Twelfth Census of the United States.

CENSUS BULLETIN.

No. 178. WASHINGTON, D. C. June 3, 1902.

AGRICULTURE.

NORTH CAROLINA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of North Carolina, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of North Carolina, June 1, 1900, numbered 224,637, and had a value of $194,655,920. Of this amount $52,700,080, or 27.1 per cent, represents the value of buildings, and $141,955,840, or 72.9 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was $9,072,600, and that of live stock, $30,106,173. These values, added to that of farms, give $233,834,693, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of all such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $89,309,638, of which amount $20,684,727, or 23.2 per cent, represents the value of animal products, and $68,624,911, or 76.8 per cent, the value of crops, including forest products cut or produced on farms. The "total value of farm products" for 1899 exceeds that reported for 1889 by $39,239,108, or 78.4 per cent.

The value of "net farm products," or the "gross farm income," is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was $10,108,890, leaving $79,200,748 as the gross farm income for that year. The ratio which this latter amount bears to the "total value of farm property" is referred to as the "percentage of gross income upon investment." For North Carolina in 1899 it was 33.9 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States. The present publication is designed to present a summarized advance statement for North Carolina.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

CP 15M

AGRICULTURE IN NORTH CAROLINA.

GENERAL STATISTICS.

The total land surface of North Carolina is 48,580 square miles, or 31,091,200 acres, of which 22,749,356 acres, or 73.2 per cent, are included in farms.

Topographically, the state has three natural divisions: the eastern, middle, and western.

Eastern North Carolina is low, and its coast line is deeply indented by Albemarle Sound, the broad estuaries of the Neuse and Pamlico rivers, and by many creeks. In the northeast are the Great and Little Dismal swamps, which, together with the chain of swamps and peat bogs extending southward through the counties bordering on the ocean and the sound, embrace an area of nearly 3,000,000 acres. Although a large part of this swamp area is at present of little value, much of it may be rendered available for agricultural purposes, by the introduction of drainage-canal systems. In some sections large tracts have already been reclaimed in this manner. The soil in the eastern division is, to a large extent, sandy and barren, although along the courses of the numerous streams the land is remarkably productive.

The middle division of the state, extending back to the mountains, is watered by numerous rivers and is either cultivated or covered with deciduous trees. The surface is undulating, and the soil rich and arable. This division is especially suited for orchards and vineyards.

Western North Carolina includes the mountains and high table-lands, none of which are less than 1,500 feet above tide water. The Appalachian system here reaches its greatest height, and includes the Blue Ridge, the Black, the Smoky, the Iron, and the Unaka mountains. These are all fertile to their summits, and are covered for the most part with magnificent forests. The valleys between the ranges are well watered and very productive. This division is well adapted to grazing, and to the raising of cereals, vegetables, and fruits.

NUMBER AND SIZE OF FARMS.

Table 1 gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	224,637	22,749,356	8,327,106	14,422,250	101.3	36.6
1890	178,359	22,651,896	7,528,669	14,823,227	127.0	34.6
1880	157,609	22,323,558	6,481,191	15,882,367	141.9	29.0
1870	93,565	19,835,416	5,258,742	14,576,638	212.0	26.5
1860	75,203	23,752,969	6,517,284	17,245,685	316.0	27.4
1850	56,968	20,996,983	5,453,975	15,543,008	368.6	26.0

The number of farms reported in 1900 was nearly four times as great as the number reported in 1850, and 25.9 per cent greater than in 1890. The total and improved acreages, however, show decreases for the Civil War decade, the loss in the former not having been entirely recovered as yet, though gains are shown for each decade since 1870. The improved acreage recovered more rapidly, having increased 58.3 per cent since 1870, and 6.4 per cent in the last decade. The average size of farms shows a marked decrease for each decade, the number of farms having increased much faster since 1850 than the total acreage. This movement indicates a progressive division of farm holdings, and is in keeping with the steady increase since 1870 in the percentage of improved farm land.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[3]
1900	$283,831,693	$194,655,920	$9,072,600	$80,103,173	$50,309,638
1890	216,707,500	183,977,010	7,183,210	25,547,280	50,070,530
1880	164,286,737	135,793,602	6,078,476	22,414,659	51,729,611
1870[2]	104,287,161	78,211,083	4,082,111	21,993,967	[3]57,845,940
1860	180,305,812	143,301,065	5,873,912	31,130,805	----------
1850	89,540,945	67,891,766	3,931,582	17,717,647	----------

[1] For the year preceding that designated.
[2] Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.
[3] Includes betterments and additions to live stock.

The rapid development of agriculture in the decade from 1850 to 1860; the disastrous effects of the Civil War, from which the state did not entirely recover until between 1880 and 1890; and the steady increase in values since that period, are the most interesting features of the statistics given in the above table.

The increase in the total value of farm property in the last decade was $17,127,193, or 7.9 per cent. Of this amount, $10,678,910, or 62.4 per cent, represents the increase in the value of farms; $4,558,893, or 26.6 per cent, in that of live stock; and $1,889,390, or 11.0 per cent, in that of implements and machinery. The value of farm products for 1899 exceeds that for 1889 by $39,239,108, or 78.4 per cent. A part of this gain, and of that in implements and machinery, and in live stock, is doubtless the result of a more detailed enumeration in 1900 than in previous census years.

COUNTY STATISTICS.

Table 3 presents the general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State	224,637	217,744	22,749,356	8,327,106	$141,955,840	$52,700,080	$9,072,600	$30,106,173	$79,200,748	$5,444,950	$1,479,030
Alamance	2,296	2,258	244,178	97,229	1,449,050	720,330	133,640	368,947	782,507	33,440	36,380
Alexander	1,889	1,848	157,619	65,576	1,071,120	283,760	67,680	217,936	504,448	12,580	18,090
Alleghany	1,367	1,241	145,200	84,996	1,416,710	331,250	70,060	354,335	401,998	22,190	5,360
Anson	2,940	2,844	309,986	116,084	1,515,990	535,870	119,240	328,026	1,134,061	81,120	76,110
Ashe	3,099	3,034	272,137	154,575	3,021,440	692,240	100,320	728,767	840,978	45,130	4,020
Beaufort	2,431	2,322	248,104	65,823	1,273,480	575,930	86,770	303,765	844,673	67,810	57,990
Bertie	2,663	2,591	341,428	109,239	1,153,570	498,400	102,160	302,510	1,023,790	155,150	49,050
Bladen	2,488	2,426	364,103	68,738	920,720	402,260	66,270	247,621	579,541	29,040	25,180
Brunswick	1,373	1,366	252,117	31,243	500,240	253,160	45,400	160,076	480,681	35,840	26,120
Buncombe	4,140	4,015	348,644	142,283	4,234,110	1,608,040	158,970	626,353	1,102,005	72,560	12,420
Burke	2,222	2,177	222,551	65,700	1,608,920	429,390	93,800	304,723	539,203	21,590	12,590
Cabarrus	2,045	2,005	209,125	98,582	1,815,670	649,360	133,530	360,883	908,336	45,310	36,510
Caldwell	2,203	2,146	231,497	71,151	1,756,000	478,750	96,100	314,926	588,281	19,130	12,190
Camden	858	838	76,549	44,656	619,360	282,520	29,480	121,140	284,927	13,980	6,980
Carteret	754	747	74,751	18,626	314,720	108,050	20,980	80,522	162,643	9,690	10,480
Caswell	1,745	1,721	243,737	113,824	1,162,710	627,230	87,540	273,406	866,039	58,430	54,020
Catawba	2,647	2,610	239,824	116,379	2,053,150	705,440	168,680	375,660	879,456	25,320	47,800
Chatham	3,605	3,530	411,084	132,427	1,640,460	739,700	149,100	518,091	1,097,806	45,000	53,860
Cherokee	1,731	1,697	208,359	41,927	782,540	210,580	33,870	236,271	412,927	9,880	560
Chowan	833	825	72,528	34,972	493,300	233,800	40,040	115,405	373,579	46,900	15,750
Clay	817	765	97,462	23,973	451,300	123,290	20,840	136,289	233,001	7,290	480
Cleveland	3,446	3,340	258,042	126,058	2,509,240	919,400	160,270	433,386	1,172,472	33,910	67,560
Columbus	2,861	2,815	360,855	68,471	1,167,150	492,840	83,370	290,764	715,763	52,170	46,940
Craven	1,725	1,645	211,523	55,986	1,067,810	343,360	62,150	205,532	592,848	85,960	84,440
Cumberland	2,673	2,624	362,609	88,461	1,553,310	589,680	91,710	395,244	908,002	67,390	59,760
Currituck	912	888	89,273	39,063	620,890	268,980	31,430	127,730	298,961	18,300	20,510
Dare	229	226	14,937	2,619	91,210	81,030	7,850	22,766	51,765	2,890	2,180
Davidson	3,419	3,350	329,043	132,761	2,497,260	959,580	222,050	509,687	1,141,430	34,710	46,010
Davie	1,742	1,631	149,302	68,650	1,161,480	377,510	82,630	248,369	488,079	15,670	14,160
Duplin	3,303	3,168	389,366	113,365	1,626,390	731,640	98,790	353,413	1,079,204	104,360	83,780
Durham	1,548	1,486	148,281	49,303	1,018,230	423,510	56,690	189,310	491,891	32,050	21,860
Edgecombe	2,284	2,164	277,376	139,426	1,895,850	753,200	122,200	366,098	1,650,094	250,780	120,260
Forsyth	2,421	2,375	228,432	101,666	2,240,350	915,010	169,600	373,052	899,133	48,980	50,510
Franklin	3,367	3,254	267,630	117,900	1,553,760	647,660	111,340	334,002	1,294,286	99,410	97,420
Gaston	2,213	2,140	201,963	88,659	1,994,000	790,880	117,090	354,982	874,309	85,310	39,390
Gates	1,461	1,441	137,494	53,425	671,740	411,510	54,440	193,052	528,348	40,940	19,030
Graham	732	723	103,617	18,360	272,730	72,620	13,370	104,591	149,096	4,150	130
Granville	3,135	3,018	309,216	118,420	1,585,840	888,420	106,420	372,185	1,176,764	123,910	77,380
Greene	2,071	1,716	156,362	87,050	1,355,390	488,420	83,950	238,196	1,083,958	73,600	82,270
Guilford	3,497	3,380	388,940	149,223	2,693,270	1,169,180	206,280	571,976	1,216,294	78,880	58,310
Halifax	3,489	3,371	380,627	163,951	2,087,450	708,910	133,720	460,690	1,855,628	228,980	93,380
Harnett	2,316	2,258	230,859	70,179	1,059,090	399,440	81,540	279,139	686,539	38,850	46,630
Haywood	2,349	2,053	251,587	84,541	1,936,850	627,470	85,750	443,278	613,851	15,710	5,450
Henderson	1,853	1,805	165,409	61,670	1,497,350	486,850	68,760	260,054	481,080	14,350	6,700
Hertford	1,788	1,732	181,955	68,324	1,021,430	509,990	66,320	215,856	698,600	73,180	41,350
Hyde	1,061	1,040	92,682	42,677	1,084,230	342,770	46,990	130,152	255,525	26,490	15,330
Iredell	3,807	3,789	353,363	159,174	2,540,840	907,470	196,970	571,579	1,297,648	57,990	56,570
Jackson	1,935	1,888	211,056	55,773	888,930	296,910	42,510	260,162	444,815	14,280	3,170
Johnston	4,452	4,378	371,000	167,339	2,649,970	1,002,280	177,480	553,708	1,820,012	121,820	143,580
Jones	1,226	1,145	191,028	56,122	733,570	239,960	54,380	174,828	476,804	37,680	26,780
Lenoir	2,179	2,023	215,911	101,996	1,625,520	618,390	91,150	291,455	1,185,009	119,810	107,380
Lincoln	1,866	1,831	180,482	84,218	1,489,450	488,880	106,210	298,884	631,111	20,590	32,060
McDowell	1,827	1,788	189,569	47,420	1,247,160	275,670	43,420	212,073	437,102	11,810	3,000
Macon	1,888	1,841	213,637	55,585	887,910	317,050	45,410	269,776	430,144	14,350	910
Madison	3,382	3,249	228,718	100,621	1,577,210	509,090	61,680	419,048	724,266	19,210	5,320
Martin	1,689	1,624	201,719	72,643	894,910	404,400	66,940	215,929	787,747	113,020	68,680
Mecklenburg	4,190	4,099	315,414	173,204	4,150,720	1,317,490	232,690	708,286	1,859,390	152,760	108,940
Mitchell	2,287	2,230	178,972	66,562	1,341,650	409,720	47,020	323,063	598,668	11,380	410
Montgomery	1,564	1,552	227,844	51,644	754,480	303,080	57,500	196,713	498,019	30,610	23,200
Moore	2,773	2,734	369,007	88,351	1,351,020	635,310	106,560	348,105	857,258	55,260	36,430
Nash	3,237	3,116	308,317	119,988	1,668,770	691,480	124,460	364,133	1,479,929	126,810	143,960
New Hanover	379	368	49,581	9,728	346,530	138,000	15,650	49,875	148,212	30,950	11,590
Northampton	2,837	2,722	251,867	126,873	1,237,440	617,150	109,160	342,970	1,235,847	104,490	53,360
Onslow	1,632	1,581	263,326	62,864	698,650	312,910	45,790	184,825	420,388	25,970	12,170
Orange	2,044	1,985	214,346	78,539	959,160	519,680	77,660	255,727	660,866	31,340	27,110
Pamlico	813	796	78,493	22,333	386,810	165,560	26,320	92,906	282,169	18,860	28,020
Pasquotank	1,125	1,071	80,862	49,094	706,070	315,540	55,350	169,951	393,454	26,410	15,340
Pender	1,975	1,906	295,248	52,090	939,190	386,060	59,120	211,674	473,413	44,580	22,670
Perquimans	1,267	1,222	96,912	50,524	781,670	384,150	54,790	231,058	578,013	61,500	18,520
Person	1,971	1,924	228,904	86,119	967,190	471,610	70,930	234,386	768,898	58,840	55,160
Pitt	4,022	3,723	355,152	151,847	2,752,200	954,080	147,230	481,762	2,173,929	262,040	166,910
Polk	1,048	1,017	100,499	30,537	633,820	191,350	34,170	131,487	306,231	8,470	6,810
Randolph	3,739	3,691	431,754	140,507	2,252,100	923,100	231,540	688,418	1,039,355	38,000	61,390
Richmond	1,462	1,441	180,504	57,593	803,190	290,110	68,180	194,518	682,746	56,050	58,130
Robeson	4,848	4,764	498,173	174,801	3,525,900	1,116,980	190,340	563,616	2,166,431	199,620	247,280
Rockingham	3,196	3,151	336,719	115,874	2,155,400	863,460	142,710	425,208	1,358,600	85,930	97,270
Rowan	3,082	3,021	295,184	132,196	2,248,190	821,690	200,040	490,008	1,286,510	45,290	60,330
Rutherford	3,365	3,207	274,412	99,511	1,999,060	596,820	114,720	381,326	876,433	18,850	38,680
Sampson	3,783	3,699	487,864	148,886	2,200,770	886,580	146,350	484,794	1,259,256	64,840	82,840
Scotland	1,080	1,061	127,403	61,442	1,752,380	417,320	72,030	175,999	886,686	72,270	86,410

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
Stanly	1,983	1,963	215,018	85,466	$986,280	$421,210	$113,900	$290,675	$743,885	$40,520	$36,920
Stokes	3,234	3,130	256,521	88,648	1,754,870	730,920	114,430	354,590	1,017,766	82,130	59,430
Surry	3,523	3,458	291,989	90,467	1,935,840	737,520	118,870	375,873	870,521	21,520	48,000
Swain	1,225	1,171	164,439	27,036	620,480	176,210	26,310	156,519	263,209	7,730	210
Transylvania	1,008	960	112,781	29,784	791,320	240,280	33,030	156,972	215,142	9,910	3,240
Tyrrell	657	649	62,260	19,840	225,710	125,770	23,100	68,354	163,999	11,170	7,715
Union	3,793	3,737	316,097	149,143	2,057,870	630,400	180,990	520,553	1,367,085	50,070	100,925
Vance	1,680	1,595	149,754	63,613	888,900	406,070	56,030	184,319	619,902	58,460	48,310
Wake	5,188	5,029	476,608	195,548	3,252,640	1,371,130	218,600	655,241	2,163,811	155,300	126,760
Warren	2,616	2,544	214,142	89,638	1,096,210	491,290	77,330	251,892	851,982	59,830	53,680
Washington	970	943	85,891	36,046	540,770	269,160	48,800	115,601	364,169	44,920	10,720
Watauga	2,170	2,105	208,559	88,423	1,829,830	484,070	66,980	401,127	544,798	5,710	2,310
Wayne	3,291	3,164	337,162	145,199	2,507,520	860,020	138,020	394,185	1,679,462	135,690	126,040
Wilkes	4,337	4,277	418,393	132,307	2,197,590	644,390	116,590	454,070	876,444	34,060	16,240
Wilson	2,565	2,470	212,686	99,762	1,952,600	619,280	98,910	332,691	1,520,510	120,300	131,660
Yadkin	2,242	2,207	207,294	77,907	1,533,690	489,860	98,570	279,750	588,359	22,880	20,860
Yancey	2,023	1,956	158,309	53,120	1,119,030	319,460	36,500	281,405	469,821	20,320	1,240

Aside from Richmond, in which a territorial change has been made, but three counties, Carteret, Chatham, and Currituck, report decreases in the number of farms since 1890. In the remaining counties the rates of increase were about the same as that shown in the state total—25.9 per cent. Pitt county reports the greatest relative gain, the number of its farms having almost doubled.

Increases in the total farm acreages are reported for about one-half of the counties, and almost two-thirds show increased areas of improved land. A large proportion of the counties reporting increases in improved land are in the southwestern part of the state. The average size of farms for the state is 101.3 acres, ranging in the several counties from 75 to 150 acres. The average value of the farms of the state is $866.54. In nearly one-fourth of the counties it is less than $600. More than two-thirds of the counties show gains since 1890 in the value of farms.

The increase since 1890 in the value of implements and machinery has been relatively greater and more general than that in any other item of farm property. Only six counties, Currituck, Durham, Gates, Granville, Macon, and Warren, report a decrease, and in most instances this has been accompanied by a decrease in the value of live stock. This latter value, however, has increased generally in the past ten years.

The amount paid for labor in 1899 varied greatly in different sections of the state, the lowest expenditure per farm being reported from the mountainous western border counties, and the highest from the eastern coast counties, where diversified farming prevails.

For fertilizers, the average expenditure per farm was approximately $20. The minimum of less than $1 per farm was found in a few extreme western counties, where corn was the principal crop, and the maximum of $80 per farm, in Scotland county, the average in the central counties being about $30 per farm.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. The farms operated by tenants are divided into two groups, designated as farms operated by "cash tenants" and "share tenants." These groups comprise, respectively: (1) Farms operated by individuals who pay a rental in cash or a stated amount of labor or farm produce; (2) farms operated by individuals who pay as rental a stated share of the products.

In Table 5 the tenure of farms for 1900 is given by race of farmer. The farms under the classification "owner" in Table 4 are subdivided in Table 5 into groups, designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	224,637	131,629	19,916	73,092	58.6	8.9	32.5
1890	178,359	117,469	10,572	50,318	65.9	5.9	28.2
1880	157,609	104,887	8,644	44,078	66.5	5.5	28.0

[1] Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	224,637	113,524	15,454	1,594	1,057	19,916	73,092
White	169,773	100,320	11,224	1,508	936	9,585	46,200
Colored	54,864	13,204	4,230	86	121	10,331	26,892
Indian	868	642	33	2	2	63	126
Negro	53,996	12,562	4,197	84	119	10,268	26,766

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	50.5	6.9	0.7	0.5	8.9	32.5
White	100.0	59.1	6.6	0.9	0.6	5.6	27.2
Colored	100.0	24.1	7.7	0.2	0.2	18.8	49.0
Indian	100.0	74.0	3.8	0.2	0.2	7.3	14.5
Negro	100.0	23.3	7.8	0.1	0.2	19.0	49.6

In the period from 1880 to 1900 the total number of farms increased 42.5 per cent, the greater part of the increase taking place in the last decade. The number of farms operated by owners has increased 25.5 per cent since 1880; by cash tenants, 130.4 per cent; and by share tenants, 65.8 per cent. The percentages shown in Table 4 indicate that the number of farms operated by owners has not increased so rapidly since 1880 as the number operated by tenants.

Of the farms of the state, 75.6 per cent are operated by white farmers and 24.4 per cent by colored farmers. Of the white farmers, 66.6 per cent own all or a part of the farms they operate, and 33.4 per cent operate farms owned by others. For the colored farmers, the corresponding percentages are 32.0 and 68.0. Of the colored farmers, 98.4 per cent are negroes, of whom nearly one-third own all or a part of their farms, and the remainder are Indians, more than three-fourths of whom are owners.

The ratio which the number of farms rented for cash bears to the total number of tenant farms, varies with the race of the tenants and the kind of crops grown. In the western counties, where diversified farming prevails and practically all the farmers are white, share tenants greatly outnumber cash tenants; but in the leading cotton-growing counties, where approximately one-half of the farmers are colored, the number of cash and share tenants are about equal. The greater number of colored farmers in the cotton counties are classed as cash tenants, but where the local contract system prevails the distinguishing line between cash and share tenure is hard to draw.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER, AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,637	101.3	22,749,356	100.0	$233,834,693	100.0
White farmers	169,773	116.6	19,794,218	87.0	204,866,528	87.6
Negro farmers	53,996	53.6	2,894,210	12.7	28,458,176	12.2
Indian farmers	868	70.2	60,928	0.3	509,989	0.2
Owners	113,524	126.4	14,345,746	63.1	144,032,808	61.6
Part owners	15,454	95.2	1,471,445	6.5	15,467,836	6.6
Owners and tenants	1,594	153.6	244,830	1.1	2,489,429	1.1
Managers	1,057	397.8	420,450	1.8	6,099,326	2.6
Cash tenants	19,916	80.5	1,602,859	7.0	15,748,869	6.7
Share tenants	73,092	63.8	4,664,017	20.5	49,996,425	21.4

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 *not fed* to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$632	$235	$40	$134	$353	33.9
White farmers	723	281	48	155	386	32.0
Negro farmers	349	92	17	68	274	52.0
Indian farmers	393	94	19	81	233	39.7
Owners	739	308	54	168	389	30.7
Part owners	604	220	41	136	348	34.8
Owners and tenants	912	377	69	204	443	28.3
Managers	3,454	1,661	196	459	1,310	22.7
Cash tenants	508	147	27	109	320	40.5
Share tenants	458	124	21	81	290	42.4

Approximately, one-fourth of the farms of the state are operated by negro farmers. Their farms, however, comprise slightly more than one-eighth of the total farm acreage of the state, and represent, in value, less than one-eighth of the total farm property. This indicates that the holdings of colored farmers are small, the average size of their farms being but 53.6 acres compared with 116.6 acres for white farmers. The average values per farm of their land, buildings, implements and machinery, and live stock, are correspondingly low. On the other hand it appears from Table 7 that they obtained in 1899 a higher per cent of gross income on their investments in farm property than did white farmers.

This apparent anomaly is traceable, in general, to certain distinguishing racial characteristics, and, in particular, to the contract system under which nearly all negro tenants lease their lands. The first point relates to the recognized tendency on the part of the more progressive white farmer to constantly improve his property, especially

his buildings and fences, thus adding to its market value, although not materially increasing its productive capacity per acre. The colored farmer, on the other hand, adds comparatively little to his fixed capital in the way of improvements, and his income per acre naturally represents a higher percentage of the capital invested than in the case of the white farmer. In addition, under the prevailing contract system, the negroes lease small tracts of the best and most highly improved land of the plantations, which they cultivate under the supervision of the land owner or his hired manager. This land appears in the census reports as farms of negro tenant farmers. Unimproved and less productive tracts of land constitute the greater part of the farms of the white plantation owners as reported by the census. The white landlord commonly owns the greater number of the working animals and most of the implements and machinery used by his colored tenants. These being kept for the most part on the farm where the landlord resides, were reported as part of his property, while the products obtained through their use were reported under the names of the tenants.

The above considerations, it is believed, not only explain the high per cent of gross income shown for the negro farmers, but also the low rates shown for managers and owners as compared with those given for cash and share tenants. It is evident, therefore, that a high rate of gross income on investment can not properly be construed as proof of superior farm management.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,637	101.3	22,749,356	100.0	$233,834,693	100.0
Under 3 acres	1,202	1.9	2,252	(1)	318,525	0.1
3 to 9 acres	11,323	6.1	69,345	0.3	2,758,498	1.2
10 to 19 acres	20,659	13.8	285,943	1.3	6,170,124	2.6
20 to 49 acres	59,913	31.4	1,880,512	8.3	29,158,570	12.5
50 to 99 acres	55,028	68.0	3,742,478	16.5	46,605,601	19.9
100 to 174 acres	44,052	125.2	5,514,229	24.2	58,043,386	24.8
175 to 259 acres	17,012	207.6	3,531,378	15.5	33,714,851	14.4
260 to 499 acres	11,224	341.4	3,832,180	16.8	32,494,046	13.9
500 to 999 acres	3,275	640.9	2,098,813	9.2	14,859,701	6.4
1,000 acres and over	949	1,888.5	1,792,226	7.9	9,711,391	4.2

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$632	$235	$40	$134	$353	33.9
Under 3 acres	92	137	8	28	75	28.2
3 to 9 acres	105	94	10	35	88	36.4
10 to 19 acres	154	84	12	49	138	46.2
20 to 49 acres	281	109	20	77	248	50.9
50 to 99 acres	501	189	34	123	327	38.7
100 to 174 acres	799	293	53	173	427	32.4
175 to 259 acres	1,226	439	80	237	566	28.5
260 to 499 acres	1,884	641	108	312	755	26.1
500 to 999 acres	2,984	965	158	430	1,115	24.6
1,000 acres and over	6,998	2,186	303	746	1,950	19.1

The group of medium-sized farms, containing from 100 to 174 acres each, comprises nearly one-fourth of the total farm acreage, and the same proportion of the total value of farm property.

In general, the average values of the different forms of farm property shown in Table 9 rise in unbroken series as the farms increase in size. The relatively high value of buildings on farms under 3 acres, forms the only striking exception to this rule. For this group of farms values are disproportionately high, as it contains nearly half of the florists' establishments of the state and a number of city dairies. The incomes from these industries depend less upon the acreage of land used, than upon the amount of capital invested in buildings and implements and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, $39.89; 3 to 9 acres, $14.46; 10 to 19 acres, $9.97; 20 to 49 acres, $7.89; 50 to 99 acres, $4.82; 100 to 174 acres, $3.41; 175 to 259 acres, $2.72; 260 to 499 acres, $2.21; 500 to 999 acres, $1.74; and 1,000 acres and over, $1.03.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

In Tables 10 and 11 farms are classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products

not fed to live stock, the farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the value of the products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,637	101.3	22,749,356	100.0	$233,834,693	100.0
Hay and grain	44,648	97.8	4,368,214	19.2	48,648,280	20.8
Vegetables	3,944	75.8	299,039	1.3	3,790,823	1.6
Fruit	2,191	107.4	235,258	1.0	2,755,871	1.2
Live stock	23,607	116.8	2,756,147	12.1	27,621,676	11.8
Dairy produce	917	115.5	105,893	0.5	1,994,126	0.9
Tobacco	22,626	94.2	2,131,698	9.4	21,902,127	9.4
Cotton	48,896	87.1	4,260,431	18.7	48,522,433	20.8
Rice	412	111.8	46,063	0.2	508,507	0.2
Sugar	23	59.5	1,368	(1)	12,578	(1)
Flowers and plants	15	7.9	119	(1)	67,095	(1)
Nursery products	25	97.6	2,441	(1)	100,585	(1)
Miscellaneous	77,333	110.5	8,542,690	37.6	77,856,092	33.3

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$682	$235	$40	$134	$353	33.9
Hay and grain	696	227	44	122	292	26.8
Vegetables	556	260	37	108	364	37.8
Fruit	765	312	41	140	461	35.6
Live stock	681	258	42	189	273	23.4
Dairy produce	1,124	635	87	329	564	25.9
Tobacco	566	245	38	119	486	50.2
Cotton	632	200	39	121	405	40.8
Rice	944	289	46	101	276	20.0
Sugar	289	155	35	68	162	29.7
Flowers and plants	2,639	1,750	41	43	1,682	37.6
Nursery products	2,552	1,122	197	152	5,188	129.0
Miscellaneous	591	242	39	135	332	33.0

For the several classes of farms, the average values per acre of products not fed to live stock are as follows: Farms whose operators derive their principal income from flowers and plants, $212.05; nursery products, $53.14; tobacco, $5.16; dairy produce, $4.88; vegetables, $4.80; cotton, $4.64; fruit, $4.29; hay and grain, $2.99; sugar, $2.73; rice, $2.47; and live stock, $2.34. In computing these averages, the total area of the farms is used, and not the acreage devoted to the crop from which the principal income is derived.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that, in computing gross income no deductions are made for expenditures. For florists' establishments and nurseries, the average expenditure for such items as labor and fertilizers represents a far greater percentage of the gross income than in the case of "live-stock" and "hay and grain" farms. If it were possible to present the average net income, the variations shown would be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,637	101.3	22,749,356	100.0	$233,834,693	100.0
$0	1,263	49.8	62,886	0.3	533,050	0.2
$1 to $49	12,590	31.6	397,850	1.7	3,296,660	1.4
$50 to $99	21,855	43.2	944,760	4.2	7,710,840	3.3
$100 to $249	74,896	66.3	4,967,125	21.8	44,688,610	19.1
$250 to $499	72,939	105.7	7,706,640	33.9	76,534,713	32.7
$500 to $999	32,600	170.9	5,571,414	24.5	62,449,530	26.7
$1,000 to $2,499	7,470	314.8	2,351,842	10.3	28,467,030	12.2
$2,500 and over	1,024	729.3	746,839	3.3	10,154,260	4.4

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$632	$235	$40	$134	$353	33.9
$0	289	88	10	35	27	10.4
$1 to $49	167	60	7	28	79	22.5
$50 to $99	218	79	11	45	177	29.7
$100 to $249	368	126	20	83	361	34.4
$250 to $499	634	232	40	143	684	35.7
$500 to $999	1,155	442	80	239	1,412	43.1
$1,000 to $2,499	2,298	913	161	439	4,581	46.2
$2,500 and over	5,932	2,505	484	995		

Some of the farms reporting no income for 1899 were fruit farms with trees or vines too young to bear, and others were the country homes of business and professional men. There were some cases, too, in which a report of the products of the farm could not be secured,

because the person in possession on June 1, 1900, was not the one who conducted the farm in 1899. To this extent the reports fall short of giving a complete statement of farm income in 1899.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the Twelfth Census. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and to the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep, by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	142,686	$549,844	$3.85	3,328
Steers	1 and under 2	43,828	383,652	8.80	795
Steers	2 and under 3	26,579	329,944	12.41	422
Steers	3 and over	30,692	572,244	18.64	688
Bulls	1 and over	17,741	198,507	10.63	240
Heifers	1 and under 2	68,732	561,321	8.17	976
Cows kept for milk	2 and over	233,178	4,426,709	18.98	13,577
Cows and heifers not kept for milk.	2 and over	61,082	675,729	11.06	874
Colts	Under 1	5,807	131,675	22.68	128
Horses	1 and under 2	5,927	233,852	39.46	203
Horses	2 and over	147,419	8,430,651	57.18	15,449
Mule colts	Under 1	8,076	81,927	26.63	40
Mules	1 and under 2	5,600	256,401	45.79	75
Mules	2 and over	126,934	8,338,970	65.70	3,061
Asses and burros	All ages	825	69,466	84.19	92
Lambs	Under 1	98,129	121,923	1.34	287
Sheep (ewes)	1 and over	164,105	276,389	1.68	615
Sheep (rams and wethers).	1 and over	44,707	76,109	1.70	229
Swine	All ages	1,200,469	2,506,419	1.94	40,009
Goats	All ages	42,901	37,297	0.89	1,124
Fowls:[1]					
Chickens[2]		3,871,858			
Turkeys		120,737	1,434,168		
Geese		284,424			
Ducks		102,942			
Bees (swarms of)		244,539	429,862	1.76	
Value of all livestock			30,106,173		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was $30,106,173, of which amount 29.2 per cent represents the value of horses; 28.8 per cent, that of mules; 14.7 per cent, that of dairy cows; 10.8 per cent, that of other neat cattle; 8.3 per cent, that of swine; 4.8 per cent, that of poultry; and 3.4 per cent, that of all other live stock.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, the value of domestic animals not on farms would be $1,503,397, which would make the value of all live stock in the state, exclusive of poultry and bees not on farms, approximately $31,609,570.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the number of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	233,178	391,340	159,153	126,435	208,812	1,200,469
1890	223,416	407,487	131,451	100,011	402,247	1,251,004
1880	232,133	425,295	133,686	81,871	461,633	1,453,541
1870	196,781	324,431	102,762	50,684	462,435	1,075,215
1860	228,623	465,187	150,661	51,388	546,749	1,353,214
1850	221,796	471,711	148,693	25,259	595,249	1,812,813

[1] Lambs not included.

The numbers of domestic animals of all classes have fluctuated from decade to decade. During the Civil War period there was a marked decrease in every class, except that of mules and asses. Since then the number of all kinds of domestic animals, except sheep, has increased. Taking the half century as a whole, the numbers of dairy cows and horses have undergone no material change. Neat cattle other than dairy cows have decreased about 17 per cent. There are only about two-thirds as many swine as were reported in 1850, and not much more than one-third as many sheep. Mules and asses are more than five times as numerous as they were fifty years ago, and are the only class of domestic animals showing a marked increase.

For the decade 1890 to 1900, increases are shown as follows: Mules and asses, 36.4 per cent; horses, 21.1 per cent; dairy cows, 4.4 per cent; and swine, 4.0 per cent. Sheep and neat cattle other than dairy cows decreased in number 48.1 per cent and 4.0 per cent, respectively.

In comparing the poultry report of 1900 (see Table 14) with that of 1890 it should be borne in mind that in 1900 the enumerators were instructed to report no fowls under 3 months old, while no such restriction was made in 1890. This fact, considered in connection with the increase of 50.6 per cent in the number of eggs produced, indicates that the decreases in numbers of all kinds of fowls, as reported by the census, are more apparent than real. Compared with the figures for 1890, those of 1900 show decreases as follows: Chickens, 48.4 per cent; ducks, 89.2 per cent; turkeys, 38.8 per cent; and geese, 24.4 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the animal products of 1899.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS, IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	797,176	$160,510
Mohair and goat hair	Pounds	416	97
Milk	Gallons	[1] 89,525,749	[2] 6,176,397
Butter	Pounds	16,918,802	
Cheese	Pounds	26,888	
Eggs	Dozens	17,704,020	1,810,116
Poultry			2,639,970
Honey	Pounds	2,477,800	263,790
Wax	Pounds	135,920	
Animals sold			2,455,252
Animals slaughtered			7,109,655
Total			20,654,727

[1] Comprises all milk produced, whether sold, consumed, or made into butter or cheese.
[2] Comprises the value of butter and cheese and of all milk sold or consumed.

The total value of animal products for the state in 1899 was $20,684,727, or 23.2 per cent of the value of all farm products, and 26.1 per cent of the gross farm income. The value of animal products for 1899 was more than two-thirds as great as that of all live stock on farms, June 1, 1900. Of the above amount, 46.4 per cent represents the value of animals sold and animals slaughtered on farms; 29.8 per cent, that of dairy products; 21.8 per cent, that of poultry and eggs; 1.3 per cent, that of honey and wax; and 0.7 per cent, that of wool, mohair, and goat hair.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms in 1899 was $9,594,907, or 12.1 per cent of the gross farm income. Of all farms in the state reporting live stock, 68,473, or 32.2 per cent, report sales of live animals, the average receipts per farm being $36.30. Animals slaughtered on farms are reported by 176,803 farmers, or 83.2 per cent of those reporting live stock, the average value per farm being $40.21.

In obtaining these reports, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

DAIRY PRODUCE.

Of the $6,175,397 given in Table 16 as the value of dairy products in 1899, $5,447,873, or 88.2 per cent, represents the value of such products consumed on farms, and $727,524, or 11.8 per cent, the amount received from sales. Of the latter amount, $478,762 was received from the sale of 2,782,905 pounds of butter; $242,968, from 1,826,631 gallons of milk; $4,162, from 4,525 gallons of cream; and $1,632, from 19,200 pounds of cheese.

In 1899, 34,275,084 more gallons of milk were reported than in 1889, a gain of 62.0 per cent. The quantity of butter made on farms increased 28.8 per cent in the same time, while the quantity of cheese made in 1899 was less than one-half as great as in 1889.

POULTRY AND EGGS.

There were 17,704,020 dozens of eggs reported in 1899, or 50.6 per cent more than in 1889. Of the $4,500,086 given in Table 16 as the value of poultry and eggs, 59.8 per cent represents the value of poultry raised in 1899, and 40.2 per cent, that of eggs produced.

HONEY AND WAX.

The production of honey for 1899 was 2,477,800 pounds, and that of wax, 135,920 pounds, a gain of 4.4 per cent in honey and 7.5 per cent in wax, since 1889.

WOOL.

The production of wool has fluctuated from decade to decade, the report for 1900 showing an increase of 8.6 per cent since 1890. This increase is more apparent than real owing to the fact that the fleeces from at least 79,674 sheep were omitted from the table in 1890, but included in a general estimate of wool shorn after the census enumeration.

HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the specified classes of farms, the number reporting horses, mules, and dairy cows, and the average number of these animals per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.		MULES.		DAIRY COWS.	
	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.
Total	108,160	1.5	88,591	1.5	144,553	1.6
White farmers	89,944	1.5	69,864	1.6	124,054	1.7
Colored farmers	18,216	1.2	18,727	1.2	20,499	1.3
Owners[1]	72,837	1.5	55,587	1.6	97,599	1.7
Managers	669	2.4	616	3.8	694	3.5
Cash tenants	10,188	1.3	9,365	1.4	9,115	1.4
Share tenants	24,466	1.3	23,023	1.3	37,145	1.3
Under 20 acres	7,448	1.2	4,610	1.1	12,223	1.2
20 to 99 acres	51,549	1.3	42,524	1.3	69,836	1.4
100 to 174 acres	26,457	1.6	21,871	1.6	35,155	1.7
175 to 259 acres	11,335	1.8	9,578	1.8	14,213	2.0
260 acres and over	11,371	2.1	10,008	2.5	13,126	2.6
Hay and grain	20,430	1.6	14,978	1.6	29,090	1.4
Vegetables	1,731	1.4	958	1.6	1,374	1.8
Fruit	1,112	1.4	805	1.5	1,241	1.7
Live stock	13,450	1.7	7,881	1.6	19,203	1.9
Dairy	613	2.0	326	1.9	917	5.3
Tobacco	11,745	1.4	9,089	1.4	11,490	1.4
Cotton	20,024	1.4	25,293	1.5	25,660	1.4
Rice	232	1.7	78	1.6	174	2.1
Miscellaneous[2]	38,823	1.4	29,188	1.5	55,404	1.7

[1] Including "part owners" and "owners and tenants."
[2] Including sugar farms, florists' establishments, and nurseries.

In North Carolina, as in other states where cotton is a staple crop and much of the farm labor is performed by negroes, large numbers of mules are used as work animals. For most classes of farms the average numbers of mules and horses are about equal, but on farms operated by managers, and on farms of the largest area, more mules than horses are reported. This is due to the fact that these two classes of farms include a relatively large number of cotton plantations.

If the numbers of horses and mules be combined, the average number of work animals per farm compares favorably with the corresponding figures for the more intensively cultivated farms of New England.

CROPS.

The following table gives the statistics of the principal crops of 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	2,720,206	Bushels	34,818,860	$17,304,407
Wheat	746,984	Bushels	4,342,351	3,463,726
Oats	270,876	Bushels	2,454,768	991,516
Barley	475	Bushels	4,237	2,335
Rye	28,074	Bushels	133,730	86,228
Buckwheat	5,168	Bushels	52,572	25,482
Broom corn	67	Pounds	80,490	1,501
Rice	22,279	Pounds	7,838,580	203,075
Kafir corn	2	Bushels	8	6
Flaxseed	2	Bushels	9	9
Clover seed	----------	Bushels	331	1,347
Grass seed	----------	Bushels	1,315	2,574
Hay and forage	229,998	Tons	429,824	4,242,561
Cottonseed	----------	Tons	[1]205,999	2,290,771
Cotton	1,007,020	Bales	450,707	15,696,952
Tobacco	203,023	Pounds	127,503,400	8,038,691
Hops	([2])	Pounds	85	12
Peanuts	95,856	Bushels	3,460,439	1,852,110
Dry beans	5,381	Bushels	49,518	50,703
Dry pease	88,407	Bushels	876,167	649,194
Potatoes	23,619	Bushels	1,636,445	862,509
Sweet potatoes	68,730	Bushels	5,781,887	2,119,956
Onions	836	Bushels	116,841	86,597
Miscellaneous vegetables	63,762	----------	----------	3,034,895
Maple sugar	----------	Pounds	1,180	117
Maple sirup	----------	Gallons	129	117
Sugar cane	25	Tons	[3]11	54
Sugar cane sirup	----------	Gallons	1,957	1,008
Sorghum cane	20,227	Tons	[3]5,980	17,083
Sorghum sirup	----------	Gallons	1,419,570	429,814
Small fruits	6,837	----------	----------	599,963
Grapes	[4]1,734	Centals	123,440	[5]197,262
Orchard fruits	[4]158,937	Bushels	5,124,959	[6]1,269,614
Tropical fruits	----------	----------	----------	446
Nuts	----------	----------	----------	3,413
Forest products	----------	----------	----------	4,921,740
Flowers and plants	61	----------	----------	31,163
Seeds	139	----------	----------	8,382
Nursery products	1,149	----------	----------	135,084
Miscellaneous	80	----------	----------	2,494
Total	5,769,954	----------	----------	68,624,911

[1] Exclusive of 10,510 tons, valued at $116,871, sold in seed cotton and included with the cotton.
[2] Less than 1 acre.
[3] Sold as cane.
[4] Estimated from number of vines or trees.
[5] Including value of raisins, wine, etc.
[6] Including value of cider, vinegar, etc.

Of the total value of crops in 1899, cotton, including seed, constituted 26.2 per cent; corn, 25.2 per cent; other cereals, including rice, 7.0 per cent; vegetables, including potatoes, sweet potatoes, and onions, 8.9 per cent; forest products, 7.2 per cent; fruits and nuts, 3.0 per cent; hay and forage, 6.2 per cent; and all other products, 16.3 per cent.

The acreage devoted to corn constituted 47.1 per cent of the total area in crops and yielded 25.2 per cent of the total receipts, while cotton, occupying but 17.5 per cent of the total acreage, yielded 26.2 per cent of the total receipts.

The average values per acre of crops were as follows: Flowers and plants, $510.87; nursery products, $117.57; onions, $103.58; tobacco, $39.59; potatoes, $36.52; sweet potatoes, $30.84; hay and forage, $18.45; cotton, including seed, $17.86; peanuts, $19.32; orchard fruits, $7.99; dry beans and dry pease, $7.46; and cereals, including rice, $5.82. The crops yielding the greatest returns were grown upon highly improved land and their production required relatively large expenditures for labor and fertilizers.

CEREALS.

Table 19 is an exhibit of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	475	5,168	2,720,206	270,876	28,074	746,984
1889	302	1,800	2,360,627	541,851	56,496	666,509
1879	230	5,725	2,305,419	500,415	61,953	646,829

[1] No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899	4,237	52,572	34,818,860	2,454,768	133,730	4,342,351
1889	3,521	12,621	25,783,623	4,512,762	276,339	4,292,035
1879	2,421	44,668	28,019,839	3,838,068	285,160	3,397,393
1869	3,186	20,109	18,454,215	3,220,105	352,008	2,859,879
1859	3,445	35,924	30,078,564	2,781,860	436,856	4,743,706
1849	2,735	16,704	27,941,051	4,052,078	229,563	2,130,102

The total area devoted to cereals in 1879 was 3,520,571 acres; in 1889, 3,627,585 acres; and in 1899, 3,771,783 acres. Of the total area in 1899, 72.1 per cent was devoted to corn; 19.8 per cent, to wheat; 7.2 per cent, to oats; and 0.9 per cent, to rye, buckwheat, and barley. The percentages of increase in the acreages devoted to the several cereals in the last decade were as follows: Corn, 15.2 per cent; wheat, 12.1 per cent; buckwheat, 187.1 per cent; and barley, 57.3 per cent. The acreage of oats and rye decreased 50.0 per cent and 50.3 per cent, respectively.

A comparison by counties shows that the acreage in corn increased between 1889 and 1899 in nearly every county. The largest acreages were reported by Robeson, Johnston, and Sampson counties. About one-third of the wheat was grown in the counties of the Yadkin River Valley. The production of this cereal has increased steadily since 1869 but the average yield per acre remains comparatively low. The acreage devoted to oats in 1899 was less than one-half as great as that reported for 1889. While this marked decrease was doubtless due, in a large measure, to severe drought in the spring of 1899, it is believed that the crop is not so generally cultivated as it was ten years ago. Rye has decreased steadily in importance since 1859. Neither barley nor buckwheat is grown extensively; the acreages and productions of both have fluctuated widely from decade to decade with a general upward tendency.

The total number of bushels of grain produced in 1849 was 34,372,233; in 1889, 34,880,901, and in 1899, 41,806,518. Comparisons between the crops of the different years have little significance, however, as the production depends to a great extent upon the nature of the season.

RICE.

In addition to the cereals given in Table 19, rice was grown in 1899 by 5,248 farmers, who reported 22,279 acres of land, and a yield of 7,838,580 pounds, valued at $203,075. There was an increase in ten years of 82.0 per cent in acreage, and of 34.9 per cent in production, the crop being the largest ever reported.

The average yield per acre was 352 pounds, and the average value for each farm reporting was $39.

The crop was grown in 45 counties, but 76.4 per cent of the acreage was furnished by the 7 counties of Beaufort, Brunswick, Camden, Hyde, Pasquotank, Perquimans, and Tyrrell, lying on the coast, and on the Albemarle and Pamlico sounds.

COTTON.

The following table shows the changes in cotton production since 1849.

TABLE 20.—ACREAGE AND PRODUCTION OF COTTON: 1849 TO 1899.

YEAR.	ACREAGE.		PRODUCTION.		
	Total.	Per cent of increase.	Commercial bales.	Pounds.	Per cent of increase.
1899	1,007,020	[1] 12.2	459,707	216,506,930	35.0
1889	1,147,136	28.4	336,261	160,396,497	[1] 9.1
1879	893,153	----------	389,598	176,487,894	180.6
1869	----------	----------	----------	62,901,790	[1] 2.9
1859	----------	----------	----------	64,753,730	119.2
1849	----------	----------	----------	29,538,000	----------

[1] Decrease.

The production of cotton in North Carolina has fluctuated greatly since 1849. In 1859 the quantity reported was more than twice that produced in 1849, while during the next decade, when the Civil War affected all industries, there was a decrease of 2.9 per cent. The reports for 1879 showed a great increase in production. This was followed in the next decade by a slight decrease, notwithstanding an increase of 28.4 per cent in acreage. But in the decade just completed, the production increased 35.0 per cent, while the acreage decreased 12.2 per cent.

In 1899, 105,766 farmers devoted to the cultivation of cotton a total area of 1,007,020 acres, or 12.1 per cent of the total improved farm land, and an average of 9.5 acres per farm reporting. The total production was 216,506,930 pounds, an average of 215 pounds per acre and 114 pounds per capita.

The counties reporting the greatest area under cotton are Mecklenburg, Robeson, Wake, Union, Johnston, Anson, Halifax, Wayne, Cleveland, and Edgecombe, ranking in the order named, and reporting in the aggregate 42.6 per cent of the total acreage. These counties are located in the central and southwestern parts of the state.

HAY AND FORAGE.

In 1900, 141,532 farmers, or 63.0 per cent of the total number, reported hay or forage crops. Exclusive of cornstalks and corn strippings, an average yield of 1.07 tons per acre was obtained. The total number of acres devoted to hay and forage in 1899 was 229,998, or 20.6 per cent more than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, and prairie grasses, 17,462 acres and 21,236 tons; millet and Hungarian grasses, 1,959 acres and 2,705 tons; alfalfa or lucern, 248 acres and 392 tons; clover, 27,238 acres and 28,290 tons; other tame and cultivated grasses, 122,879 acres and 122,411 tons; grains cut green for hay, 51,772 acres and 56,780 tons; crops grown for forage, 8,445 acres and 15,006 tons; cornstalks and corn strippings, 843,557 acres and 183,004 tons.

In Table 18 the production of cornstalks and corn strippings is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 21.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	6,438,871	4,249,468	4,662,751	7,591,541
Apricots	2,549	5,096	245	1,915
Cherries	174,295	111,774	33,899	45,918
Peaches	2,773,788	2,133,004	373,663	2,740,915
Pears	138,836	44,902	25,521	33,910
Plums and prunes	183,451	51,341	22,074	15,516

Increases are shown for the decade in numbers of trees as follows: Apple, 51.5 per cent; peach, 30.0 per cent; cherry, 55.9 per cent. Plum and prune and pear have increased more than threefold. The number of apricot trees decreased about one-half.

Of all trees reported in 1900, 66.1 per cent were apple trees; 28.5 per cent, peach trees; and the remainder, 5.4 per cent, plum, prune, pear, cherry, apricot, and unclassified trees; the latter class, which is not included in the table, numbering 22,389 trees and yielding 6,806 bushels of fruit.

Most of the fruit trees are reported from the western part of the state, Guilford ranking among the leading counties in all varieties. Moore, Burke, and Guilford counties reported about one-eighth of the peach trees, and Wilkes, Buncombe, Surry, Guilford, and Haywood reported about one-sixth of the apple trees.

The value of the orchard products given in Table 18 includes the value of 7,651 barrels of cider, 3,298 barrels of vinegar, and 2,744,450 pounds of dried and evaporated fruits.

SEMITROPICAL FRUITS.

In 1900, 1,019 farms representing 66 counties reported 5,057 fig trees. The total amount of fruit produced was 14,510 pounds, valued at $446. Although fig trees are grown generally throughout the state, those yielding fruit in 1899 were located in 36 counties, principally in the eastern half of the state. Halifax county reported one-fourth of the trees and fruit produced.

SMALL FRUITS.

The total area used in the growing of small fruits was 6,837 acres, distributed among 10,873 farms. The value of the fruit produced was $599,963, an average of $55.18 per farm. Of the total area, 5,616 acres, or 82.1 per cent,

were devoted to strawberries, of which the total production was 10,674,610 quarts. Over three-fourths of the acreage in this fruit was in the adjoining counties of Duplin, Pender, Sampson, and Wayne. The acreage and production of other berries were as follows: Blackberries and dewberries, 1,073 acres and 1,089,290 quarts; raspberries and Logan berries, 69 acres and 78,050 quarts; currants, 28 acres and 32,360 quarts; gooseberries, 25 acres and 30,340 quarts; and other berries, 26 acres and 29,410 quarts.

VEGETABLES.

The value of the vegetables grown in 1899, including potatoes, sweet potatoes, and onions, was $6,103,957, or 7.7 per cent of the gross farm income. Of this amount 49.7 per cent represents the value of miscellaneous vegetables; 34.8 per cent, that of sweet potatoes; 14.1 per cent, that of Irish potatoes; and 1.4 per cent, that of onions.

Sweet potatoes were grown in 1899 by 112,951 farmers, or approximately one-half the total number in the state. The area devoted to this crop in 1889 was 71,752 acres, and in 1899, 68,730 acres, a decrease of 4.2 per cent. The total crop was 5,781,587 bushels, an average of 84.1 bushels per acre. The leading counties are Columbus, Sampson, Johnston, Beaufort, Brunswick, Duplin, and Robeson, ranking in the order named.

Aside from the land devoted to potatoes, sweet potatoes, and onions, 63,762 acres were used in the growing of miscellaneous vegetables. The products of 38,566 acres were not reported in detail; of the remaining area, 9,814 acres were devoted to watermelons; 9,747, to cabbages; 1,729, to muskmelons; 1,166, to tomatoes; 626, to beans; 611, to cucumbers; 610, to sweet corn; and 893 acres to other vegetables.

PEANUTS.

Peanuts were grown in 1899 by 19,685 farmers, who devoted 95,856 acres to their cultivation. The total production was 3,460,439 bushels, an average of 36.1 bushels per acre. In the last decade the gain in acreage was fourfold, and that in production sevenfold. Of the total acreage, 66.6 per cent was reported from the 6 northeastern counties of Bertie, Halifax, Northampton, Hertford, Martin, and Edgecombe, ranking in the order named. The area devoted to peanut growing has increased at least tenfold since 1889 in each of these counties, while Bertie county shows a gain from 528 acres to 14,499 acres, or about twenty-sevenfold.

TOBACCO.

According to the census of 1850, North Carolina produced in 1849, 11,984,786 pounds of tobacco. The production in 1859 was nearly three times as great, while the crop of 1869 fell below that of 1849. In the two succeeding decades, there were large increases, amounting to 15,836,126 pounds, or 142.0 per cent, between 1870 and 1880, and to 9,389,045 pounds, or 34.8 per cent, between 1880 and 1890.

In 1899 tobacco was grown in North Carolina by 51,106 farmers, who obtained from 203,023 acres a yield of 127,503,400 pounds, valued at $8,038,691. The average value per pound was 6.3 cents. The increase in area in the last decade was 105,946 acres, or 109.1 per cent, and that in production 91,128,142 pounds, or 250.5 per cent. The average yield per acre in 1899 was 628 pounds, against 375 pounds in 1889, and 472 pounds in 1879.

Of the 86 counties reporting the cultivation of tobacco in 1899, the county having the largest acreage was Rockingham, with 16,882 acres. Pitt county reported the largest production, 10,733,010 pounds, and was closely followed by Rockingham, Nash, Wilson, Stokes, Granville, Franklin, Caswell, Greene, and Person counties in the order named. The 12 leading counties of the state contained 61.3 per cent of the entire acreage in tobacco and contributed 63.0 per cent of the total production.

SUGAR CANE AND SORGHUM CANE.

In 1899, 57 farmers raised 25 acres of sugar cane, from which they sold 11 tons of cane for $54, and manufactured from the remaining cane 1,957 gallons of sirup, valued at $1,008. The entire crop of cane reported was grown in Columbus county. Previous to the present census no cane, sugar, or sirup had been reported from the state since 1869, in which year 42,000 pounds of sugar, and 33,888 gallons of sirup were produced.

In 1899, 20,227 acres of sorghum cane were grown by 48,214 farmers, an average of 0.42 acre for each farm reporting. From this area 5,980 tons of cane were sold for $17,083, and from the remaining cane 1,419,570 gallons of sirup, valued at $429,814, were manufactured. This was a decrease since 1889 of 16.0 per cent in acreage and an increase of 150,624 gallons, or 11.9 per cent in production of sirup. The total value of sorghum cane products for 1899 was $446,897, an average of $9.27 for each farm reporting. The sorghum crop was distributed quite uniformly over 93 counties of the state.

FLOWERS AND PLANTS.

In 1899 the operators of 58 farms raised flowers and plants valued at $31,163. Of this number, 15 were commercial florists, who reported a gross income of $25,234, of which $23,909 was derived from the sale of flowers and plants, and $1,325 from other products. The capital invested was $67,095—$39,585 in land, $26,255 in buildings and other improvements, $615 in implements, and $640 in live stock. The expenditure for fertilizers was $165, and that for labor $4,060.

A total of 186,900 square feet of land under glass was reported by the operators of 139 farms, including the 15 florists, who reported 61,444 square feet.

NURSERIES.

The 25 nurserymen in the state reported a gross income of $129,714, of which amount $118,509 was derived from the sale of trees, shrubs, and plants, and $11,205 from other products. The total area of land used was 2,441 acres, making the gross income per acre $53.14. The value of

land was $63,800; that of buildings and other improvements, $28,959; that of implements and machinery, $4,935; and that of live stock, $3,800. The expenditures for labor and fertilizers were $27,549 and $3,636, respectively.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was $5,444,950, an average of $24 per farm. The average was highest on the most intensively cultivated farms, having been $1,102 for nurseries, $271 for florists' establishments, $70 for dairy farms, $51 for fruit farms, $48 for vegetable farms, $38 for tobacco farms, $38 for rice farms, $32 for cotton farms, $15 for live-stock farms, $14 for hay and grain farms, and $5 for sugar farms. "Managers" expended on an average, $335; "owners," $29; "cash tenants," $22; and "share tenants," $13. White farmers expended $29 per farm, and colored farmers, $9.

Fertilizers purchased in 1899 cost $4,479,030, or an average of $20 per farm, and an increase since 1890 of $1,596,792, or 55.4 per cent. The average expenditure in 1899 was greatest for nurseries, amounting to $145. For vegetable farms the average was $43; for tobacco farms, $42; for dairy farms, $15; for florists' establishments, $11; for hay and grain farms, $11; for sugar farms, $9; for live-stock farms, $7; and for rice farms, $5.

IRRIGATION STATISTICS.

Irrigation in North Carolina is practiced principally in the cultivation of rice in the tide-water districts. With the exception of a few inland basins or flats, dependent on reservoirs for water supply, the entire crop of irrigated rice is planted along the tide-water rivers, which are fresh, where there is sufficient oscillation of the tides to afford the means of flooding and draining the dike-protected lands.

The rice fields are divided by check banks into sections ranging in area from 5 to 30 acres each, which are subdivided by ditches into beds. Each section is provided with a wooden trunk or box built under the dikes, with a door at each end by means of which the ingress and egress of the water is controlled. These trunks are from 30 to 40 feet long, and from 3 to 4 feet wide, with a depth of 16 inches. In flooding the field, the outer door is hoisted, and as the tide rises the water comes in through the trunk and passes through the ditches. When the tide begins to recede, the inner door is closed and the water is securely stored. To drain the field thoroughly, it is only necessary to open the inner doors at low tide.

The average first cost per acre of preparing rice lands for irrigation, including the cost of constructing dikes, trunks, check banks, and ditches, is $34.35.

The principal rice-growing counties in 1899 were Hyde, with 2,203,606 pounds; Brunswick, with 1,215,814 pounds; Pasquotank, with 748,376 pounds; Perquimans, with 573,256 pounds; and Camden, with 556,254 pounds. The total production of the 5 counties was 5,297,306 pounds, or 67.0 per cent of the total crop of the state.

A considerable area of land in Hyde county is irrigated by pumping from Mattamuskeet Lake, situated near the center of the county. The surface of the county is low and flat, and some of the rice land is below the level of the lake, and can be irrigated simply by cutting ditches from the lake to the farms. The highest lift required to irrigate any of the contiguous land is 4 feet. Rice grown in this section is of a superior quality. Land lying below the level of the lake can be irrigated at very little expense, one rice grower reporting that the entire cost of his irrigation plant, including engine, elevator, etc., was but $500. The area irrigated by this grower was 300 acres, and the average cost per acre for labor and fuel was 75 cents.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 179. WASHINGTON, D. C. June 3, 1902.

AGRICULTURE.

NEW YORK.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of New York, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of New York, June 1, 1900, numbered 226,720, and were valued at $888,134,180. Of this amount, $336,959,960, or 37.9 per cent, represents the value of buildings, and $551,174,220, or 62.1 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was $50,006,000, and that of live stock, $125,583,715. These values, added to that of farms, give $1,069,723,895, the "total value of farm property." The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $245,270,600, of which amount $95,352,247, or 38.9 per cent, represents the value of animal products, and $149,918,353, or 61.1 per cent, the value of crops, including forest products cut or produced on farms. The total value of farm products for 1899 exceeds that reported for 1889 by $83,677,591, or 51.8 per cent.

The "gross farm income" is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was $63,429,180, leaving $181,841,420 as the gross farm income. The ratio which this latter amount bears to the "total value of farm property" is referred to in the text as the "percentage of gross income upon investment." For New York, in 1899, it was 17.0 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States. The present publication is designed to present a summarized advance statement for New York.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

CP 15M

AGRICULTURE IN NEW YORK.

GENERAL STATISTICS.

New York has a total land area of 47,620 square miles, or 30,476,800 acres, of which 22,648,109 acres, or 74.3 per cent, are included in farms.

The surface of the state is greatly varied. Its eastern portion is traversed by several chains of mountains, among which are the Adirondacks and the Catskills. The points of greatest elevation are in the eastern and northeastern parts of the state, the altitude of the southeastern portion being less, although the surface is mountainous, except on the comparatively level Long Island coast. To the north and west of these highlands, the surface sinks gradually by a series of terraces, toward Lake Ontario and the St. Lawrence River, where the land becomes more level and is diversified by many small lakes and rivers.

The land is for the most part arable, much of it being unusually fertile. The soil is composed mainly of the glacial drift, which lies in an irregular sheet, varying in depth from a few inches to several hundred feet. Along the shores of the lakes and rivers are found rich deposits of clay, alluvium, and marl, mixed with humus.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the percentage of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	226,720	22,648,109	15,599,986	7,048,123	99.9	68.9
1890	226,223	21,961,502	16,389,380	5,572,182	97.1	74.6
1880	241,058	23,780,754	17,717,862	6,062,892	98.7	74.5
1870	216,253	22,190,810	15,627,206	6,563,604	102.6	70.4
1860	196,990	20,974,958	14,358,403	6,616,555	106.5	68.4
1850	170,621	19,119,084	12,408,964	6,710,120	112.1	64.9

Since 1850 the number of farms has increased 56,099, or 32.9 per cent, but in the last decade a gain of only 497 farms, or 0.2 per cent is shown. Between 1850 and 1900 the total area in farm land increased 3,529,025 acres, or 18.5 per cent. Owing to the more rapid increase in the number of farms than in the total acreage, there has been a decrease in the average size of farms in each decade, except that between 1890 and 1900. The percentage of farm land improved has increased continuously except for the last decade, the decrease in this period being doubtless the result of a more strict construction of the term "improved land" in 1900 than heretofore.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[1]
1900	$1,069,728,895	$888,134,180	$36,006,000	$125,588,715	$245,270,600
1890	1,139,310,716	968,127,286	46,659,465	124,523,965	161,593,009
1880	1,216,637,765	1,056,176,741	42,592,741	117,868,283	178,025,695
1870[2]	1,494,738,190	1,272,857,766	45,997,712	175,882,712	[3]253,526,153
1860	936,366,584	803,343,593	29,166,695	103,856,296	----------
1850	650,202,067	554,546,642	22,084,926	73,570,499	----------

[1] For year preceding that designated.
[2] Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.
[3] Includes betterments and additions to live stock.

The total value of farm property shows a gain since 1850 of $419,521,828, but in the last decade there was a loss of $69,586,821. This decrease is in the value of land, improvements, and buildings only, where the loss is $79,993,106, or 8.3 per cent. The value of implements and machinery shows an increase since 1890 of $9,346,535, or 20.0 per cent, and that of live stock a gain of $1,059,750, or 0.9 per cent. The value of farm products for 1899 exceeds that reported for 1889 by $83,677,591, or 51.8 per cent. Part of this increase, and of that in implements and machinery is doubtless the result of a more detailed enumeration in 1900 than heretofore.

COUNTY STATISTICS.

Table 3 gives an exhibit of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State	226,720	223,836	22,648,109	15,599,986	$551,174,220	$336,959,960	$56,006,000	$125,583,715	$181,841,420	$27,102,130	$4,493,050
Albany	3,281	3,251	298,656	245,969	6,782,350	6,428,530	1,080,910	1,575,077	2,806,275	486,300	55,090
Allegany	5,082	5,019	593,888	408,252	10,631,560	5,612,520	1,182,040	2,991,954	3,425,285	322,100	34,830
Broome	4,410	4,363	417,022	308,758	7,375,650	4,883,280	784,340	2,116,021	2,629,531	249,870	29,750
Cattaraugus	5,976	5,904	672,561	417,123	11,675,400	6,237,990	1,226,200	3,721,058	4,286,867	369,070	49,990
Cayuga	5,039	4,998	413,924	341,950	10,757,040	7,671,590	1,394,080	2,649,102	4,218,878	630,920	131,260
Chautauqua	7,404	7,291	614,303	434,246	16,470,490	8,869,090	1,563,600	3,934,751	5,805,773	676,430	102,630
Chemung	2,438	2,398	233,976	176,328	5,487,560	3,119,540	551,460	1,093,174	1,683,254	228,250	32,920
Chenango	4,473	4,413	543,884	398,503	7,829,260	5,551,300	959,160	3,198,673	3,702,369	410,680	48,590
Clinton	3,764	3,730	435,825	214,929	6,081,670	3,503,290	700,590	1,764,482	1,968,568	265,070	17,600
Columbia	2,944	2,919	375,904	301,103	6,450,670	5,847,010	955,180	1,810,089	2,664,286	591,390	41,900
Cortland	2,754	2,717	303,254	232,647	5,228,270	3,235,980	656,070	1,889,571	2,317,596	253,290	38,570
Delaware	5,232	5,168	795,997	502,036	9,349,570	7,437,090	1,147,460	4,123,807	4,731,475	483,550	38,450
Dutchess	3,537	3,515	466,453	348,495	10,399,650	10,316,300	1,380,880	2,927,062	3,881,586	901,600	55,500
Erie	7,929	7,782	571,084	428,024	34,212,480	11,026,460	2,247,420	4,111,360	5,801,603	752,860	186,370
Essex	2,412	2,387	401,912	152,255	3,571,120	2,673,670	441,560	1,195,881	1,125,008	188,860	13,440
Franklin	3,721	3,667	429,452	201,981	6,473,470	3,789,840	692,920	1,957,296	2,204,192	274,020	34,230
Fulton	2,234	2,193	208,687	115,213	2,603,800	2,066,850	331,420	332,680	1,027,283	135,020	35,130
Genesee	3,286	3,219	294,316	242,307	9,438,320	5,217,350	897,270	1,745,779	2,956,806	453,620	82,620
Greene	2,746	2,708	337,909	215,694	4,862,580	4,419,130	718,230	1,316,125	1,845,310	308,450	86,170
Hamilton	510	504	63,832	22,917	338,460	337,420	63,990	160,408	162,725	25,960	1,950
Herkimer	3,227	3,199	383,180	272,158	6,873,680	4,879,640	810,320	2,477,406	2,721,867	390,020	30,400
Jefferson	6,052	5,982	745,093	526,288	16,945,020	8,839,550	1,481,840	4,166,825	5,205,633	625,830	34,950
Kings	360	338	6,480	5,989	8,966,760	1,185,150	338,620	213,693	1,099,305	254,560	85,730
Lewis	3,338	3,747	494,165	272,866	6,455,090	3,748,190	702,540	2,160,460	2,240,523	252,010	35,290
Livingston	3,267	3,191	373,660	301,860	12,851,960	5,516,100	1,078,260	2,282,382	2,870,280	548,070	89,420
Madison	4,144	4,098	388,866	299,251	6,754,610	5,462,560	940,600	2,523,252	3,510,532	573,690	66,120
Monroe	5,889	5,828	381,941	339,870	23,724,770	11,597,480	1,894,660	2,823,543	6,454,975	1,091,660	214,030
Montgomery	2,407	2,387	236,934	202,394	5,941,600	4,608,840	769,990	1,608,651	2,064,886	353,780	17,810
Nassau	1,658	1,642	88,452	69,357	10,972,040	5,746,490	906,010	988,288	2,645,652	612,370	441,490
New York	184	180	3,461	2,599	7,064,600	688,650	96,130	110,824	447,923	95,490	29,260
Niagara	4,356	4,293	305,456	279,807	13,959,900	6,636,980	786,065	2,089,585	4,096,059	539,440	72,260
Oneida	7,232	7,146	657,748	447,359	12,560,500	8,687,940	1,435,780	3,987,463	4,950,018	818,800	112,630
Onondaga	6,305	6,231	453,934	383,621	16,474,420	10,149,940	1,679,100	3,480,038	5,312,363	825,190	110,030
Ontario	4,328	4,287	405,003	318,948	12,670,520	7,990,530	744,055	2,321,845	5,206,447	810,660	108,540
Orange	3,966	3,918	402,519	284,093	10,426,180	9,462,550	1,180,400	3,486,031	4,993,307	811,430	68,150
Orleans	2,964	2,924	237,600	205,279	8,315,300	4,833,770	935,270	1,507,141	3,081,832	331,110	93,840
Oswego	6,914	6,819	492,935	319,431	9,482,900	6,062,710	1,167,000	2,875,538	3,570,138	322,840	45,380
Otsego	5,634	5,586	612,224	470,787	9,487,540	7,350,970	1,223,000	3,414,454	4,261,749	635,020	84,190
Putnam	1,141	1,122	133,899	70,263	3,763,920	2,895,990	273,300	793,584	1,074,574	279,720	4,970
Queens	1,188	1,162	25,649	21,865	11,827,740	2,918,020	754,540	550,660	3,018,604	749,800	823,740
Rensselaer	3,668	3,639	365,007	256,584	6,122,330	6,266,440	1,048,920	1,852,146	3,128,532	564,830	52,170
Richmond	290	288	11,724	8,048	3,228,000	767,800	253,670	140,902	479,572	117,100	28,290
Rockland	939	923	62,050	32,649	2,764,650	2,274,090	223,810	366,633	604,243	159,870	19,890
St. Lawrence	8,353	8,278	1,068,798	559,010	18,732,620	10,082,490	1,743,080	5,952,795	6,481,416	662,030	49,610
Saratoga	3,805	3,747	406,079	271,135	5,335,210	4,943,790	817,530	1,622,720	2,324,751	345,360	48,980
Schenectady	1,194	1,178	119,577	95,396	2,623,370	2,016,150	377,260	575,180	927,340	147,060	21,810
Schoharie	3,437	3,400	367,023	283,225	5,381,490	4,515,620	789,820	1,774,038	2,458,156	374,950	29,590
Schuyler	2,103	2,078	196,718	158,991	3,964,810	2,903,990	538,950	969,863	1,313,858	157,760	15,690
Seneca	2,303	2,277	194,591	169,186	5,454,960	3,778,430	679,290	1,136,267	1,999,248	335,920	52,460
Steuben	8,179	8,009	825,334	610,181	17,863,180	9,303,860	1,942,310	3,661,234	5,432,426	637,990	47,970
Suffolk	3,277	3,231	276,860	130,144	12,684,600	8,597,670	943,850	1,462,775	2,918,071	637,540	476,050
Sullivan	3,887	3,848	478,783	201,032	4,922,860	5,032,350	742,800	1,775,134	1,814,060	190,020	16,780
Tioga	3,134	3,105	305,061	233,907	4,303,630	3,398,560	621,440	1,520,675	1,981,403	194,840	24,360
Tompkins	3,270	3,217	285,721	230,543	5,973,890	4,351,570	820,790	1,589,148	2,284,694	284,730	45,020
Ulster	5,181	5,125	522,113	254,310	7,854,510	7,278,590	1,121,880	2,059,818	3,361,315	655,440	102,260
Warren	2,121	2,098	286,945	127,763	1,829,730	1,578,950	278,520	654,339	825,523	88,340	10,780
Washington	3,715	3,693	454,502	314,993	6,411,260	5,572,510	880,710	2,099,953	2,727,680	449,850	29,960
Wayne	5,286	5,230	363,211	305,299	12,167,630	7,782,750	1,377,090	2,344,327	4,700,730	603,420	107,300
Westchester	2,326	2,301	184,512	124,916	16,884,890	10,606,110	981,070	1,956,578	2,568,955	891,090	63,610
Wyoming	3,519	3,490	367,894	270,374	8,608,380	4,626,840	908,560	2,144,329	3,093,091	284,110	72,880
Yates	2,504	2,465	203,568	168,485	6,523,200	3,770,120	740,690	1,099,258	2,225,029	336,080	49,070

Increases in the total number of farms in the last decade are reported for nearly half of the counties in the state. The remaining counties show slight decreases.

Three-fourths of the counties report increases in the total farm acreage since 1890. The decreases are reported from the counties in the eastern part of the state. The decrease in improved acreage reported in nearly all counties, is due to a more intensive cultivation of the soil, and to a more strict construction of the term "improved land" by the Twelfth than by preceding censuses. The counties containing the largest farms, are those having a number of hay and grain and dairy farms, while the smallest average farm areas are shown for the counties containing a number of florists' establishments and market gardens. The average size for the state is 99.9 acres and ranges from 18.0 acres in Kings county to 166.6 acres in Essex county.

In only a few of the extreme northern and southern counties is an increase in the value of farms reported for the last ten years. The average value for the state is $3,917, being highest in the southeastern counties, in several of which the average is over $10,000 per farm.

Fulton, Niagara, Ontario, and Queens counties alone report decreases in the value of implements and machinery. Most counties, except those on the northern and southern borders of the state, report decreases in the value of live stock.

The average expenditure for labor in 1899 was $119.54 per farm. It varied greatly in different sections of the state, being largest in the counties where floriculture and market gardening were the chief occupations. For fertilizers, the average expenditure per farm for the state was $20. Nearly all counties reported an increase in this item since 1889.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. Tenants are divided into two groups: "Cash tenants," who pay a rental in cash or a stated amount of labor or farm produce, and "share tenants," who pay as rental a stated share of the products.

In Table 5 the tenure of farms for 1900 is given by race of farmer, and farms operated by owners are subdivided into four groups designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other or others owning no part but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	226,720	172,517	24,303	29,900	76.1	10.7	13.2
1890	226,223	180,472	19,725	26,026	79.8	8.7	11.5
1880	241,058	201,186	18,124	21,748	83.5	7.6	9.0

[1] Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	226,720	152,956	13,497	2,245	3,819	24,303	29,900
White	225,935	152,399	13,419	2,241	3,806	24,242	29,828
Colored	785	557	78	4	13	61	72
Chinese	11					11	
Indian	331	282	30	1	1	1	16
Negro	443	275	48	3	12	49	56

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	67.5	5.9	1.0	1.7	10.7	13.2
White	100.0	67.5	5.9	1.0	1.7	10.7	13.2
Colored	100.0	70.9	9.9	0.5	1.7	7.8	9.2

Between 1890 and 1900, the number of farms operated by owners decreased 7,955, or 4.4 per cent. Cash tenant farms increased 4,578, or 23.2 per cent, and share tenant farms, 3,874, or 14.9 per cent. The relative number of share tenants was slightly less in 1900 than in 1890, this class contributing 56.9 per cent of the total number of tenants in the former year, and 55.2 per cent in the latter. The greatest relative numbers of cash tenants are in the southeastern counties, where the land is very valuable.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number of farms conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	226,720	99.9	22,648,109	100.0	$1,069,723,895	100.0
White farmers	225,935	100.0	22,600,592	99.8	1,067,898,391	99.8
Negro farmers	443	60.3	26,735	0.1	1,114,787	0.1
Indian farmers	331	62.7	20,744	0.1	691,797	0.1
Chinese farmers	11	3.5	38	(1)	108,920	(1)
Owners	152,956	90.4	13,828,567	61.1	626,707,561	58.6
Part owners	13,497	126.7	1,709,422	7.6	78,126,804	7.3
Owners and tenants	2,245	123.8	277,978	1.2	13,386,733	1.3
Managers	3,819	186.6	712,436	3.1	56,091,699	5.2
Cash tenants	24,303	95.3	2,315,789	10.2	134,567,491	12.6
Share tenants	29,900	127.2	3,803,917	16.8	160,843,607	15.0

[1] Less than one-tenth of 1 per cent.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,431	$1,486	$247	$554	$802	17.0
White farmers	2,435	1,489	248	555	804	17.0
Negro farmers	1,249	819	148	300	387	15.4
Indian farmers	1,055	450	113	201	294	16.1
Chinese farmers	9,464	286	138	19	831	8.4
Owners	1,962	1,399	233	504	732	17.9
Part owners	3,206	1,630	306	646	1,067	18.4
Owners and tenants	2,940	1,982	333	708	1,090	18.3
Managers	8,077	4,890	505	1,216	1,409	9.6
Cash tenants	3,482	1,292	231	532	802	14.5
Share tenants	2,809	1,552	271	687	942	17.5

The average values of the several forms of farm property and the per cent of gross income upon investment are con-

siderably lower for the farms of all colored farmers, except Chinese, than for those of white farmers.

Farms operated by owners have the smallest average area, 90.4 acres, and those conducted by managers the largest, 186.6 acres. A number of the farms operated by managers are adjuncts of public institutions, while others are conducted for wealthy individuals in connection with their summer homes. These farms are, as a rule, favorably located and highly improved, and their average values, shown in Table 7, are much larger than those for any other tenure group. The ratio which the gross income of these farms bears to the total value of farm property is, however, smaller than for the other groups. This is due to the high average valuation above noted and to the fact that very few of these farms are cultivated for profit.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	226,720	99.9	22,648,109	100.0	$1,069,723,895	100.0
Under 3 acres	2,971	1.7	5,109	(1)	8,367,231	0.8
3 to 9 acres	13,789	6.1	84,255	0.4	29,915,196	2.8
10 to 19 acres	15,782	13.8	218,157	1.0	39,397,835	3.7
20 to 49 acres	35,123	33.6	1,180,411	5.2	108,969,883	10.2
50 to 99 acres	63,789	71.3	4,551,108	20.1	251,343,891	23.5
100 to 174 acres	63,846	127.8	8,157,512	36.0	338,807,707	31.7
175 to 259 acres	21,335	207.0	4,416,428	19.5	162,097,992	15.1
260 to 499 acres	8,728	323.9	2,827,356	12.5	96,898,600	9.0
500 to 999 acres	1,109	622.8	690,692	3.0	23,290,139	2.2
1,000 acres and over	248	2,085.0	517,081	2.3	10,635,421	1.0

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,431	$1,486	$247	$554	$802	17.0
Under 3 acres	1,328	1,243	101	144	701	24.9
3 to 9 acres	1,025	924	100	120	321	14.8
10 to 19 acres	1,223	987	122	164	356	14.2
20 to 49 acres	1,619	1,057	165	262	458	14.8
50 to 99 acres	2,011	1,265	225	439	663	16.8
100 to 174 acres	2,638	1,663	298	708	991	18.7
175 to 259 acres	4,026	2,152	375	1,045	1,334	17.6
260 to 499 acres	6,338	2,884	464	1,416	1,777	16.0
500 to 999 acres	10,981	6,505	823	2,689	2,870	18.7
1,000 acres and over	27,502	10,665	1,244	3,474	3,719	8.7

The group of medium-sized farms, containing from 100 to 174 acres each, comprises over one-third of the total farm acreage, and more than one-fourth of the total value of farm property.

For the group of farms containing less than 3 acres each, the average values given in Table 9 are relatively high, as this group contains more than one-half of the florists' establishments of the state, and a large number of city dairies and vegetable farms. It should be borne in mind that the income from these industries is determined less by the acreage of land used than by the amount of capital invested in buildings, implements, and live stock, and by the expenditures for labor and fertilizers.

The average gross income per acre for each of the various groups classified by area is as follows: Farms under 3 acres, $407.71; 3 to 9 acres, $52.60; 10 to 19 acres, $25.72; 20 to 49 acres, $13.64; 50 to 99 acres, $9.29; 100 to 174 acres, $7.75; 175 to 259 acres, $6.45; 260 to 499 acres, $5.49; 500 to 999 acres, $4.61; and 1,000 acres and over, $1.78.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the value of products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	226,720	99.9	22,648,109	100.0	$1,069,723,895	100.0
Hay and grain	27,095	104.1	2,819,847	12.5	140,739,391	13.2
Vegetables	17,083	59.1	1,009,397	4.5	101,102,441	9.4
Fruits	10,367	52.4	542,792	2.4	51,157,185	4.8
Live stock	38,182	91.3	3,485,805	15.4	145,572,118	13.6
Dairy produce	67,457	129.1	8,706,442	38.4	352,953,954	33.0
Tobacco	1,068	70.6	75,348	0.3	5,186,168	0.5
Sugar	51	135.4	6,907	(1)	279,240	(1)
Flowers and plants	983	7.5	7,362	(1)	8,692,939	0.8
Nursery products	237	74.1	17,568	0.1	3,803,232	0.4
Miscellaneous	64,197	93.1	5,976,641	26.4	260,287,227	24.3

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,431	$1,486	$247	$554	$802	17.0
Hay and grain	2,088	1,548	248	410	708	13.6
Vegetables	3,743	1,541	281	353	902	15.3
Fruits	2,719	1,651	244	321	992	20.1
Live stock	1,697	1,337	219	560	552	14.5
Dairy produce	2,564	1,582	269	817	984	18.8
Tobacco	2,535	1,654	260	407	979	20.2
Sugar	3,697	1,177	196	405	553	10.1
Flowers and plants	4,466	4,039	272	66	2,916	33.0
Nursery products	10,685	4,534	493	335	7,060	44.0
Miscellaneous	2,033	1,354	231	436	683	16.9

For the several classes of farms the average values per acre of products not fed to live stock are as follows: For farms deriving their principal income from flowers and plants, $389.34; nursery products, $95.24; fruit, $18.94; vegetables, $15.27; dairy produce, $7.63; miscellaneous products, $7.34; hay and grain, $6.80; live stock, $6.05; and sugar, $4.08.

The wide variations in the averages and percentages of gross income, shown for the several classes of farms, are largely due to the fact that in computing gross income no deduction is made for expenditures. For florists' establishments, nurseries, and market gardens, the average expenditures represent a far greater percentage of the gross income than in the case of "hay and grain," "live stock," or "miscellaneous" farms. Were it possible to present the average net incomes, the variations shown would be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	226,720	99.9	22,648,109	100.0	$1,069,723,895	100.0
$0	487	57.7	28,116	0.1	2,021,610	0.2
$1 to $49	3,370	32.7	110,095	0.5	5,615,490	0.5
$50 to $99	7,944	29.3	233,020	1.0	12,099,130	1.1
$100 to $249	34,918	42.4	1,480,248	6.5	66,386,110	6.2
$250 to $499	52,395	74.1	3,884,443	17.2	149,312,530	14.0
$500 to $999	68,689	107.7	7,398,874	32.7	308,055,490	28.8
$1,000 to $2,499	51,295	153.1	7,854,196	34.7	392,162,610	36.7
$2,500 and over	7,622	217.7	1,659,117	7.3	134,070,925	12.5

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,431	$1,486	$247	$554	$802	17.0
$0	2,311	1,166	117	557	----------	----------
$1 to $49	867	653	56	90	46	2.7
$50 to $99	736	613	64	110	74	4.9
$100 to $249	883	750	94	174	172	9.1
$250 to $499	1,368	994	158	330	359	12.6
$500 to $999	2,233	1,433	251	568	738	16.5
$1,000 to $2,499	4,026	2,275	401	943	1,450	19.0
$2,500 and over	10,349	4,713	765	1,763	4,093	23.3

Of the farms of the state, 487, ranging in area from 3 to 1,000 acres, report no income. The average values of the land and improvements, buildings, and live stock of these farms are very high. This, together with the fact that 283 of them are operated by their owners, indicates that many of them are the suburban or summer homes

of city merchants and professional men who derive their principal income from other than agricultural pursuits. The same statement is also true of some of the farms with reported incomes of less than $100. Some, however, are farms that were partially abandoned in 1899, while others had changed owners or tenants, and the persons in charge, June 1, 1900, could not always give definite information concerning the products of the preceding year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the Twelfth Census. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	507,140	$3,144,954	$6.20	5,903
Steers	1 and under 2	36,446	578,624	15.88	730
Steers	2 and under 3	23,492	656,229	27.93	2,875
Steers	3 and over	8,253	385,378	46.70	5,207
Bulls	1 and over	85,140	1,730,526	20.33	517
Heifers	1 and under 2	335,844	5,151,708	15.34	3,136
Cows kept for milk	2 and over	1,501,608	48,694,512	32.43	36,313
Cows and heifers not kept for milk.	2 and over	98,466	2,393,248	24.31	814
Colts	Under 1	20,027	650,894	32.50	856
Horses	1 and under 2	30,033	1,771,023	58.97	1,192
Horses	2 and over	578,378	45,556,014	78.77	303,889
Mule colts	Under 1	192	6,162	32.09	7
Mules	1 and under 2	182	9,160	50.33	14
Mules	2 and over	2,939	213,850	72.76	1,845
Asses and burros	All ages	338	8,109	23.99	421
Lambs	Under 1	761,230	1,940,188	2.55	4,032
Sheep (ewes)	1 and over	938,315	3,729,631	3.97	12,330
Sheep (rams and wethers).	1 and over	46,201	252,127	5.46	1,686
Swine	All ages	676,639	3,794,332	5.61	52,176
Goats	All ages	1,316	6,442	4.90	8,046
Fowls:[1]					
Chickens[2]		8,964,736	4,310,755		
Turkeys		190,879			
Geese		45,983			
Ducks		159,864			
Bees (swarms of)		187,208	593,784	3.17	
Unclassified			6,075		
Value of all live stock			125,583,715		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of live stock on farms, June 1, 1900, was $125,583,715. Of this amount, 38.8 per cent represents the value of cows kept for milk; 38.2 per cent, that of horses; 11.2 per cent, that of neat cattle other than dairy cows; 4.7 per cent, that of sheep; 3.4 per cent, that of poultry; 3.0 per cent, that of swine; and 0.7 per cent, that of all other live stock.

Of the total number of steers 3 years old and over, 38.7 per cent are kept in towns or cities; the corresponding percentage for horses 2 years old and over, being 34.4. The total number of goats kept in towns or cities is more than twice the number kept on farms.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, however, the value of live stock not on farms is $26,184,844. The total value of all live stock in the state is approximately $151,768,560.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—*NUMBER OF SPECIFIED DOMESTIC ANIMALS* ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	1,501,608	1,094,781	628,438	3,651	984,516	676,639
1890	1,440,280	691,162	664,430	4,636	1,528,979	843,342
1880	1,437,355	901,866	610,358	5,072	1,715,180	751,907
1870	1,350,661	694,663	536,861	4,407	2,181,578	518,251
1860	1,123,634	849,540	503,725	1,553	2,617,855	910,178
1850	931,324	946,315	447,014	963	3,453,241	1,018,252

[1] Lambs not included.

The development of intensive agriculture in New York has been attended by important changes in the general character of live stock kept on farms.

The remarkable growth in dairying is shown by the constantly increasing number of dairy cows; the gradual but constant decrease in the number of sheep since 1850 and of swine during the last decade is incident to the transfer of the meat-producing and wool-growing industries to the Western states. There was, during the last ten years, a small decrease in the number of horses and mules throughout the state.

Compared with the census of 1890, the present census shows increases of 4.3 per cent in the number of dairy cows, and of 58.4 per cent in the number of other neat cattle, and decreases as follows: Horses, 5.4 per cent; mules and asses, 21.2 per cent; sheep, 35.6 per cent; and swine, 19.8 per cent.

In 1900 the enumerators were instructed to report no fowls under three months old, this limitation not being made in former census years. This fact probably accounts for the apparent decreases in the number of turkeys, ducks, and geese, and the small increase in the number of chickens. Compared with the Eleventh Census, the report of 1900 shows an increase of 6.4 per cent in the number of chickens, *and the following decreases: Turkeys, 52.6 per cent*; ducks, 49.9 per cent; and geese, 42.9 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the animal products of 1899.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS, IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	6,674,165	$1,387,969
Mohair and goat hair	Pounds	383	155
Milk	Gallons	[1]772,799,352	
Butter	Pounds	74,714,376	[2]55,474,155
Cheese	Pounds	2,624,552	
Eggs	Dozens	62,096,690	8,630,062
Poultry			6,161,429
Honey	Pounds	3,422,497	352,795
Wax	Pounds	84,075	
Animals sold			15,025,932
Animals slaughtered			8,319,750
Total			95,352,247

[1]Comprises all milk produced, whether sold, consumed, or made into butter or cheese.
[2]Comprises the value of milk sold and consumed, and of butter and cheese made.

The value of the animal products for the state in 1899 was $95,352,247. Of this amount 58.2 per cent represents the value of dairy products; 24.5 per cent, that of animals sold and animals slaughtered on farms; 15.5 per cent, that of poultry and eggs; 1.4 per cent, that of wool, mohair, and goat hair; and 0.4 per cent, that of honey and wax.

DAIRY PRODUCE.

The importance of the dairy industry is shown by the fact that in 1899 the proprietors of 67,457 farms, or 29.8 per cent of all in the state, derived their principal income from the sale of dairy produce, while the value of all dairy products constituted 30.5 per cent of the gross farm income. The production of milk in 1899 was 108,882,112 gallons greater than in 1889, a gain of 16.4 per cent. As the number of dairy cows increased but 4.3 per cent in the same time, the increased production of milk indicates an improvement in the grade of cows kept, and in the care given them.

Decreases since 1889 of 23.9 per cent in the quantity of butter produced on farms, and 39.3 per cent in the quantity of cheese, are significant of a change in the general character of the dairy industry. The larger quantities of butter and cheese made in creameries and cheese factories, and the increased consumption of milk and cream in cities, account for the change.

Of the $55,474,155 given in Table 16 as the value of dairy products, $46,670,916, or 84.1 per cent, represents the value of such products sold, and $8,803,239, or 15.9 per cent, that of dairy produce consumed on farms. Of the former amount, $36,248,833 was received from the sale of 445,427,888 gallons of milk; $9,868,446, from 51,861,592 pounds of butter; $312,414, from 609,866 gallons of cream; and $241,223, from 2,524,917 pounds of cheese.

POULTRY AND EGGS.

The value of the products of the poultry industry for 1899 was $14,791,491, of which 58.3 per cent represents the value of eggs produced, and 41.7 per cent, that of poultry raised. Over sixteen million dozen more eggs were produced in 1899 than in 1889, the gain being 35.6 per cent.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms in 1899 was $23,345,682, or 12.8 per cent of the gross farm income. Of all farmers reporting live stock, 162,630, or 75.2 per cent, report animals slaughtered, the average value per farm being $51.16. Sales are reported by 147,238 farmers, or 68.1 per cent of all reporting live stock, the average receipts per farm being $102.05. In obtaining these reports, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

WOOL.

The production of wool for the state has decreased steadily since 1869, the production of 1899 being 6,674,165 pounds, a decrease of 0.6 per cent since 1889.

HONEY AND WAX.

In 1899, 3,422,497 pounds of honey and 84,075 pounds of wax were produced, a decrease of 20.1 per cent since 1889 in quantity of honey, and an increase of 26.1 per cent in quantity of wax.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total	203,469	628,438	3.1	196,366	1,501,608	7.6
White farmers	202,832	626,848	3.1	195,920	1,499,941	7.7
Colored farmers	637	1,590	2.5	446	1,667	3.7
Owners[1]	150,607	448,179	3.0	146,004	1,023,531	7.0
Managers	3,278	17,196	5.2	2,999	31,431	10.5
Cash tenants	21,461	65,586	3.1	19,986	166,034	8.3
Share tenants	28,123	97,477	3.5	27,377	280,612	10.2
Under 20 acres	22,502	33,769	1.5	18,650	37,604	2.0
20 to 99 acres	88,766	225,179	2.5	86,227	394,118	4.6
100 to 174 acres	61,540	219,912	3.6	61,117	564,136	9.2
175 to 259 acres	20,847	92,046	4.4	20,673	308,118	14.9
260 acres and over	9,814	57,532	5.9	9,699	197,632	20.4
Hay and grain	20,470	83,382	4.1	18,137	80,960	4.5
Vegetable	15,301	44,510	2.9	12,187	38,299	3.1
Fruit	8,985	23,694	2.6	7,107	19,273	2.7
Live stock	34,990	102,891	2.9	34,509	178,569	5.2
Dairy	64,390	209,901	3.3	67,638	922,128	13.6
Tobacco	847	2,752	3.2	837	4,328	5.2
Sugar	36	112	3.1	31	213	7.8
Miscellaneous[2]	58,450	161,196	2.8	55,920	257,808	4.6

[1]Including "part owners" and "owners and tenants."
[2]Including florists' establishments and nurseries.

CROPS.

The following table gives the statistics of the principal crops grown in 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	658,652	Bushels	20,024,865	$9,181,791
Wheat	557,736	Bushels	10,412,675	7,332,597
Oats	1,329,753	Bushels	40,785,900	12,929,092
Barley	111,658	Bushels	2,943,250	1,402,184
Rye	177,416	Bushels	2,431,670	1,393,313
Buckwheat	289,862	Bushels	3,815,350	2,045,737
Flaxseed	159	Bushels	1,350	1,485
Clover seed		Bushels	7,880	42,384
Grass seed		Bushels	3,619	5,406
Hay and forage	5,154,965	Tons	6,389,496	55,237,446
Tobacco	11,307	Pounds	13,958,370	1,172,236
Hops	27,533	Pounds	17,332,310	1,600,305
Peppermint	62	Pounds	700	613
Broom corn	356	Pounds	201,060	8,967
Dry beans	129,298	Bushels	1,360,445	2,472,668
Dry peas	14,748	Bushels	251,889	230,609
Potatoes	395,640	Bushels	38,060,471	15,019,135
Sweet potatoes	73	Bushels	8,681	5,588
Onions	6,033	Bushels	2,177,271	1,066,042
Chicory	4	Pounds	20,500	162
Miscellaneous vegetables	138,285			9,590,016
Maple sugar		Pounds	8,623,540	807,184
Maple sirup		Gallons	413,159	323,996
Sorghum sirup	[1]14	Gallons	973	371
Sugar beets	2,053	Tons	16,003	75,487
Small fruits	25,051			2,538,363
Grapes	[2]42,337	Centals	2,476,981	[3]2,763,711
Orchard fruits	[2]437,582	Bushels		[4]10,542,272
Nuts				71,122
Forest products				7,671,099
Willows	366			22,495
Flowers and foliage plants	1,496			2,867,673
Seeds	529			54,148
Nursery products	8,238			1,642,107
Miscellaneous	442			[5]300,549
Total	9,521,648			149,918,353

[1] Sorghum cane.
[2] Estimated from the number of vines or trees.
[3] Including value of wine, raisins, etc.
[4] Including value of cider, vinegar, etc.
[5] The greater part of this value was derived from products for which no acreage was reported.

Of the total value of crops, hay and forage contributed 36.9 per cent; cereals, 22.9 per cent; vegetables, including potatoes, sweet potatoes, and onions, 17.1 per cent; fruits, 10.6 per cent; forest products, 5.1 per cent; nursery and florists' products and seeds, 3.0 per cent; and all other crops, 4.4 per cent.

The average values per acre of the various crops are as follows: Flowers and plants, $1,916.89; nursery products, $199.33; tobacco, $103.67; small fruits, $101.33; miscellaneous vegetables, $69.35; grapes, $65.28; hops, $58.12; potatoes, $37.96; orchard fruits, $24.09; beans and pease, $18.77; cereals, $10.97.

CEREALS.

The following table is an exhibit of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	111,658	289,862	658,654	1,329,753	177,416	557,736
1889	349,311	280,029	493,320	1,417,371	236,874	462,561
1879	356,829	291,228	779,272	1,261,171	244,923	736,611

[1] No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899	2,943,250	3,815,350	20,024,865	40,785,900	2,431,670	10,412,675
1889	8,220,242	4,675,735	15,109,969	38,396,479	3,065,623	8,304,539
1879	7,792,062	4,461,200	25,690,156	37,575,506	2,634,690	11,587,766
1869	7,434,621	3,904,030	16,462,825	35,293,625	2,478,125	12,178,462
1859	4,186,668	5,126,307	20,061,049	35,175,184	4,786,905	8,681,105
1849	3,585,059	3,183,955	17,858,400	26,552,814	4,148,182	13,121,458

The total area devoted to cereals in 1879 was 3,669,834 acres; in 1889, 3,239,466 acres; and in 1899, 3,125,079 acres. Of the total area under cereals in 1899, 42.5 per cent was devoted to oats; 21.1 per cent, to corn; 17.8 per cent, to wheat; 9.3 per cent, to buckwheat; 5.7 per cent, to rye; and 3.6 per cent, to barley.

The increases in area devoted to cereals in the decade 1889–1899, were: Corn, 33.5 per cent; wheat, 20.6 per cent; and buckwheat, 3.5 per cent. The decreases were: Oats, 6.2 per cent; rye, 25.1 per cent; and barley, 68.1 per cent.

The total number of bushels of cereals produced in 1849 was 68,449,908, and in 1899, 80,413,710, showing an increase of 17.5 per cent in fifty years.

Oats are raised in every county in the state, but particularly in the St. Lawrence Valley, Jefferson and Lawrence counties each reporting more than 2,000,000 bushels. The acreage under corn is distributed throughout the state, the largest yield coming from the counties of Onondaga, including Onondaga Indian reservation, Cayuga, and Dutchess, respectively. Wheat is most extensively grown in the Genesee Valley, especially in Monroe and Ontario counties.

HAY AND FORAGE.

In 1900, 210,527 farmers, or 92.9 per cent of the total number, reported hay and forage crops. Exclusive of cornstalks, an average yield of 1.2 tons per acre was obtained. The total area in hay and forage in 1899 was 5,154,965 acres, or 1.7 per cent less than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, and prairie grasses, 26,006 acres and 29,719 tons; millet and Hungarian grasses, 10,401 acres and 18,341 tons; alfalfa or lucern, 5,582 acres and 13,002 tons; clover, 103,155 acres and 114,660 tons; other tame and cultivated grasses, 4,758,523 acres and 5,082,322 tons; grains cut green for hay, 61,697 acres and 96,693 tons; crops grown for forage, 189,601 acres and 964,738 tons; and cornstalks, 45,469 acres and 70,021 tons.

In Table 18 the production of cornstalks is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	15,054,882	14,428,381	24,111,257	8,493,846
Apricots	25,606	6,540	15,710	281
Cherries	539,742	391,446	218,642	44,298
Peaches	2,522,729	1,014,110	466,850	169,976
Pears	2,183,909	1,178,206	960,170	588,767
Plums and prunes	988,147	504,365	303,688	78,411

Of the farmers of the state, 158,860, or 70.1 per cent,

reported orchard fruits for 1899. The value of orchard products was not reported by the census of 1890, but in 1879 the total value of such products was $8,409,794. For 1899 the corresponding value is $10,542,272, a gain in twenty years of 25.4 per cent. The total number of trees increased from 17,518,048 to 21,470,841 in the last ten years. For this period the percentages of increase in the numbers of the various trees are as follows: Apricot, 291.5; peach, 148.8; plum and prune, 95.9; pear, 86.1; cherry, 37.9; and apple, 4.3.

In 1900, 70.1 per cent of all fruit trees in the state were apple trees; 11.7 per cent, peach trees; 10.2 per cent, pear trees; 4.6 per cent, plum and prune trees; and 3.4 per cent, all other fruit trees.

Apple trees were reported by 174,579 farmers. A large percentage of the apple trees reported are in the western counties, more than one-fourth of the total number being in Niagara, Wayne, Monroe, Erie, and Orleans counties.

Niagara, Ulster, and Monroe counties contain over one-half of the peach trees, which are reported by 21,798 farmers. Nearly one-fifth of the pear and plum and prune trees are grown in Niagara county, and Columbia is the leading cherry-growing county. The majority of the apricot trees are reported from Seneca and Ontario counties.

In addition to the trees given in Table 20, unclassified fruit trees to the number of 155,876 are reported, with a yield of 95,993 bushels of fruit. The value of orchard products, given in Table 18, includes the value of 145,953 barrels of cider, 18,250 barrels of vinegar, and 3,658,610 pounds of dried and evaporated fruits. Approximately four-fifths of this fruit comes from Wayne county.

The quantity of fruit produced in any year is determined so largely by the nature of the season, that comparisons between the crop of 1889 and that of 1899 have little significance. In the latter season there was a very large production of all fruits.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 25,051 acres, distributed among 39,984 farmers. The value of the fruits grown was $2,538,363, an average of $63 per farm. Of the total area, 12,376 acres, or 49.4 per cent, were devoted to raspberries and Logan berries. The total production of these berries for the state was 17,575,530 quarts, of which nearly one-half were grown in the adjoining counties of Wayne, Ontario, Yates, and Monroe. The acreages and productions of the other small fruits were as follows: Strawberries, 7,311 acres and 13,849,860 quarts; currants, 2,594 acres and 4,584,080 quarts; blackberries and dewberries, 2,060 acres and 3,167,090 quarts; and other berries, 710 acres and 862,107 quarts.

VEGETABLES.

The value of the vegetables grown in 1899, including potatoes, sweet potatoes, and onions, was $25,680,781, representing 14.1 per cent of the gross farm income. Of the total, 58.5 per cent represents the value of potatoes. This important crop was reported by 194,914 farmers, or 86.0 per cent of the total number in the state.

Aside from the land devoted to potatoes and onions, 138,285 acres were used in the growing of miscellaneous vegetables. The products of 42,123 acres of this area were not reported in detail. Of the remaining area, 35,818 acres were devoted to sweet corn; 25,261, to cabbages; 9,159, to tomatoes; 7,421, to pease; 3,624, to cucumbers; 2,021, to beans; 1,830, to cauliflower; 1,735, to beets; 1,624, to celery; 1,569, to carrots; 1,533, to muskmelons; 1,335, to turnips; 811, to asparagus; 749, to squashes; 323, to lettuce; 288, to radishes; 277, to spinach; 276, to watermelons; 205, to parsnips; 192, to rhubarb; and 111, to other vegetables.

SUGAR BEETS.

Though begun in the last decade, the growing of sugar beets has become an important branch of agriculture in New York. In 1899, 774 farmers devoted to this crop an area of 2,053 acres, an average of 2.7 acres per farm. They obtained and sold from this land 16,003 tons of beets, an average of 7.8 tons per acre, and received therefrom $75,487, an average of $98 per farm, $37 per acre, and $4.72 per ton.

Beets were raised in 28 counties, Wayne, Broome, Ontario, Yates, and Steuben counties, ranking in the order named, reporting 76.0 per cent of the total acreage.

HOPS.

The cultivation of hops has for years been an important industry in New York, and was reported as early as 1839. Up to 1880, the production increased in each decade as follows: 1850 to 1860, 7,135,632 pounds; 1860 to 1870, 7,886,750 pounds; 1870 to 1880, 4,070,250 pounds; but from 1880 to 1890 it decreased 1,565,902 pounds, or 7.2 per cent. In 1899, 5,003 farmers, in 32 counties, devoted to this crop 27,533 acres, an average of 5.5 acres per farm. They obtained from this land 17,332,340 pounds, an average of 630 pounds per acre, which was a decrease since 1889 of 2,730,689 pounds, or 13.6 per cent. From the sale of this product they received $1,600,305, an average of $320 per farm, $58 per acre, and $0.09 per pound. The counties producing the most hops are Otsego, Schoharie, Madison, and Oneida, ranking in the order named, and reporting 80.1 per cent of the total acreage.

The recent growth of hop culture on the Pacific coast has affected the production of this crop in the Eastern states, and accounts for the noticeable decrease in New York.

TOBACCO.

According to the census of 1850, New York produced in 1849, 83,189 pounds of tobacco. The census of 1860 showed a production of 5,764,582 pounds, while between 1860 and 1870 there was a decrease of 3,414,784 pounds, or 59.2 per cent. In each of the three decades since 1870, there has been a considerable increase in production. Between 1870 and 1880 there was a gain of 4,131,633

pounds, or 175.8 per cent, and between 1880 and 1890 there was a gain of 2,834,704 pounds, or 43.7 per cent.

The present census shows that in 1899 tobacco was grown in New York by 4,221 farmers, who obtained from 11,307 acres, a yield of 13,958,370 pounds, valued at $1,172,236. This was a gain over the crop area of 1889, of 2,678 acres, or 31.0 per cent, and an increase in production of 4,642,235 pounds, or 49.8 per cent. The average area in tobacco for each farm on which tobacco was grown was 2.7 acres. The average yield per acre in 1899 was 1,234 pounds, against 1,080 pounds in 1889, and 1,313 pounds in 1879. The average value was 8.4 cents per pound.

Tobacco was grown in 1899 in 31 counties of the state. The leading county was Onondaga, which furnished 32.4 per cent of the acreage, and 30.9 per cent of the production of the state. The counties next in rank were Chemung, Steuben, Cayuga, and Oswego. These 5 counties together furnished 89.0 per cent of the entire acreage, and 90.4 per cent of the entire production of the state.

FLORICULTURE.

The area devoted to the cultivation of flowers and ornamental plants in 1899 was 1,496 acres, and the value of the products sold therefrom was $2,867,673. These flowers and plants were grown by 1,212 farmers and florists. Of this number, 983 made commercial floriculture their principal business. They had invested in the aggregate $8,692,939, of which $4,389,995 represents the value of land and improvements other than buildings; $3,970,102, that of buildings; $267,712, that of implements and machinery; and $65,130, that of live stock. Their sales of flowers and plants amounted to $2,622,899; and of other products $243,458. They expended for labor $688,191, and for fertilizers $61,627. The average income for each farm reporting (including products fed to live stock) was $2,928.

In addition to the 983 principal florists' establishments, 2,361 farms and market gardens made use of glass in the propagation of flowers, plants, or vegetables. They had an area under glass of 5,617,357 square feet, making, with the 8,018,083 square feet belonging to the florists' establishments, a total of 13,635,440 square feet of land under glass.

NURSERIES.

The total value of nursery stock sold in 1899 was $1,642,107, reported by the operators of 485 farms and nurseries. Of this number, 237 derived their principal income from the nursery business. They had 17,568 acres of land, valued at $2,532,482; buildings worth $1,074,625; implements and machinery valued at $116,780; and live stock valued at $79,345. Their total income, exclusive of products fed to live stock, was $1,673,130, of which $1,530,360 represents the value of nursery stock, and $142,770 that of other products. The expenditure for labor was $468,873, and for fertilizers $29,205. The average income for each farm reporting (including products fed to live stock) was $7,187. Monroe county is far in advance of any other in the production of nursery stock, furnishing, in 1899, 37.9 per cent of the entire acreage devoted to the business.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was $27,102,130, an average of $120 per farm. The average was highest on the most intensively cultivated farms, being $1,978 for nurseries, $700 for florists' establishments, $182 for fruit farms, $165 for vegetable farms, $150 for tobacco farms, $129 for dairy farms, $120 for sugar farms, $109 for hay and grain farms, and $85 for live-stock farms. "Managers" expended on an average $563; "share tenants," $116; "cash tenants," $115; and "owners," $106. White farmers expended $120 per farm, and colored farmers, $33.

Fertilizers purchased in 1899 cost $4,493,050, an average of $20 per farm and an increase since 1889 of 23.9 per cent. The average expenditure was $123 for nurseries, $84 for vegetable farms, $63 for florists' establishments, $37 for tobacco farms, $23 for fruit farms, $18 for hay and grain farms, $12 for dairy farms, $11 for sugar farms, and $10 for live-stock farms.

IRRIGATION STATISTICS.

In 1899 irrigation was reported on 11 farms, the area irrigated being 123 acres and the cost of the systems, $4,372, or $35.54 per acre. The total value of the irrigated products on these farms was $11,735, or $95 per acre. The acreage and values of the irrigated products were as follows: Vegetables, 20 acres, valued at $5,015, or $250.75 per acre; tobacco, 2 acres, valued at $200, or $100 per acre; small fruit, 10 acres, valued at $2,600, or $260 per acre; miscellaneous crops, flowers, plants, etc., 25 acres, valued at $3,060, or $122.40 per acre; and hay, 66 acres, valued at $860, or $13.03 per acre.

The most extensive irrigation plant in the state, located in Rensselaer county, irrigates 55 acres. A small mountain stream furnishes the water, which is diverted into a large reservoir, 210 feet above the land to be irrigated, and thence directed to the land through cast-iron pipes. In the spring and autumn the water is turned upon a Pelton wheel, the power developed being utilized in the operation of a sawmill.

No reports were received of numerous irrigation systems on the small truck farms in the vicinity of several of the large cities of the state. Many of these farms are operated by Italians and Chinese, and their irrigation plants are usually very inexpensive, the water being supplied chiefly from the city water mains, and delivered to the land through garden hose.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 180. WASHINGTON, D. C. June 3, 1902.

MANUFACTURES.

ALCOHOLIC LIQUORS.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I transmit herewith, for publication in bulletin form, a report on the manufacture of alcoholic liquors during the census year ending May 31, 1900, prepared under my direction by Mr. John H. Garber, of the Census Office.

The manufacture of alcoholic liquors is now for the first time made the subject of special inquiry by the Census Office. The determination to publish detailed statistics of this industry was reached too late in the organization of the Census Office work to permit the preparation of special schedules for the collection of information, and the general schedule for manufactures was accepted as being sufficient in scope to elicit data desirable for publication. There was, however, because of this lack of special schedules, an absence of uniformity and completeness in the returns, which is explained in detail in the accompanying report, and which applies more particularly to the minute classification of malt liquors and distillates, and to the internal-revenue tax on the latter.

For statistical purposes alcoholic liquors were divided into three general classes, namely: Liquors, malt; liquors, distilled; and liquors, vinous. The statistics of each, separately, and also the combined totals, are presented in the several tables under explanatory headings. The industry of wine making includes both agricultural and manufacturing enterprise, and at the census of 1900, the vineyard, with all pertaining to the growing and harvesting of grapes, was segregated from the winery and included in the reports of the agricultural division.

The statistics are presented in 22 tables: Table 1 showing the leading statistics for the combined industry at the Twelfth Census; Tables 3, 10, and 17 being comparative statements of the principal statistics of each class of alcoholic liquors for each decade from 1850 to 1900, inclusive, with the percentages of increase for each decade; Tables 5, 12, and 19 being comparative summaries by states of the principal statistics of each class for 1890 and 1900; Tables 4, 11, and 18 being comparative statements of capital for the censuses of 1890 and 1900; Tables 6, 13, and 20 showing the quantity and cost of materials, and the quantity and value of products, for each class as reported at the census of 1900; Tables 7 and 14 showing the growth of the manufacture of malt liquors and of distillates from 1863 to 1900, inclusive, adapted from the reports of the Bureau of Internal Revenue; Tables 8, 15, and 21 presenting quantities and destination of exports of each class of alcoholic liquors for 1900, compiled from the report of the Bureau of Statistics of the Treasury Department; Tables 9, 16, and 22 showing, by states and territories, detailed statistics for each class; and Table 2 showing imports and domestic and foreign exports of the three classes fr 1871 to 1900, inclusive.

In drafting the schedules of inquiry for the census o

1900 care was taken to preserve the basis of comparison with prior censuses. Comparison may be made safely with respect to all the items of inquiry except those relating to capital, salaried officials, clerks, etc., and their salaries, the average number of employees, and the total amount of wages paid. Live capital, that is, cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries, was first called for at the census of 1890. No definite attempt was made, prior to the census of 1890, to secure a return of live capital invested.

Changes were made in the inquiries relating to employees and wages in order to eliminate defects found to exist on the form of inquiry adopted in 1890. At the census of 1890 the average number of persons employed during the entire year was called for, and also the average number employed at stated weekly rates of pay, and the average number was computed for the actual time the establishments were reported as being in operation. At the census of 1900 the greatest and least numbers of employees were reported, and also the average number employed during each month of the year. The average number of wage-earners (men, women, and children) employed during the entire year was ascertained by using 12, the number of calendar months, as a divisor into the total of the average numbers reported for each month. This difference in the method of ascertaining the average number of wage-earners during the entire year may have resulted in a variation in the number, and should be considered in making comparisons.

At the census of 1890 the number and salaries of proprietors and firm members actively engaged in the business or in supervision were reported, combined with clerks and other officials. In cases where proprietors and firm members were reported without salaries, the amount that would ordinarily be paid for similar services was estimated. At the census of 1900 only the number of proprietors and firm members actively engaged in the industry or in supervision was ascertained, and no salaries were reported for this class. It is therefore impossible to compare the number and salaries of salaried officials of any character for the two censuses.

Furthermore, the schedules for 1890 included in the wage-earning class, overseers, foremen, and superintendents (not general superintendents or managers), while the census of 1900 separates from the wage-earning class such salaried employees as general superintendents, clerks, and salesmen. It is possible and probable that this change in the form of the question has resulted in eliminating from the wage-earners, as reported by the present census, many high-salaried employees included in that group for the census of 1890.

In some instances, the number of proprietors and firm members, shown in the accompanying tables, falls short of the number of establishments reported. This is accounted for by the fact that no proprietors or firm members are reported for corporations or cooperative establishments. The number of salaried officials, clerks, etc., is the greatest number reported employed at any one time during the year.

The reports show a capital of $457,674,087 invested in the manufacture of alcoholic liquors in the 2,850 establishments reporting. This sum represents the value of land, buildings, machinery, tools, and implements, and the live capital utilized, but does not include the capital stock of any of the manufacturing corporations. The value of the products is returned at $340,615,466, to produce which involved an outlay of $14,301,644 for salaries of officials, clerks, etc.; $28,005,484 for wages; $183,099,796 for miscellaneous expenses, including rent, taxes, internal revenue, etc.; and $70,512,042 for materials used, mill supplies, freight, and fuel. It is not to be assumed, however, that the difference between the aggregate of these sums and the value of the products is, in any sense, indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles, or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant. The value of the product given is the value as obtained or fixed at the shop or factory. This statement is necessary in order to avoid erroneous conclusions from the figures presented.

Very respectfully,

Chief Statistician for Manufactures.

THE MANUFACTURE OF ALCOHOLIC LIQUORS.

By JOHN H. GARBER.

Alcohol is a natural product derived from sugar in the process of alcoholic fermentation. Wine is the simplest and its manufacture the least complex of all alcoholic liquors, as it consists of fruit juices whose saccharine matter is converted into alcohol on exposure to the air. The manufacture of malt liquors is more complex, as it involves the preliminary process of malting, by which the starch of grains is converted into sugar, which in turn is converted into alcohol by fermentation. Alcohol being produced by fermentation is found in dilute form mingled with other liquids and the manufacture of distillates is the additional process of separating it, more or less completely, from the mixture. As the various liquids vaporize at different temperatures, the separation is effected by the application of such degree of heat as will vaporize the alcohol out of its combinations.

For the collection of statistical data pertaining to the manufacture of alcoholic liquors the Census Office divided them into three classes, namely: Malt liquors, embracing beers, ales, porters, and all similar beverages fermented from malt infusions and included in the products of the brewing industry; distilled liquors, embracing all ardent spirits separated by distillation from fermented fruit juices, molasses, or malted infusions of grain; and vinous liquors, embracing all varieties of wines fermented from the juice of grapes and berries. From the reports of breweries, distilleries, and wineries, representing the three classes of alcoholic liquors, statistics of which are herewith presented in detail, it appears that 1,198,602,104 gallons of malt liquors, 103,330,423 gallons of distillates, and 23,425,567 gallons of wine were manufactured during the census year ending May 31, 1900. This is a total for all classes of 1,325,358,094 gallons, which does not include quantities reported from small establishments with a product less than $500 each; wine returned from farms and as a subsidiary product of distilleries; and spirits returned from wineries, principally as a by-product. In estimating the annual consumption for 1900, the quantity of tax-paid spirits, not the quantity manufactured, was employed, and the differences between imports and domestic and foreign exports were considered. On this basis the total estimated consumption for the census year was 1,322,166,685 gallons, or 17.3 gallons per capita.

The totals for the three classes show 2,835 establishments, with a capital of $457,674,087, and products valued at $340,615,466. This last amount includes $96,798,443 as the value of distilled liquors, which includes an indeterminate amount of internal-revenue tax, because of a lack of uniformity in reporting it. If such tax were included in every instance, the value of the distillates reported would approximate $140,000,000 and the total value of all liquors would be increased from $340,615,466 to about $384,000,000. Returns from breweries uniformly included internal-revenue tax in values of products.

Malting, bottling, and the manufacture of mineral and soda waters, while not presented in detail in this report, are, in their relation to the manufacture of alcoholic liquors, correlative industries. At the census of 1900, the malting industry showed 146 establishments, with $39,288,102 capital, 1,990 wage-earners, $14,816,741 for cost of materials, and products valued at $19,373,600; the bottling industry, 2,064 establishments, with $16,620,152 capital, 7,680 wage-earners, $28,087,823 for cost of materials, and products valued at $41,620,672; and the manufacture of mineral and soda waters, 2,816 establishments, with $20,518,708 capital, 8,985 wage-earners, $8,801,467 for cost of materials, and products valued at $23,874,429. The malt reported by the maltsters was very largely manufactured into malted beverages, and a large proportion of the independent bottling plants were bottlers of malt liquors and whiskies purchased from brewers and distillers. The totals given for the value of products for these two industries are, therefore, to a considerable extent, duplications of the corresponding totals for alcoholic liquors.

Table 1 shows the combined totals for the three classes of alcoholic liquors and the corresponding totals for each class.

TABLE 1.—ALCOHOLIC LIQUORS: SUMMARY, 1900.

	Total.	Liquors, malt.	Liquors, distilled.	Liquors, vinous.
Number of establishments.	2,835	1,509	967	359
Capital	$457,674,087	$415,284,468	$32,551,604	$9,838,015
Salaried officials, clerks, etc., number	8,158	7,153	661	344
Salaries	$14,301,644	$13,046,540	$889,606	$365,498
Wage-earners, average number	44,417	39,532	3,722	1,163
Total wages	$28,005,484	$25,826,211	$1,733,218	$446,055
Men, 16 years and over.	43,107	38,385	3,623	1,099
Wages	$27,726,021	$25,573,612	$1,715,552	$436,857
Women, 16 years and over	646	504	81	61
Wages	$156,850	$132,614	$15,428	$8,808
Children, under 16 years	664	643	18	3
Wages	$122,613	$119,985	$2,238	$390
Miscellaneous expenses	$188,099,796	$109,329,231	$73,218,227	$552,338
Cost of materials used	$70,512,042	$51,674,928	$15,147,784	$3,689,330
Value of products	$340,615,466	$237,269,713	$96,798,443	$6,547,310

Table 2, compiled from the reports on Commerce and Navigation of the United States, by the Bureau of Statistics, Treasury Department, shows the quantity and value of imports and foreign and domestic exports of the different classes of alcoholic liquors from 1891 to 1900, inclusive, and the annual averages from 1871 to 1890, inclusive.

TABLE 2.—ALCOHOLIC LIQUORS: IMPORTS AND EXPORTS, 1891 TO 1900, INCLUSIVE; ANNUAL AVERAGES FOR DECADES ENDING WITH 1880 AND 1890, RESPECTIVELY.

	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	Annual average, 1881 to 1890, inclusive.	Annual average, 1871 to 1880, inclusive.
IMPORTS.												
Aggregate value	$12,758,582	$11,223,163	$9,305,504	$12,272,872	$11,849,715	$11,429,123	$10,660,375	$15,147,884	$13,604,958	$16,027,423	.....	.....
Beer, ale, porter, and other malt liquors:												
Gallons	3,310,320	2,847,234	2,510,787	2,964,644	3,283,404	2,971,676	2,910,540	3,365,389	2,929,581	3,082,977	2,101,676	[1] 1,519,088
Value	$1,727,256	$1,487,878	$1,201,530	$1,560,293	$1,665,016	$1,514,845	$1,510,767	$1,940,370	$1,709,960	$1,765,702	$1,176,680	$1,184,150
Spirits, distilled, and cordials:												
In casks—												
Gallons [2]	2,482,020	2,445,965	1,763,318	3,021,465	2,539,252	2,223,161	2,155,191	2,266,742	2,239,194	3,453,671	1,604,434	1,633,261
Value [2]	$3,609,831	$3,145,079	$2,134,794	$3,850,114	$3,077,694	$2,730,741	$2,410,130	$3,002,111	$2,950,495	$4,254,661	$2,072,794	$1,711,300
In bottles—												
Dozens [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	105,554
Value [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$592,524
Wines:												
Total value	$7,421,495	$6,590,206	$5,969,180	$6,862,465	$7,107,005	$7,188,537	$6,739,478	$10,205,353	$8,944,503	$10,007,060	.....	.....
In casks—												
Gallons	2,533,828	2,253,226	1,930,870	2,997,952	2,834,898	2,789,153	2,599,693	3,525,625	3,477,989	3,860,503	3,865,537	6,392,826
Value	$1,744,736	$1,573,578	$1,392,710	$2,039,250	$1,950,770	$1,945,347	$1,817,813	$2,505,024	$2,464,484	$2,641,816	$2,617,641	$2,632,754
In bottles—												
Dozens	626,069	537,244	492,748	537,909	560,583	554,536	533,457	787,984	684,732	748,750	535,722	386,795
Value	$5,676,759	$5,016,633	$4,576,470	$4,823,215	$5,156,235	$5,238,190	$4,921,665	$7,700,329	$6,480,019	$7,365,244	$4,786,982	$2,636,639
EXPORTS OF FOREIGN.												
Aggregate value	$154,269	$167,074	$137,100	$269,735	$253,499	$117,201	$146,412	$93,526	$119,592	$117,603	.....	.....
Beer, ale, porter, and other malt liquors:												
Gallons	7,841	16,425	9,169	6,968	7,052	6,293	6,480	15,724	6,431	8,586	8,865	29,083
Value	$6,808	$9,843	$7,119	$5,561	$5,233	$4,697	$4,505	$10,252	$4,952	$6,630	$5,936	$24,038
Spirits, distilled, and cordials:												
In casks—												
Gallons [2]	46,767	58,956	40,335	38,455	58,606	38,385	48,792	46,954	75,323	51,247	62,693	128,456
Value [2]	$81,733	$102,594	$60,126	$55,290	$119,976	$52,360	$55,934	$44,969	$55,470	$47,567	$71,817	$105,679
In bottles—												
Dozens [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,194
Value [2]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$32,271
Wines:												
Total value	$65,728	$54,637	$69,855	$208,884	$128,290	$60,144	$85,973	$38,305	$59,170	$63,406	.....	.....
In casks—												
Gallons	15,122	21,387	31,615	28,232	31,979	22,536	21,027	15,785	35,830	26,711	69,179	109,920
Value	$6,268	$12,470	$14,653	$13,475	$18,355	$11,609	$11,120	$9,146	$18,795	$14,585	$37,058	$49,572
In bottles—												
Dozens	8,438	5,677	8,086	16,981	13,799	7,509	8,140	5,535	5,393	8,540	10,172	10,857
Value	$59,460	$42,167	$55,202	$195,409	$109,935	$48,535	$74,853	$29,159	$40,375	$48,821	$64,400	$50,274
EXPORTS OF DOMESTIC.												
Aggregate value	$4,697,692	$4,620,819	$2,935,302	$3,138,469	$2,890,445	$4,092,242	$6,415,186	$3,648,697	$3,472,483	$2,910,212	.....	.....
Beer, ale, and porter:												
Total value	$2,139,216	$1,888,124	$585,579	$723,949	$659,875	$558,770	$548,979	$665,538	$657,934	$672,243	.....	.....
In casks—												
Gallons	761,411	602,055	391,802	390,048	290,383	258,620	307,077	245,497	260,724	242,991	197,892	[3] 101,411
Value	$194,157	$154,751	$88,548	$87,112	$69,759	$66,322	$77,390	$65,219	$68,150	$69,602	$62,704	[3] $32,890
In bottles—												
Dozens	1,578,240	1,433,799	406,231	549,910	492,055	426,777	351,625	417,704	402,358	413,278	292,472	[3] 40,776
Value	$1,945,059	$1,733,373	$497,031	$636,837	$590,116	$492,448	$471,589	$600,319	$589,784	$602,641	$490,230	[3] $67,007
Spirits, distilled:												
Total value	$1,932,884	$2,056,865	$1,620,974	$1,715,806	$1,579,283	$2,931,562	$5,421,759	$2,561,612	$2,375,519	$1,866,492	.....	.....
Brandy—												
Gallons	80,259	20,944	24,886	11,815	89,259	100,719	361,653	123,518	216,696	136,529	[4]	[4]
Value	$83,698	$29,289	$39,455	$12,640	$87,294	$94,924	$291,022	$90,731	$178,294	$111,657	[4]	[4]
Rum—												
Gallons	670,410	850,719	607,634	808,393	865,643	879,153	977,994	647,415	773,713	1,025,226	[5] 702,935	[5] 840,386
Value	$903,808	$1,175,806	$845,673	$1,102,267	$1,174,093	$1,134,965	$1,081,716	$778,006	$921,913	$1,230,994	$814,472	$855,389
Whisky—												
Gallons	954,962	324,802	304,094	590,695	166,496	1,460,357	4,362,455	1,693,098	872,445	294,651	[6] 4,031,040	[6] 2,231,528
Value	$886,101	$424,482	$272,230	$460,853	$232,604	$1,520,280	$3,986,855	$1,640,547	$799,375	$343,542	$1,837,674	$756,417
Alcohol, including pure, neutral, or cologne spirits—												
Gallons	177,974	1,476,028	1,619,230	416,725	331,407	676,832	178,527	162,181	1,440,219	418,935	[7]	[7]
Value	$59,277	$427,288	$463,616	$140,046	$85,292	$181,393	$62,166	$52,328	$475,937	$180,299	[7]	[7]
Wines:												
Total value	$625,592	$676,330	$728,749	$698,714	$651,287	$601,910	$444,448	$421,547	$439,030	$371,477	.....	.....
In bottles—												
Dozens	9,854	10,973	9,672	16,794	17,147	13,919	13,813	11,128	15,054	11,409	[8]	[8]
Value	$49,927	$52,015	$46,721	$69,444	$69,460	$56,202	$63,860	$51,654	$67,686	$52,892	[8]	[8]
In other coverings—												
Gallons	1,408,859	1,498,078	1,623,103	1,389,375	1,339,090	1,125,297	802,192	708,558	655,795	543,292	[8] 198,019	[8] 52,742
Value	$575,665	$624,315	$682,028	$629,270	$581,827	$545,708	$380,588	$369,893	$371,344	$319,085	[8] $151,156	[8] $49,418

[1] Quantity not shown in 1871; average is for nine years.
[2] Quantities and values "in bottles" included with those "in casks," since 1881, not being reported separately after 1883.
[3] Quantities and values of cider included from 1871 to 1878.
[4] Not reported separately previous to 1891.
[5] Distilled from molasses.
[6] Distilled from grain.
[7] Not reported separately previous to 1884. No average can be shown for decade.
[8] Quantities and values "in bottles" included with those "in other coverings," not being reported separately previous to 1884.

THE MANUFACTURE OF MALT LIQUORS.

In colonial times, as well as in the early decades of the nation's history, the consumption of malt liquors was relatively small and increased slowly. The wide distribution of small quantities of wine manufactured from grapes or currants, the introduction of tea, the general consumption of all classes of distilled spirits, and the household manufacture of cider and fruit brandies satisfied the tastes of the people, and the demand for malt liquors was of slow and gradual development. Where the demand existed at all it was for ale, porter, or stout. The manufacture of lager beer in the United States was begun about 1840. Its use extended with the general increase of population, the influx of German immigrants, and the cultivation of the tastes of the people for milder beverages. In 1900 its use had almost entirely superseded that of ale and porter.

Table 3 is a comparative summary of statistics of the manufacture of malt liquors as returned at the censuses of 1850 to 1900, inclusive, with the percentages of increase for each decade.

TABLE 3.—LIQUORS, MALT: COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	1,509	1,248	2,191	1,972	1,269	431	20.9	[1]43.0	11.1	55.4	194.4
Capital	$415,284,468	$232,471,290	$91,208,224	$48,779,435	$15,782,342	$4,072,380	78.6	154.9	87.0	209.1	287.5
Salaried officials, clerks, etc., number	7,153	[2]4,543	[3]	[3]	[3]	[3]	57.5				
Salaries	$13,046,540	[2]$7,669,161	[3]	[3]	[3]	[3]	70.1				
Wage-earners, average number	39,532	30,257	26,220	12,443	6,433	2,347	30.7	15.4	110.7	93.4	174.1
Total wages	$25,826,211	$20,713,383	$12,198,053	$6,758,602	$2,805,970	$654,144	24.7	69.8	80.5	193.1	252.5
Men, 16 years and over	38,385	29,491	26,001	12,320	6,412	2,336	30.2	13.4	111.0	92.1	174.5
Wages	$25,573,612	$20,564,793	[3]	[3]	[3]	[3]	24.4				
Women, 16 years and over	504	250	29	29	21	11	101.6	762.1		38.1	90.9
Wages	$182,614	$55,757	[3]	[3]	[3]	[3]	137.8				
Children, under 16 years	643	516	190	94	[3]	[3]	24.6	171.6	102.1		
Wages	$119,985	$92,833	[3]	[3]	[3]	[3]	29.2				
Miscellaneous expenses	$109,329,231	$48,276,290	[4]	[4]	[4]	[4]	126.5				
Cost of materials used	$51,674,928	$64,003,347	$56,836,500	$28,177,684	$9,997,293	$3,055,266	[1]19.3	12.6	101.7	181.9	227.2
Value of products	$237,269,713	$182,731,622	$101,058,385	$55,706,643	$21,810,933	$5,728,568	29.8	80.8	81.4	161.4	272.0

[1] Decrease.
[2] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 9.)
[3] Not reported separately.
[4] Not reported.

Table 3 shows that the brewing industry for the last half century has had practically an uninterrupted growth. In the percentages of increase or decrease for the different decades, a decrease is shown in but two instances, viz., in the number of establishments from 1880 to 1900, and in the cost of materials from 1890 to 1900. From 1880 to 1890 the number of establishments decreased 943, or 43 per cent, and from 1890 to 1900 increased 261, or 20.9 per cent. The net decrease in the twenty years from 1880 to 1900 was 682, or 31.1 per cent, which was largely due to consolidations of brewing interests and the lack of uniformity in reporting the number of establishments included in such consolidations. The decrease in cost of materials was due to the lower prices of barley, hops, and corn, prevailing in 1900 as compared with 1890, and to the introduction of improved methods of manufacture, which brought about a more thorough extraction and use of the productive elements of materials. The introduction of improved and economic methods of refrigeration, while adding largely to the capital of the industry, also aided very materially in reducing cost of production.

The decrease of 19.3 per cent in cost of materials from 1890 to 1900 was accompanied by an increase of 29.8 per cent in value of products. This discrepancy is much more apparent than real, since in 1900 the value of malt liquors included the increased cost of the internal-revenue stamps required under the war tax then in effect. If the net price of the product had been reported—i. e., the price less the internal-revenue tax—the percentage of increase for 1900 would approximate 5.8 per cent instead of 29.8 per cent, and the apparent discrepancy between the percentages of change in cost of materials and value of products would disappear.

Miscellaneous expenses increased $61,052,941, or 126.5 per cent, in the decade from 1890 to 1900. This disproportionate increase was due to the same circumstances noted above—the increase in internal-revenue tax, which was one of the items of miscellaneous expense. In 1890 the net tax on malt liquors was 92½ cents, and in 1900, $1.85 per barrel. The amount of revenue tax paid in 1900 exceeded that paid in 1890 by approximately $47,000,000, leaving an increase of $14,000,000, or 29.1 per cent, in the other items of miscellaneous expense.

In the half century closing with 1900 the industry increased in number of establishments from 431 to 1,509; in capital, from $4,072,380 to $415,284,468; in number of wage-earners, from 2,347 to 39,532; in wages, from $654,144 to $25,826,211; and in value of products from $5,728,568 to $237,269,713.

Table 4 shows the comparative distribution of capital for 1890 and 1900.

TABLE 4.—LIQUORS, MALT: COMPARATIVE SUMMARY, CAPITAL, 1890 AND 1900.

	1900	1890	Per cent of increase.
Total	$415,284,468	$232,471,290	78.6
Land	53,611,097	33,538,926	59.8
Buildings	119,232,506	64,412,133	85.1
Machinery, tools, and implements	76,398,777	50,288,210	51.9
Cash and sundries	166,042,088	84,232,021	97.1

Table 4 shows that at the census of 1900 the capital amounted to $415,284,468, an increase of $182,813,178, or 78.6 per cent, for the decade. This amount was distributed as follows: Land, $53,611,097; buildings, $119,232,506; machinery, tools, and implements, $76,398,777; and cash and sundries, $166,042,088. Of the four divisions of capital, cash and sundries shows the largest percentage of increase; this division includes cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries. In 1900 the amount reported for these items was $166,042,088, and in 1890, $84,232,021, an increase of $81,810,067, or 97.1 per cent. This relatively higher rate of increase is in part due to the greater cost of internal-revenue stamps carried on hand and in part to the increased facilities made necessary by the expansion of an industry in which competition is active.

Table 4 does not include, for 1900, 16 idle establishments, with a capital of $945,577, and 15 active establishments, each with a product less than $500, with a capital of $30,965. The combined capital of these two classes of establishments was $976,542, making an aggregate capital for the industry of $416,261,010.

Table 5 is a comparative summary, by states and territories, of the principal statistics of the industry for the censuses of 1890 and 1900.

TABLE 5.—LIQUORS, MALT: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1890 AND 1900.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
United States	1900	1,509	$415,284,468	7,153	$13,046,540	39,532	$25,826,211	$109,329,231	$51,074,928	$237,209,713
	1890	1,248	232,471,290	[1]4,543	[1]7,669,161	30,257	20,713,383	48,276,290	64,003,347	182,731,622
Alabama	1900	5	829,446	34	40,142	239	75,157	150,039	134,653	481,610
	1890	3	438,000	13	21,500	89	54,740	88,046	140,609	344,986
California	1900	99	8,183,286	125	212,634	950	753,424	2,126,734	1,276,575	5,085,462
	1890	65	5,525,041	104	130,463	700	592,153	943,505	1,179,897	3,628,256
Colorado	1900	14	5,682,204	39	78,121	323	256,764	835,518	375,893	2,042,863
	1890	11	1,917,050	33	70,280	236	214,407	252,024	555,149	1,601,168
Connecticut	1900	20	3,108,778	81	132,897	344	278,946	1,156,308	639,555	2,652,819
	1890	16	1,470,120	45	56,372	203	157,241	349,854	584,390	1,456,379
Delaware	1900	5	1,126,738	18	25,301	84	56,091	285,662	123,327	616,486
	1890	3	456,876	10	14,780	48	33,280	68,068	100,608	247,016
District of Columbia	1900	4	2,298,704	35	56,104	191	140,690	650,902	286,653	1,340,011
	1890	5	836,434	17	24,800	103	57,622	173,413	295,017	853,800
Georgia	1900	5	1,327,880	37	64,900	300	128,288	410,745	275,747	973,222
	1890	5	923,247	28	31,950	165	97,236	92,140	241,783	580,760
Idaho	1900	16	144,032	1	600	29	19,064	26,195	19,301	74,868
	1890	5	16,030	6	2,080	9	2,354	3,294	5,265	17,580
Illinois	1900	94	32,798,080	578	1,040,689	3,269	2,059,792	9,927,696	4,036,178	19,733,821
	1890	88	21,294,107	321	537,320	2,622	1,519,509	3,452,695	4,627,634	13,664,016
Indiana	1900	42	6,347,997	205	317,721	1,045	601,638	2,534,285	1,127,079	5,777,017
	1890	37	4,589,030	121	186,298	865	516,307	1,203,239	1,144,002	3,837,841
Iowa	1900	21	2,420,515	58	84,136	321	189,916	736,550	385,164	1,713,911
	1890	18	1,057,292	52	47,970	155	88,786	190,124	294,626	786,585
Kentucky	1900	26	5,131,654	124	192,525	591	327,242	1,500,606	630,969	3,186,627
	1890	29	4,005,743	88	144,172	509	320,685	818,803	853,126	2,600,897
Louisiana	1900	6	3,299,326	57	87,556	374	224,985	792,468	403,440	1,472,062
	1890	8	3,188,232	103	132,672	179	138,212	839,331	592,562	1,905,760
Maryland	1900	16	13,857,328	161	262,916	752	484,318	1,568,108	878,933	4,133,797
	1890	32	5,824,669	88	141,492	735	530,885	1,186,155	1,586,951	4,662,887
Massachusetts	1900	40	18,136,623	322	639,025	1,651	1,340,412	4,731,540	2,843,050	11,255,613
	1890	26	6,003,344	150	260,169	818	613,070	1,320,173	2,064,079	5,355,488
Michigan	1900	77	6,235,484	242	297,150	980	599,319	2,402,652	1,187,770	5,296,825
	1890	78	3,963,163	152	168,670	687	419,439	737,785	998,128	2,979,258
Minnesota	1900	78	8,539,722	154	213,544	856	417,832	1,996,040	867,901	4,456,928
	1890	66	3,625,239	110	116,727	548	295,955	526,786	751,907	2,206,366
Missouri	1900	49	25,781,930	398	836,383	3,150	1,890,100	6,137,846	3,073,011	13,776,905
	1890	30	16,689,575	283	594,420	2,834	1,847,195	3,114,676	6,563,536	16,951,157
Montana	1900	21	1,203,516	34	68,280	193	169,066	433,577	375,631	1,276,331
	1890	6	462,400	6	7,340	47	43,330	54,874	60,930	204,645

[1] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 9.)

TABLE 5.—LIQUORS, MALT: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1890 AND 1900—Continued.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
Nebraska	1900	19	$2,678,593	45	$94,215	200	$131,455	$635,031	$311,783	$1,433,501
	1890	14	1,464,211	28	40,850	172	125,333	219,854	357,266	1,079,865
Nevada	1900	5	44,410	.....	.....	11	8,760	6,935	9,240	29,216
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire	1900	5	2,047,576	34	64,578	280	185,300	778,198	599,144	1,955,628
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Jersey	1900	45	26,330,466	350	818,888	1,723	1,360,915	6,733,772	2,782,420	14,386,456
	1890	34	10,184,540	221	459,271	1,174	949,661	2,490,157	3,592,491	10,018,393
New Mexico	1900	3	42,500	1	800	14	8,387	11,456	7,312	37,136
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York	1900	225	95,057,875	1,721	3,673,854	7,424	5,630,990	26,954,024	11,418,383	56,137,854
	1890	232	67,759,552	1,284	2,509,998	7,001	5,525,189	16,445,206	18,776,129	53,429,685
Ohio	1900	112	26,822,396	547	879,010	3,464	2,292,652	8,104,240	4,277,812	18,522,639
	1890	106	21,491,924	377	604,150	3,117	2,224,351	3,826,311	5,272,894	15,899,629
Oregon	1900	24	818,654	19	24,200	136	106,041	215,584	172,615	714,242
	1890	13	805,135	20	21,819	80	67,240	153,826	165,887	613,316
Pennsylvania	1900	208	63,684,480	816	1,474,092	4,505	2,884,242	13,039,371	6,609,889	29,162,743
	1890	163	26,106,355	414	702,500	3,148	2,120,443	4,866,575	6,461,082	18,358,734
Rhode Island	1900	6	3,338,276	53	89,674	296	223,712	859,619	453,406	1,880,171
	1890	3	287,500	15	29,125	82	50,900	102,376	187,500	436,846
South Dakota	1900	4	560,794	10	12,420	61	23,949	78,216	37,843	280,080
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	1900	4	1,277,772	31	51,500	288	129,782	517,278	262,437	1,175,304
	1890	4	882,434	24	48,282	147	75,288	106,659	213,393	618,970
Texas	1900	9	4,439,012	98	180,619	585	354,682	1,210,381	646,794	2,689,606
	1890	7	1,534,775	43	57,719	401	205,628	379,309	495,307	1,702,087
Utah	1900	7	613,992	22	21,178	89	53,751	123,838	120,995	432,835
	1890	5	150,500	7	6,810	39	18,875	15,011	37,206	113,531
Virginia	1900	6	2,000,954	72	95,458	300	144,882	374,865	215,923	972,820
	1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington	1900	25	1,506,762	53	81,830	211	171,456	385,884	294,565	1,230,525
	1890	13	1,328,329	21	36,305	209	176,970	193,186	424,637	1,178,306
West Virginia	1900	8	1,714,050	60	70,803	256	117,320	492,611	197,724	1,113,021
	1890	6	833,768	27	27,532	164	91,460	188,911	323,894	747,402
Wisconsin	1900	147	35,317,950	484	726,069	3,904	1,926,730	10,259,291	4,237,454	19,394,709
	1890	107	16,803,323	306	407,271	2,859	1,457,308	3,806,846	4,829,390	14,193,057
Wyoming	1900	4	86,301	2	2,400	19	12,300	18,710	11,748	52,540
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	[2]1900	5	498,467	32	34,328	124	45,855	126,456	66,611	321,419
	[3]1890	10	563,352	26	28,054	122	73,331	67,078	226,072	455,003

[1] Included in "all other states."
[2] Includes establishments distributed as follows: Arkansas, 1; Florida, 1; Kansas, 2; South Carolina, 1.
[3] Includes establishments distributed as follows: Nevada, 2; New Hampshire, 1; New Mexico, 2; North Dakota, 1; South Carolina, 1; South Dakota, 1; Wyoming, 2.

This table shows a wider distribution for the manufacture of malt liquors than is shown by the corresponding tables of this report for the manufacture of either distillates or wine. Commercial wine making is necessarily localized where soil and climatic conditions will produce the desired varieties of grapes. The manufacture of distilled liquors from grain, owing to the fact that the finished product is less bulky than the raw material, and consequently costs less to transport, tends to localize at points where the cereal supply is ample and its cost least. This is particularly true of the manufacture of alcohol and pure, neutral, or cologne spirits. In the manufacture of malt liquors the transportation of the finished product involves greater expense than that of the materials used, and the industry tends to localize at points of consumption. There are a few large establishments, however, with an output ranging from 500,000 to 1,000,000 barrels a year, and whose products have a wide distribution, to which this law does not now apply, although it governed their inception and influenced their early history. At the census of 1900, 38 states and territories reported a total of 1,504 establishments out of 1,509 for the United States, and practically every state showed a substantial increase in value of products, the three notable exceptions being Louisiana, Maryland, and Missouri.

The leading states in value of malt liquors produced during the census year were as follows: New York, $56,137,854; Pennsylvania, $29,162,743; Illinois, $19,733,821; Wisconsin, $19,394,709; Ohio, $18,522,639; New Jersey, $14,386,456; and Missouri, $13,776,905. From Table 9 it appears that the quantity produced in each of the same states was as follows: New York, 9,593,085 barrels; Pennsylvania, 4,648,172; Illinois, 3,794,782; Wisconsin, 3,049,191; Ohio, 3,028,116; Missouri, 2,410,999; and New Jersey, 2,117,491.

Table 6 shows the quantity and cost of materials and the quantity and value of products for 1900.

TABLE 6.—LIQUORS, MALT: MATERIALS AND PRODUCTS, 1900.

	Unit of measure.	Quantity.	Cost of materials.	Value of products.
Materials:				
Total			$51,674,928	
Malt	Bushels	36,385,365	20,539,308	
Corn, in partially manufactured form.	Pounds	483,998,984	4,805,887	
Barley	Bushels	11,232,599	5,554,669	
Hops	Pounds	37,604,067	5,878,460	
Fuel, and rent of power and heat.			4,742,998	
Mill supplies			599,479	
All other materials.			8,722,576	
Freight			831,551	
Products:				
Total				$237,269,718
Beer, ale, and porter.	Barrels of 31 gallons.	38,664,584		234,275,259
All other products				2,994,459

It appears from Table 6 that there were manufactured during the census year, 38,664,584 barrels of malt liquors, valued at $234,275,259, or an average of $6.06 a barrel. This represents the value of the product at the brewery, packed in barrels, kegs, or bottles, and ready for shipment, with the necessary revenue stamps affixed. This table shows also that 36,385,365 bushels of malt, 11,232,599 bushels of barley, 37,604,067 pounds of hops, and 483,998,984 pounds of corn were the principal materials used in the production. In addition there were consumed and reported under "all other materials" considerable quantities of rice, sirup, glucose, and similar ingredients. With the 11,232,599 bushels of barley converted into malt, the approximate average quantities of the principal ingredients consumed in producing a barrel of beer were 1¼ bushels of malt, 1 pound of hops, and 12 pounds of corn. The corn was used in the form of meal and grits of varying degrees of coarseness, or in the form of cerealine (flakes) or maizone. The hops used ranged in quality from the cheapest domestic product to the finest Bohemian importation.

Table 7, taken from the annual report of the Commissioner of Internal Revenue for the fiscal year 1900, shows the quantity of malt liquors manufactured in the United States for each fiscal year from 1863 to 1900, inclusive.

TABLE 7.—LIQUORS, MALT: QUANTITY MANUFACTURED IN EACH FISCAL YEAR FROM 1863 TO 1900.

YEAR.	Number of barrels.	YEAR.	Number of barrels.
1863	2,006,625	1882	16,952,085
1864	3,141,881	1883	17,767,892
1865	3,657,181	1884	18,998,619
1866	5,115,140	1885	19,185,953
1867	6,207,402	1886	20,710,933
1868	6,146,663	1887	23,121,526
1869	6,342,055	1888	24,680,219
1870	6,574,617	1889	25,119,853
1871	7,740,260	1890	27,561,944
1872	8,659,427	1891	30,478,192
1873	9,633,323	1892	31,817,836
1874	9,600,897	1893	34,554,317
1875	9,452,697	1894	33,334,783
1876	9,902,352	1895	33,561,411
1877	9,810,060	1896	35,826,098
1878	10,241,471	1897	34,423,094
1879	11,103,084	1898	37,493,806
1880	13,347,111	1899	36,581,114
1881	14,311,028	1900	39,330,849

Table 7 shows 39,330,849 barrels reported to the Internal-Revenue Bureau for the fiscal year ending June 30, 1900, as against 38,664,584 reported to the Census Office for the census year ending May 31, 1900. The census tabulation does not include 15 breweries, each with a product less than $500, whose combined product was 3,896 barrels; and a number of small establishments, principally producers of weiss beer, which were not reported. With these items considered, and also the difference in time covered by the two reports, the figures of the Internal-Revenue and Census bureaus practically agree.

The 38,664,584 barrels reported at the census of 1900 were equivalent to 1,198,602,104 gallons. In computing per capita consumption, malt liquors, because of the comparatively short time necessary to prepare them for market, do not present the difficulties common to wines and distillates, which require longer time for aging. Beer is the product of a slow fermentation and some few months are necessary to mature it properly, but there is practical uniformity in the quantities carried over from year to year, and the annual production, less the excess of exports over imports, practically represents the annual consumption. During the fiscal year ending June 30, 1900, 5,496,131 gallons were exported, and during the same period 3,310,320 gallons were imported, of which 7,841 gallons were exported, leaving 3,302,479 gallons imported for domestic consumption, an excess of exports over net imports of 2,193,652 gallons. This quantity, subtracted from the total production, leaves 1,196,408,452 for annual consumption in the United States, or 15.7 gallons per capita.

Table 8 shows the quantity, value, and destination of malt liquors exported during the fiscal year 1900.

TABLE 8.—LIQUORS, MALT: EXPORTS, BY COUNTRIES, 1900.[1]

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
Total	1,578,240	$1,945,059	761,411	$194,157
EUROPE.				
Total	5,683	8,787	231	61
Azores, and Madeira Islands	152	278		
Belgium	12	19		
France	487	1,011		
Germany	941	1,266	200	50
Gibraltar	100	180		
Italy	10	17		
Malta, Gozo, etc	140	185		
Portugal	525	685		
Spain	155	265		
Turkey in Europe	1,487	1,920		
United Kingdom	1,674	2,961	31	11
NORTH AMERICA.				
Total	665,888	897,178	554,798	135,295
Bermuda	1,349	2,003	116	21
British Honduras	2,912	4,956	3,804	706
Dominion of Canada:				
Nova Scotia, New Brunswick, etc	1,247	1,504	6,682	1,827
Quebec, Ontario, Manitoba, etc	14,071	16,611	155,390	27,045
British Columbia	32,082	39,741	34,740	8,331
Newfoundland and Labrador	74	76	271	111
Central American states:				
Costa Rica	12,190	19,659		

[1] Commerce and Navigation of the United States: United States Treasury Department, Annual Report, 1900.

TABLE 8.—LIQUORS, MALT: EXPORTS, BY COUNTRIES, 1900—Continued.

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
NORTH AMERICA—continued.				
Central American states—continued:				
Guatemala	1,680	$1,919	200	$40
Honduras	5,675	8,127	349	80
Nicaragua	15,981	18,625	4,190	1,063
Salvador	8,715	6,319	.....	.....
Mexico	24,893	29,413	55,200	17,628
Miquelon	928	891	.....	.....
West Indies:				
British	19,961	31,013	6,063	1,438
Cuba	445,621	601,920	285,448	75,602
Danish	636	740	.....	.....
Dutch	771	1,305	.....	.....
French	2,684	3,844	.....	.....
Haiti	2,402	4,177	2,330	900
Porto Rico	69,635	101,217	.....	.....
Santo Domingo	2,381	3,118	15	3
SOUTH AMERICA.				
Total	64,432	104,678	514	168
Bolivia	50	107	.....	.....
Brazil	45,845	78,389	.....	.....
Chile	91	135	.....	.....
Colombia	11,094	16,479	64	33
Ecuador	1,517	1,894	.....	.....
Guianas:				
British	2,190	2,362	450	135
Dutch	824	1,075	.....	.....
French	411	675	.....	.....
Peru	1,540	2,252	.....	.....
Venezuela	870	1,310	.....	.....
ASIA.				
Total	203,476	197,997	43,037	13,251
Aden	225	260	.....	.....
Chinese Empire	37,187	42,464	.....	.....
East Indies:				
British	603	993	.....	.....
Dutch	320	453	.....	.....
Hongkong	142,380	127,237	35,257	11,401
Japan	17,982	21,833	1,780	450

TABLE 8.—LIQUORS, MALT: EXPORTS, BY COUNTRIES, 1900—Continued.

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
ASIA—continued.				
Korea	720	$845	.....	.....
Russia, Asiatic	2,460	1,692	6,000	$1,400
Turkey in Asia	1,270	1,732	.....	.....
All other Asia	329	488	.....	.....
OCEANIA.				
Total	629,281	723,804	162,831	45,382
British Australasia	15,136	17,271	.....	.....
French Oceania	734	531	.....	.....
German Oceania	40	74	.....	.....
Guam	600	420	.....	.....
Hawaii	142,161	147,584	146,410	39,136
Philippine Islands	470,451	557,807	16,080	6,143
Tonga, Samoa, etc	159	117	341	103
AFRICA.				
Total	9,480	12,615	.....	.....
British Africa	5,910	7,736	.....	.....
Canary Islands	844	1,135	.....	.....
French Africa	174	245	.....	.....
Liberia	41	69	.....	.....
Portuguese Africa	911	1,282	.....	.....
Turkey in Africa—Egypt	1,600	2,148	.....	.....

It appears from Table 8 that, while the exports had a wide distribution among the countries of the world, the sales were, as a general rule, small and unimportant. The largest shipments were consigned to the countries recently acquired or occupied by the United States, viz., Hawaii, Cuba, and the Philippine Islands.

Table 9 shows the detailed statistics, by states and territories, of the manufacture of malt liquors.

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900.

	United States.	Alabama.	California.	Colorado.	Connecticut.	Delaware.	District of Columbia.	Georgia.
Number of establishments	1,509	5	99	14	20	5	4	5
Character of organization:								
Individual	535	.....	58	5	6	3	.....	.....
Firm and limited partnership	260	.....	21	2	6	.....	1	.....
Incorporated company	714	5	20	7	8	2	3	5
Established during the decade	450	3	31	4	8	1	2	2
Established during the census year	45	.....	2	.....	.....	.....	.....	.....
Capital:								
Total	$415,284,468	$829,446	$8,183,286	$5,682,204	$3,108,778	$1,126,738	$2,298,704	$1,327,830
Land	$58,611,097	$52,000	$1,212,127	$361,700	$193,761	$95,700	$261,040	$200,500
Buildings	$119,232,506	$284,000	$1,894,415	$2,246,102	$958,722	$362,569	$955,848	$323,852
Machinery, tools, and implements	$76,398,777	$335,000	$1,477,327	$1,622,500	$804,297	$193,616	$520,328	$323,380
Cash and sundries	$166,042,088	$158,446	$3,599,417	$1,451,902	$1,151,998	$484,853	$561,493	$480,098
Proprietors and firm members	1,102	.....	105	9	20	3	2	.....
Salaried officials, clerks, etc.:								
Total number	7,153	34	125	39	81	18	35	37
Total salaries	$18,046,540	$40,142	$212,634	$78,121	$132,897	$25,301	$56,104	$64,900
Officers of corporations—								
Number	1,433	8	22	10	19	3	7	11
Salaries	$4,710,692	$19,500	$37,580	$23,000	$57,000	$4,940	$10,500	$26,500
General superintendents, managers, clerks, etc.—								
Total number	5,720	26	103	29	62	15	28	26
Total salaries	$8,335,848	$20,642	$175,054	$55,121	$75,897	$20,361	$45,604	$38,400
Men—								
Number	5,617	26	99	28	61	15	28	26
Salaries	$8,280,336	$20,642	$171,954	$54,821	$75,585	$20,361	$45,604	$38,400
Women—								
Number	103	.....	4	1	1	.....	.....	.....
Salaries	$55,512	.....	$3,100	$300	$312	.....	.....	.....
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	43,464	271	1,080	339	360	94	217	360
Least number employed at any one time during the year	36,523	211	830	303	335	77	173	250
Average number	39,532	239	950	323	344	84	191	300
Wages	$25,826,211	$75,157	$753,424	$256,764	$278,946	$56,091	$140,690	$128,288
Men, 16 years and over—								
Average number	38,385	234	940	309	342	84	191	300
Wages	$25,573,612	$73,657	$749,844	$253,114	$278,781	$56,091	$140,690	$128,288
Women, 16 years and over—								
Average number	504	5	8	.....	2	.....	.....	.....
Wages	$132,614	$1,500	$3,280	.....	$165	.....	.....	.....
Children, under 16 years—								
Average number	643	.....	2	14	.....	.....	.....	.....
Wages	$119,985	.....	$300	$8,650	.....	.....	.....	.....

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Number of establishments	16	94	42	21	26	6	16	40
Character of organization:								
Individual	10	26	10	11	8	.....	9	5
Firm and limited partnership	6	10	7	3	3	.....	.....	5
Incorporated company	.....	58	25	7	15	6	7	30
Established during the decade	3	25	12	5	6	4	5	19
Established during the census year	1	1	.....	2	1	1	3	1
Capital:								
Total	$144,032	$32,798,080	$6,347,997	$2,420,515	$5,131,654	$3,299,326	$13,857,323	$18,186,623
Land	$22,150	$6,244,880	$666,976	$215,005	$504,115	$355,110	$589,246	$2,074,101
Buildings	$69,600	$9,255,270	$1,767,970	$973,110	$1,870,761	$1,097,483	$9,952,309	$6,226,373
Machinery, tools, and implements	$34,965	$6,579,129	$1,414,525	$417,677	$1,310,336	$500,178	$1,484,183	$4,421,247
Cash and sundries	$17,317	$10,718,801	$2,498,526	$814,723	$1,446,442	$1,346,555	$1,831,585	$5,414,902
Proprietors and firm members	19	47	26	18	14	.....	9	15
Salaried officials, clerks, etc.:								
Total number	1	578	205	58	124	57	161	322
Total salaries	$600	$1,040,689	$317,721	$84,136	$192,525	$87,556	$262,916	$639,025
Officers of corporations—								
Number	.....	123	64	15	30	12	12	46
Salaries	.....	$382,459	$147,000	$40,113	$72,899	$34,960	$41,477	$193,597
General superintendents, managers, clerks, etc.—								
Total number	1	455	141	43	94	45	149	277
Total salaries	$600	$658,230	$170,721	$44,023	$119,626	$52,596	$221,439	$445,428
Men—								
Number	1	447	136	43	91	44	149	271
Salaries	$600	$654,974	$168,273	$44,023	$118,456	$52,116	$221,439	$442,356
Women—								
Number	.....	8	5	.....	3	1	.....	6
Salaries	.....	$3,256	$2,448	.....	$1,170	$480	.....	$3,072
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	35	3,617	1,128	392	681	401	839	1,767
Least number employed at any one time during the year	29	3,013	951	287	488	350	744	1,514
Average number	29	3,269	1,045	321	591	374	752	1,651
Wages	$19,064	$2,059,792	$601,638	$189,916	$327,242	$224,985	$484,318	$1,340,412
Men, 16 years and over—								
Average number	29	3,205	1,020	317	573	353	751	1,641
Wages	$19,064	$2,047,023	$596,567	$189,366	$323,662	$221,195	$484,162	$1,336,427
Women, 16 years and over—								
Average number	.....	52	15	.....	3	7	.....	10
Wages	.....	$10,426	$3,320	.....	$364	$1,360	.....	$3,985
Children, under 16 years—								
Average number	.....	12	10	4	15	14	1	.....
Wages	.....	$2,343	$1,751	$550	$3,216	$2,430	$156	.....

	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.
Number of establishments	77	78	49	21	19	5	5	45
Character of organization:								
Individual	25	47	11	8	10	4	.....	8
Firm and limited partnership	14	18	1	5	2	1	.....	6
Incorporated company	38	13	37	8	7	.....	5	31
Established during the decade	27	17	19	9	10	.....	1	8
Established during census year	2	.....	2	4	.....	1	.....	4
Capital:								
Total	$6,235,484	$8,539,722	$25,731,930	$1,203,516	$2,678,593	$44,410	$2,047,576	$26,330,466
Land	$674,609	$2,202,783	$4,108,252	$106,030	$228,023	$3,610	$97,000	$1,559,072
Buildings	$1,806,812	$2,541,442	$8,211,376	$482,440	$775,735	$16,700	$1,084,844	$6,212,028
Machinery, tools, and implements	$1,820,343	$1,170,589	$3,535,386	$328,861	$784,728	$10,550	$443,599	$5,106,292
Cash and sundries	$1,933,720	$2,624,908	$9,876,916	$286,185	$890,107	$13,550	$422,133	$13,453,074
Proprietors and firm members	49	85	13	22	14	6	.....	18
Salaried officials, clerks, etc.:								
Total number	242	154	398	34	45	.....	34	350
Total salaries	$297,150	$213,544	$836,383	$68,280	$94,215	.....	$64,578	$818,388
Officers of corporations—								
Number	68	29	60	11	16	.....	9	69
Salaries	$118,400	$66,662	$341,600	$34,800	$57,107	.....	$14,260	$321,257
General superintendents, managers, clerks, etc.—								
Total number	174	125	338	23	29	.....	25	281
Total salaries	$178,750	$146,882	$494,783	$33,980	$37,108	.....	$50,318	$497,631
Men—								
Number	166	121	328	21	29	.....	25	280
Salaries	$175,693	$144,602	$485,303	$32,680	$37,108	.....	$50,318	$497,215
Women—								
Number	8	4	10	2	.....	.....	.....	1
Salaries	$3,057	$2,280	$9,480	$1,300	.....	.....	.....	$416
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	1,187	1,072	3,394	229	242	11	313	1,860
Least number employed at any one time during the year	887	764	3,023	186	183	10	236	1,651
Average number	980	856	3,150	193	200	11	280	1,723
Wages	$599,319	$417,832	$1,890,100	$169,066	$131,455	$8,760	$185,300	$1,360,915
Men, 16 years and over—								
Average number	955	843	3,092	181	197	11	280	1,715
Wages	$591,186	$414,895	$1,876,961	$165,030	$130,495	$8,760	$185,300	$1,358,715
Women, 16 years and over—								
Average number	25	13	23	.....	3	.....	.....	2
Wages	$8,133	$2,937	$5,425	.....	$960	.....	.....	$1,000
Children, under 16 years—								
Average number	.....	.....	35	12	.....	.....	.....	6
Wages	.....	.....	$7,714	$4,036	.....	.....	.....	$1,200

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	New Mexico.	New York.	Ohio.	Oregon.	Pennsylvania.	Rhode Island.	South Dakota.	Tennessee.
Number of establishments	3	225	112	24	208	6	4	4
Character of organization:								
Individual		50	37	17	73	1	3	1
Firm and limited partnership		41	19	3	44			
Incorporated company	3	134	56	4	91	5	1	3
Established during the decade		47	20	8	89	1		
Established during the census year		6	3		2	1	1	
Capital:								
Total	$42,500	$95,057,875	$26,822,396	$818,654	$63,684,480	$3,338,276	$560,794	$1,277,772
Land	$1,700	$13,022,037	$3,564,394	$124,340	$6,270,152	$143,711	$57,038	$111,000
Buildings	$15,000	$22,686,162	$8,592,305	$240,350	$17,290,687	$1,002,754	$148,318	$443,534
Machinery, tools, and implements	$17,800	$15,843,299	$5,651,174	$207,711	$12,476,071	$1,170,167	$120,200	$271,586
Cash and sundries	$8,000	$43,506,377	$9,014,523	$246,253	$27,647,570	$1,021,644	$235,238	$451,652
Proprietors and firm members		153	81	24	171	1	3	1
Salaried officials, clerks, etc.:								
Total number	1	1,721	547	19	816	53	10	31
Total salaries	$800	$3,673,854	$879,010	$24,200	$1,474,092	$89,674	$12,420	$51,500
Officers of corporations—								
Number	1	385	94	4	118	3	2	11
Salaries	$800	$1,511,133	$274,960	$4,100	$437,445	$20,000	$5,000	$26,200
General superintendents, managers, clerks, etc.—								
Total number		1,336	453	15	698	50	8	20
Total salaries		$2,162,721	$604,050	$20,100	$1,036,647	$69,674	$7,420	$25,300
Men—								
Number		1,318	446	15	688	50	8	20
Salaries		$2,156,079	$599,516	$20,100	$1,030,063	$69,674	$7,420	$25,300
Women—								
Number		18	7		10			
Salaries		$6,642	$4,534		$6,584			
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	26	7,921	3,749	157	4,791	322	70	324
Least number employed at any one time during the year	8	7,081	3,161	113	4,159	274	54	249
Average number	14	7,424	3,464	136	4,505	296	61	288
Wages	$8,387	$5,630,996	$2,292,652	$106,041	$2,884,242	$223,712	$23,949	$129,782
Men, 16 years and over—								
Average number	14	7,409	3,420	133	4,490	296	58	281
Wages	$8,387	$5,627,656	$2,284,958	$105,341	$2,881,215	$223,712	$22,949	$126,982
Women, 16 years and over—								
Average number		13	5		6			
Wages		$2,620	$852		$1,346			
Children, under 16 years—								
Average number		2	39	3	9		3	7
Wages		$720	$6,842	$700	$1,681		$1,000	$2,800

	Texas.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states.[1]
Number of establishments	9	7	6	25	8	147	4	5
Character of organization:								
Individual	2	1		10	2	73	1	
Firm and limited partnership		3		4		32	1	2
Incorporated company	7	3	6	11	6	42	2	3
Established during the decade	6	2	5	10	2	34	1	4
Established during the census year				2		5		
Capital:								
Total	$4,439,012	$613,992	$2,000,954	$1,506,762	$1,714,050	$35,317,950	$86,301	$498,467
Land	$295,635	$154,374	$208,179	$147,750	$109,811	$7,316,144	$9,625	$47,417
Buildings	$1,156,821	$98,999	$700,419	$458,689	$463,308	$6,342,994	$25,500	$206,905
Machinery, tools, and implements	$1,099,179	$118,341	$410,563	$343,461	$366,009	$3,515,536	$26,400	$122,249
Cash and sundries	$1,887,377	$242,278	$681,793	$556,862	$774,922	$18,143,276	$24,776	$121,896
Proprietors and firm members	2	4		19	2	139	3	5
Salaried officials, clerks, etc.:								
Total number	98	22	72	53	60	484	2	32
Total salaries	$180,619	$21,178	$95,458	$81,830	$70,803	$726,069	$2,400	$34,328
Officers of corporations—								
Number	11	1	19	22	9	102	2	6
Salaries	$45,100	$1,800	$30,760	$42,000	$16,920	$234,063	$2,400	$12,900
General superintendents, managers, clerks, etc.—								
Total number	87	21	53	31	51	382		26
Total salaries	$135,519	$19,378	$64,698	$39,830	$53,883	$492,006		$21,428
Men—								
Number	84	20	52	30	51	374		26
Salaries	$133,411	$18,478	$64,398	$39,230	$53,883	$488,833		$21,428
Women—								
Number	3	1	1	1		8		
Salaries	$2,108	$900	$300	$600		$3,173		
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	668	102	343	242	300	4,451	20	189
Least number employed at any one time during the year	502	72	251	192	219	3,536	18	109
Average number	585	89	300	211	256	3,904	19	124
Wages	$354,682	$53,751	$144,882	$171,456	$117,320	$1,926,730	$12,300	$45,855
Men, 16 years and over—								
Average number	555	83	300	210	256	3,178	19	120
Wages	$349,351	$52,591	$144,882	$171,206	$117,320	$1,770,694	$12,300	$44,895
Women, 16 years and over—								
Average number	6					306		
Wages	$471					$84,470		
Children, under 16 years—								
Average number	24	6		1		420		4
Wages	$4,860	$1,160		$250		$71,666		$960

[1] Includes establishments distributed as follows: Arkansas, 1; Florida, 1; Kansas, 2; South Carolina, 1.

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	United States.	Alabama.	California.	Colorado.	Connecticut.	Delaware.	District of Columbia.	Georgia.
Average number of wage-earners, including piece-workers, employed during each month:								
Men, 16 years and over—								
January	37,018	219	887	301	336	77	174	260
February	36,897	222	912	293	334	78	174	264
March	37,437	216	938	296	336	82	173	277
April	38,233	231	984	303	335	82	186	291
May	39,348	256	968	315	339	86	196	324
June	39,709	257	991	319	347	87	195	347
July	39,875	258	972	321	353	90	217	350
August	39,901	259	983	320	356	89	214	326
September	39,448	254	950	318	349	88	205	320
October	38,322	215	932	311	345	86	191	284
November	37,314	214	890	308	341	83	182	285
December	37,114	205	868	304	339	82	181	270
Women, 16 years and over—								
January	434	4	2	.....	1	.....	.....	.....
February	442	4	8	.....	1	.....	.....	.....
March	465	4	12	.....	1	.....	.....	.....
April	499	5	17	.....	1	.....	.....	.....
May	507	6	8	.....	1	.....	.....	.....
June	529	6	7	.....	3	.....	.....	.....
July	539	6	2	.....	3	.....	.....	.....
August	579	6	7	.....	3	.....	.....	.....
September	548	6	2	.....	3	.....	.....	.....
October	535	4	14	.....	1	.....	.....	.....
November	503	4	3	.....	1	.....	.....	.....
December	471	4	10	.....	1	.....	.....	.....
Children, under 16 years—								
January	513	.....	2	15	.....	.....	.....	.....
February	527	.....	2	12	.....	.....	.....	.....
March	585	.....	2	12	.....	.....	.....	.....
April	676	.....	2	12	.....	.....	.....	.....
May	719	.....	2	17	.....	.....	.....	.....
June	757	.....	2	17	.....	.....	.....	.....
July	751	.....	2	17	.....	.....	.....	.....
August	778	.....	2	17	.....	.....	.....	.....
September	731	.....	2	15	.....	.....	.....	.....
October	601	.....	2	12	.....	.....	.....	.....
November	552	.....	2	12	.....	.....	.....	.....
December	529	.....	2	12	.....	.....	.....	.....

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Average number of wage-earners, including piece-workers, employed during each month:								
Men, 16 years and over—								
January	27	3,113	941	335	483	329	757	1,588
February	27	3,090	934	312	485	330	757	1,581
March	29	3,129	967	294	495	335	768	1,598
April	29	3,197	1,028	302	527	334	775	1,619
May	30	3,238	1,063	310	628	379	815	1,663
June	30	3,249	1,085	325	636	380	730	1,672
July	32	3,294	1,096	325	656	379	743	1,710
August	30	3,322	1,093	325	653	377	742	1,708
September	31	3,301	1,082	321	627	376	743	1,686
October	30	3,273	1,040	303	579	341	732	1,635
November	26	3,151	966	306	557	338	725	1,615
December	28	3,109	948	349	549	335	728	1,618
Women, 16 years and over—								
January	.....	42	13	.....	3	7	.....	10
February	.....	42	13	.....	3	7	.....	11
March	.....	42	17	.....	3	7	.....	11
April	.....	47	17	.....	3	7	.....	11
May	.....	56	15	.....	3	7	.....	11
June	.....	62	15	.....	3	7	.....	11
July	.....	67	17	.....	4	7	.....	11
August	.....	60	17	.....	4	7	.....	11
September	.....	58	17	.....	3	7	.....	11
October	.....	55	17	.....	3	7	.....	11
November	.....	47	13	.....	3	7	.....	8
December	.....	52	13	.....	3	7	.....	1
Children, under 16 years—								
January	.....	3	5	3	9	14	1	.....
February	.....	2	5	3	9	14	1	.....
March	.....	2	5	4	12	14	1	.....
April	.....	10	10	3	13	14	1	.....
May	.....	18	12	5	19	14	1	.....
June	.....	23	12	4	20	14	1	.....
July	.....	18	12	4	19	14	1	.....
August	.....	22	13	4	19	14	1	.....
September	.....	19	11	3	18	14	1	.....
October	.....	15	11	3	17	14	1	.....
November	.....	3	11	4	15	14	1	.....
December	.....	3	11	3	15	14	1	.....

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.
Average number of wage-earners, including piece-workers, employed during each month:								
Men, 16 years and over—								
January	875	905	2,990	168	196	11	287	1,710
February	900	800	3,023	168	188	11	287	1,702
March	893	780	3,046	173	182	11	289	1,708
April	928	801	3,080	196	195	11	294	1,721
May	993	838	3,218	202	201	11	298	1,756
June	1,031	883	3,178	185	217	11	282	1,713
July	1,053	926	3,096	184	208	11	256	1,766
August	1,044	894	3,209	182	207	11	254	1,762
September	1,009	859	3,199	184	207	11	253	1,740
October	953	813	3,060	188	196	11	278	1,693
November	896	784	3,018	177	185	10	291	1,656
December	885	838	2,987	171	183	10	291	1,654
Women, 16 years and over—								
January	19	14	21	.....	3	.....	.....	2
February	19	14	21	.....	3	.....	.....	2
March	21	14	24	.....	3	.....	.....	2
April	22	15	24	.....	3	.....	.....	2
May	23	13	23	.....	3	.....	.....	2
June	33	12	24	.....	3	.....	.....	2
July	35	16	24	.....	3	.....	.....	2
August	32	11	23	.....	3	.....	.....	2
September	26	11	22	.....	3	.....	.....	2
October	25	11	22	.....	3	.....	.....	2
November	20	11	22	.....	3	.....	.....	2
December	19	15	22	.....	3	.....	.....	2
Children, under 16 years—								
January	.....	.....	31	8	.....	.....	.....	5
February	.....	.....	29	8	.....	.....	.....	5
March	.....	.....	32	8	.....	.....	.....	5
April	.....	.....	32	12	.....	.....	.....	6
May	.....	.....	38	14	.....	.....	.....	7
June	.....	.....	38	14	.....	.....	.....	7
July	.....	.....	40	15	.....	.....	.....	7
August	.....	.....	40	15	.....	.....	.....	7
September	.....	.....	39	15	.....	.....	.....	6
October	.....	.....	35	14	.....	.....	.....	5
November	.....	.....	33	8	.....	.....	.....	5
December	.....	.....	35	8	.....	.....	.....	5

	New Mexico.	New York.	Ohio.	Oregon.	Pennsylvania.	Rhode Island.	South Dakota.	Tennessee.
Average number of wage-earners, including piece-workers, employed during each month:								
Men, 16 years and over—								
January	8	7,336	3,236	121	4,302	284	47	249
February	8	7,343	3,239	121	4,311	278	47	244
March	8	7,349	3,334	127	4,345	274	53	271
April	9	7,396	3,406	134	4,428	289	54	288
May	11	7,479	3,510	142	4,574	313	66	290
June	21	7,527	3,553	143	4,713	274	65	310
July	22	7,492	3,603	146	4,728	282	65	304
August	26	7,446	3,592	147	4,706	302	65	304
September	22	7,393	3,558	145	4,614	321	65	304
October	15	7,410	3,420	132	4,478	319	58	280
November	6	7,372	3,325	123	4,358	313	58	268
December	6	7,367	3,269	119	4,329	300	52	260
Women, 16 years and over—								
January	.....	8	2	.....	6	.....	.....	.....
February	.....	12	2	.....	6	.....	.....	.....
March	.....	11	4	.....	6	.....	.....	.....
April	.....	14	6	.....	6	.....	.....	.....
May	.....	14	6	.....	6	.....	.....	.....
June	.....	15	6	.....	6	.....	.....	.....
July	.....	14	6	.....	6	.....	.....	.....
August	.....	14	6	.....	7	.....	.....	.....
September	.....	15	6	.....	6	.....	.....	.....
October	.....	12	6	.....	6	.....	.....	.....
November	.....	15	6	.....	8	.....	.....	.....
December	.....	15	2	.....	9	.....	.....	.....
Children, under 16 years—								
January	.....	2	24	1	6	.....	2	5
February	.....	2	22	1	7	.....	2	5
March	.....	2	31	3	6	.....	3	5
April	.....	2	38	3	5	.....	3	10
May	.....	2	43	3	9	.....	4	10
June	.....	2	42	4	13	.....	4	10
July	.....	2	52	4	14	.....	4	10
August	.....	2	53	4	13	.....	4	10
September	.....	2	50	3	13	.....	4	10
October	.....	2	42	2	10	.....	3	5
November	.....	2	35	2	8	.....	3	5
December	.....	2	32	2	8	.....	2	5

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Texas.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states.[1]
Average number of wage-earners, including piece-workers, employed during each month:								
Men, 16 years and over—								
January	487	69	256	188	231	3,109	17	109
February	486	78	253	195	233	3,068	17	109
March	521	82	282	203	248	3,194	18	113
April	527	87	303	211	251	3,265	18	123
May	586	90	318	220	262	3,216	19	125
June	606	95	343	223	278	3,257	19	132
July	626	91	343	228	286	3,211	20	132
August	614	91	334	228	284	3,252	20	130
September	601	87	321	224	274	3,258	20	128
October	586	79	308	213	244	3,160	20	116
November	520	72	268	197	239	3,064	17	110
December	503	75	270	191	236	3,076	17	112
Women, 16 years and over—								
January	6	.....	.....	.....	.....	271	.....	.....
February	6	.....	.....	.....	.....	268	.....	.....
March	6	.....	.....	.....	.....	277	.....	.....
April	6	.....	.....	.....	.....	293	.....	.....
May	6	.....	.....	.....	.....	304	.....	.....
June	6	.....	.....	.....	.....	308	.....	.....
July	6	.....	.....	.....	.....	310	.....	.....
August	6	.....	.....	.....	.....	360	.....	.....
September	6	.....	.....	.....	.....	344	.....	.....
October	6	.....	.....	.....	.....	330	.....	.....
November	6	.....	.....	.....	.....	324	.....	.....
December	6	.....	.....	.....	.....	287	.....	.....
Children, under 16 years—								
January	20	6	.....	1	.....	348	.....	2
February	22	6	.....	1	.....	365	.....	4
March	23	6	.....	1	.....	406	.....	2
April	28	6	.....	1	.....	459	.....	6
May	25	6	.....	1	.....	463	.....	5
June	26	6	.....	1	.....	491	.....	6
July	30	6	.....	1	.....	473	.....	6
August	24	6	.....	1	.....	497	.....	5
September	26	6	.....	1	.....	468	.....	5
October	22	6	.....	1	.....	375	.....	4
November	22	6	.....	1	.....	358	.....	2
December	22	6	.....	1	.....	343	.....	2

	United States.	Alabama.	California.	Colorado.	Connecticut.	Delaware.	District of Columbia.	Georgia.
Miscellaneous expenses:								
Total	$109,329,231	$150,039	$2,126,734	$835,518	$1,156,308	$285,662	$650,902	$410,745
Rent of works	$304,665	.....	$11,370	.....	$5,800	.....	$2,400	.....
Taxes, not including internal revenue	$2,431,195	$6,342	$41,725	$30,678	$21,146	$3,451	$7,933	$9,903
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$106,537,764	$143,697	$2,073,639	$804,526	$1,129,362	$282,211	$640,569	$400,842
Contract work	$55,607	.....	.....	$314	.....	.....	.....	.....
Materials used:								
Total cost	$51,674,928	$134,653	$1,276,575	$375,898	$639,555	$123,327	$286,653	$275,747
Malt, bushels	36,385,365	86,550	312,173	70,754	599,276	123,996	241,754	174,213
Cost	$20,539,308	$48,485	$213,606	$45,270	$349,402	$83,906	$157,541	$110,321
Corn, in partially manufactured form, pounds	483,998,984	1,282,000	3,289,180	4,718,280	5,927,520	464,280	4,439,754	364,594
Cost	$4,805,887	$10,500	$56,430	$52,712	$68,068	$5,358	$40,765	$9,093
Barley, bushels	11,232,599	.....	865,792	194,611	.....	.....	3,246	.....
Cost	$5,554,669	.....	$493,829	$100,449	.....	.....	$1,623	.....
Hops, pounds	37,604,067	59,000	812,426	215,312	590,447	98,950	190,522	114,479
Cost	$5,878,460	$9,230	$111,088	$35,860	$73,090	$16,894	$34,001	$19,652
Fuel	$4,727,891	$23,726	$190,807	$38,365	$55,699	$8,970	$25,692	$40,940
Rent of power and heat	$15,107	.....	$8,189	.....	$80	.....	$342	.....
Mill supplies	$599,479	$4,625	$12,048	$3,742	$11,995	$1,323	$7,242	$3,846
All other materials	$8,722,576	$32,787	$177,256	$73,258	$76,270	$6,852	$14,310	$73,802
Freight	$831,551	$5,300	$18,322	$26,237	$9,951	$24	$5,187	$18,593
Products:								
Total value	$237,269,718	$481,040	$5,085,462	$2,042,863	$2,652,819	$616,496	$1,340,041	$973,212
Beer, ale, and porter, barrels of 31 gallons	88,664,584	60,707	748,917	272,869	425,266	103,330	213,939	124,025
Value	$234,275,259	$441,692	$4,987,367	$2,025,627	$2,618,188	$609,097	$1,297,443	$938,644
All other products	$2,994,454	$39,948	$98,095	$17,236	$34,681	$7,399	$42,598	$34,568
Comparison of products:								
Number of establishments reporting for both years	1,226	4	76	12	18	4	3	5
Value for census year	$216,203,898	$465,340	$4,565,710	$2,029,435	$2,324,398	$616,496	$1,174,973	$973,212
Value for preceding business year	$198,543,002	$409,000	$4,431,118	$1,785,286	$2,110,963	$568,154	$891,940	$952,947

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Miscellaneous expenses:								
Total	$26,195	$9,927,696	$2,534,285	$736,550	$1,500,606	$792,468	$1,568,108	$4,731,540
Rent of works	$540	$4,260	$715	$15,050	$1,760	.....	$2,914	$324
Taxes, not including internal revenue	$2,637	$189,690	$52,042	$12,775	$30,222	$42,621	$25,889	$115,875
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$23,018	$9,718,746	$2,481,528	$708,725	$1,468,624	$749,847	$1,539,355	$4,614,343
Contract work	.....	$15,000	.....	.....	.....	.....	.....	$998
Materials used:								
Total cost	$19,301	$4,086,178	$1,127,079	$385,164	$630,969	$403,440	$878,933	$2,843,050
Malt, bushels	5,124	3,189,654	713,683	216,849	397,358	279,298	711,024	2,299,215
Cost	$4,334	$1,572,057	$396,103	$118,671	$223,806	$167,332	$427,401	$1,395,624
Corn, in partially manufactured form, pounds	.....	70,500,228	16,749,722	3,302,924	6,455,588	2,165,390	10,965,513	14,888,968
Cost	.....	$584,260	$154,834	$28,620	$59,118	$20,565	$124,118	$165,114

[1] Includes establishment distributed as follows: Arkansas, 1; Florida, 1; Kansas, 2; South Carolina, 1.

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Materials used—Continued.								
Total cost—Continued.								
Barley, bushels	8,407	998,117	229,435	228,926	110,000	.....	.....	.....
Cost	$4,558	$463,520	$121,744	$87,762	$54,860	.....	.....	.....
Hops, pounds	11,019	3,100,409	751,064	253,949	337,492	205,833	591,341	2,457,654
Cost	$1,711	$468,390	$116,044	$37,112	$71,420	$42,604	$97,289	$367,019
Fuel	$2,270	$400,828	$133,064	$53,860	$61,187	$54,899	$72,941	$220,071
Rent of power and heat	.....	$76	.....	.....	.....	.....	.....	.....
Mill supplies	$240	$47,735	$16,810	$2,733	$5,583	$3,499	$9,108	$22,123
All other materials	$4,115	$464,427	$164,590	$41,976	$154,751	$104,303	$147,751	$590,732
Freight	$2,073	$34,885	$23,890	$14,430	$244	$10,238	$325	$82,367
Products:								
Total value	$74,868	$19,733,821	$5,777,047	$1,713,911	$3,186,627	$1,472,062	$4,133,797	$11,255,613
Beer, ale, and porter, barrels of 31 gallons.	8,875	3,794,782	857,332	252,814	499,009	241,108	694,769	1,731,608
Value	$71,918	$19,530,322	$5,733,145	$1,625,876	$3,145,759	$1,448,549	$4,104,506	$11,175,068
All other products	$2,950	$203,499	$43,902	$88,035	$40,868	$23,513	$29,291	$80,545
Comparison of products:								
Number of establishments reporting for both years	11	100	35	18	24	4	13	34
Value for census year	$56,219	$19,012,851	$4,662,849	$1,402,123	$3,120,440	$1,244,298	$3,938,971	$9,661,069
Value for preceding business year	$50,284	$17,353,916	$4,958,572	$1,178,906	$2,735,925	$1,346,056	$3,903,542	$9,285,800

	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.
Miscellaneous expenses:								
Total	$2,402,652	$1,996,040	$6,137,846	$433,577	$635,031	$6,935	$778,198	$6,733,772
Rent of works	$51,767	$646	$31,874	$600	$3,180	.....	.....	$5,520
Taxes, not including internal revenue	$61,076	$39,332	$151,076	$12,961	$14,694	$715	$36,003	$112,564
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$2,289,809	$1,927,987	$5,954,896	$420,016	$617,157	$6,220	$742,195	$6,615,688
Contract work	.....	$28,075	.....	.....	.....	.....	.....	.....
Materials used:								
Total cost	$1,187,770	$867,901	$3,073,011	$375,631	$311,783	$9,240	$599,144	$2,782,420
Malt, bushels	927,748	216,193	2,233,512	89,761	218,639	4,987	468,033	2,110,649
Cost	$509,146	$129,659	$1,064,297	$60,158	$121,715	$4,971	$298,019	$1,114,655
Corn, in partially manufactured form, pounds	14,955,434	6,053,391	7,337,595	1,080,572	4,056,210	.....	1,304,015	24,656,416
Cost	$166,402	$56,462	$65,017	$17,129	$35,922	.....	$16,552	$259,364
Barley, bushels	189,197	561,616	562,343	146,499	37,265	.....	200,000	588,079
Cost	$92,196	$238,173	$270,467	$102,328	$17,716	.....	$120,000	$303,531
Hops, pounds	789,298	502,527	2,114,888	159,091	210,870	5,088	656,171	2,030,528
Cost	$114,761	$84,561	$457,596	$20,264	$27,181	$693	$91,730	$332,669
Fuel	$112,670	$92,521	$315,912	$35,628	$35,688	$2,110	$38,796	$200,672
Rent of power and heat	$16	$1,500	$3,100	$240	.....	.....	$150	.....
Mill supplies	$11,716	$9,459	$25,778	$2,635	$1,754	.....	$5,237	$51,140
All other materials	$145,276	$221,044	$862,132	$88,964	$68,536	$295	$25,629	$468,566
Freight	$35,587	$34,522	$8,717	$48,285	$3,271	$1,171	$3,031	$70,828
Products:								
Total value	$5,296,825	$4,456,928	$13,776,905	$1,276,331	$1,433,501	$29,216	$1,955,628	$14,886,456
Beer, ale, and porter, barrels of 31 gallons	911,268	683,124	2,410,999	149,697	218,161	2,417	312,661	2,117,491
Value	$5,259,958	$4,451,444	$13,484,470	$1,263,906	$1,433,001	$29,216	$1,951,000	$14,287,345
All other products	$36,867	$5,484	$292,435	$12,425	$500	.....	$4,628	$99,111
Comparison of products:								
Number of establishments reporting for both years	66	56	32	16	14	5	5	31
Value for census year	$4,981,878	$4,105,361	$12,297,760	$1,181,064	$1,414,973	$29,216	$1,955,628	$13,996,136
Value for preceding business year	$4,568,181	$3,625,648	$11,545,381	$888,810	$1,361,470	$26,100	$1,798,761	$13,260,965

	New Mexico.	New York.	Ohio.	Oregon.	Pennsylvania.	Rhode Island.	South Dakota.	Tennessee.
Miscellaneous expenses:								
Total	$11,456	$26,954,024	$8,104,240	$215,584	$13,039,371	$859,619	$78,216	$517,278
Rent of works	$300	$92,860	$12,120	$200	$52,307	.....	.....	.....
Taxes, not including internal revenue	$473	$566,136	$217,484	$9,756	$335,263	$14,907	$1,417	$15,421
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$10,683	$26,290,528	$7,874,686	$205,628	$12,651,551	$844,712	$76,754	$501,857
Contract work	.....	$4,500	.....	.....	$250	.....	$45	.....
Materials used:								
Total cost	$7,312	$11,418,383	$4,277,812	$172,615	$6,609,889	$453,406	$37,843	$202,437
Malt, bushels	5,035	9,605,158	2,790,141	53,581	5,618,139	422,983	5,023	184,453
Cost	$3,090	$5,574,099	$1,551,085	$38,511	$3,333,710	$250,389	$2,792	$88,659
Corn, in partially manufactured form, pounds	.....	120,330,084	32,162,333	272,720	57,381,614	2,389,380	541,470	1,152,080
Cost	.....	$1,203,377	$336,089	$4,396	$638,224	$24,102	$6,324	$16,076
Barley, bushels	.....	1,266,548	1,227,437	91,986	123,000	.....	36,182	.....
Cost	.....	$650,668	$618,760	$52,935	$64,130	.....	$12,585	.....
Hops, pounds	3,100	10,000,156	2,944,523	90,699	4,557,446	407,459	22,022	147,478
Cost	$365	$1,390,616	$511,869	$12,907	$686,327	$44,668	$3,387	$23,551
Fuel	$1,200	$896,921	$382,156	$27,584	$528,957	$49,112	$5,660	$18,912
Rent of power and heat	.....	$1,884	.....	.....	.....	.....	.....	.....
Mill supplies	$175	$130,956	$50,677	$4,734	$78,697	$14,923	$805	$3,718
All other materials	$1,532	$1,482,863	$744,207	$22,220	$1,178,322	$65,692	$6,095	$107,021
Freight	$950	$86,999	$82,969	$9,328	$116,522	$4,670	$755	$4,500
Products:								
Total value	$37,136	$56,137,854	$18,522,639	$714,242	$29,162,743	$1,880,171	$280,080	$1,175,304
Beer, ale, and porter, barrels of 31 gallons	3,698	9,593,085	3,028,116	87,002	4,648,172	332,916	34,810	144,625
Value	$35,776	$55,967,887	$18,239,356	$696,866	$28,981,891	$1,867,881	$278,980	$1,167,580
All other products	$1,360	$169,967	$283,283	$17,376	$180,852	$12,290	$1,100	$7,724
Comparison of products:								
Number of establishments reporting for both years	1	201	99	20	143	4	8	4
Value for census year	$30,360	$53,603,204	$17,718,861	$697,102	$21,923,133	$1,177,662	$264,080	$1,175,304
Value for preceding business year	$33,000	$52,079,358	$14,829,552	$615,501	$19,766,566	$1,133,956	$134,226	$1,129,688

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Texas.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states.[1]
Miscellaneous expenses:								
Total	$1,210,381	$123,838	$374,865	$385,884	$492,611	$10,259,291	$18,710	$126,456
Rent of works	$2,120	$60		$2,022	$300	$8,656		
Taxes, not including internal revenue	$28,107	$6,369	$8,299	$9,681	$20,707	$171,379	$900	$9,646
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$1,180,154	$116,559	$366,566	$374,181	$471,129	$10,079,156	$17,810	$122,810
Contract work		$850			$475	$5,100		
Materials used:								
Total cost	$646,794	$120,995	$215,923	$294,565	$197,724	$4,237,454	$11,748	$66,611
Malt, bushels	399,082		136,208	174,846	201,293	1,058,663	6,300	33,477
Cost	$217,350		$80,370	$115,997	$116,451	$524,741	$4,960	$20,075
Corn, in partially manufactured form, pounds	5,212,020	100,000	1,777,640	1,826,715	2,895,580	52,464,764	44,270	490,300
Cost	$55,017	$1,250	$16,708	$27,110	$24,786	$464,380	$1,443	$4,252
Barley, bushels		69,168	19,280	60,139		3,410,581	1,495	13,000
Cost		$40,325	$11,375	$27,988		$1,596,125	$922	$6,100
Hops, pounds	302,557	48,220	139,223	142,258	133,256	2,369,345	6,953	20,014
Cost	$53,665	$7,321	$21,502	$21,800	$20,196	$444,778	$812	$3,838
Fuel	$132,387	$12,007	$31,530	$29,932	$18,799	$358,208	$950	$21,260
Rent of power and heat				$4,315		$215		
Mill supplies	$6,440	$791	$4,358	$5,241	$1,743	$40,923	$260	$672
All other materials	$166,531	$50,708	$46,056	$53,397	$15,075	$780,349	$1,595	$8,451
Freight	$15,404	$8,593	$4,024	$8,785	$725	$27,735	$806	$1,303
Products:								
Total value	$2,689,606	$432,835	$972,820	$1,230,525	$1,113,021	$19,394,709	$52,540	$321,419
Beer, ale, and porter, barrels of 31 gallons	366,274	45,583	141,555	157,225	152,064	3,049,191	6,097	38,509
Value	$2,440,026	$431,630	$920,620	$1,220,427	$1,061,534	$18,707,752	$46,340	$297,222
All other products	$249,580	$1,205	$52,200	$10,098	$51,487	$686,957	$6,200	$24,197
Comparison of products:								
Number of establishments reporting for both years	7	7	6	17	5	116	4	3
Value for census year	$1,953,850	$432,835	$972,820	$1,024,169	$1,042,037	$18,745,838	$52,540	$180,203
Value for preceding business year	$1,563,715	$362,696	$855,272	$819,166	$1,016,747	$14,958,239	$48,145	$175,050

	United States.	Alabama.	California.	Colorado.	Connecticut.	Delaware.	District of Columbia.	Georgia.
Power:								
Number of establishments reporting	1,333	5	66	13	19	3	4	4
Total horsepower	204,533	1,046	8,624	1,057	2,219	480	1,823	1,385
Owned—								
Engines—								
Steam, number	4,123	22	99	34	46	12	21	10
Horsepower	195,430	1,046	8,382	1,050	2,115	462	1,697	1,360
Gas or gasoline, number	29		2		1		1	
Horsepower	394		6		10		10	
Water wheels, number	27		8					
Horsepower	319		28					
Electric motors, number	469		6	1	8	1	11	1
Horsepower	6,632		19	7	85	10	51	25
Other power, number	70						17	
Horsepower	1,159						65	
Rented—								
Electric, horsepower	540		185		9	8		
Other kind, horsepower	59		4					
Furnished to other establishments, horsepower	401							
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	1,524	5	99	14	20	5	4	5
No employees	43		12	1				
Under 5	304		39	3	4	2		
5 to 20	523		35	5	7			
21 to 50	349	2	7	2	9	3	2	
51 to 100	176	2	3	2			1	4
101 to 250	94	1	3	1			1	1
251 to 500	19							
501 to 1,000	15							
Over 1,000	1							

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Power:								
Number of establishments reporting	5	90	87	18	25	6	10	39
Total horsepower	82	18,596	5,037	2,807	3,238	1,813	4,650	6,869
Owned—								
Engines—								
Steam, number	6	301	104	42	68	44	103	152
Horsepower	82	17,509	5,003	2,262	3,015	1,813	4,650	6,719
Gas or gasoline, number		1	1					
Horsepower		2	6					
Water wheels, number								
Horsepower								
Electric motors, number		56	3	5	13			15
Horsepower		1,085	28	45	113			150
Other power, number					5			
Horsepower					110			
Rented—								
Electric, horsepower								
Other kind, horsepower								
Furnished to other establishments, horsepower						12		

[1] Includes establishments distributed as follows: Arkansas, 1; Florida, 1; Kansas, 2; South Carolina, 1.

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Idaho.	Illinois.	Indiana.	Iowa.	Kentucky.	Louisiana.	Maryland.	Massachusetts.
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	16	109	42	21	26	6	16	40
No employees	3	1	3					
Under 5	11	12	7	3	3		4	3
5 to 20	2	32	14	10	11		3	3
21 to 50		25	12	6	7	3	4	17
51 to 100		12	3	1	3	2	2	15
101 to 250		15	2	1	2	1	2	2
251 to 500			1				1	
501 to 1,000		12						
Over 1,000								

	Michigan.	Minnesota.	Missouri.	Montana.	Nebraska.	Nevada.	New Hampshire.	New Jersey.
Power:								
Number of establishments reporting	71	67	37	18	14	2	5	36
Total horsepower	4,861	2,939	14,499	1,040	964	13	1,336	8,733
Owned—								
Engines—								
Steam, number	140	96	183	39	28	1	24	232
Horsepower	4,809	2,874	13,542	1,033	964	10	1,293	8,565
Gas or gasoline, number		1	2			1	1	1
Horsepower		15	62			3	35	1
Water wheels, number	1		2					
Horsepower	5		3					
Electric motors, number	3	3	69	1				11
Horsepower	43	50	855	2				167
Other power, number	2							
Horsepower	4							
Rented—								
Electric, horsepower				5			8	
Other kind, horsepower			37					
Furnished to other establishments, horsepower	4		240					
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	77	78	49	21	19	5	5	45
No employees	1	6	2	1		1		
Under 5	16	29	3	6	7	3		4
5 to 20	39	33	15	10	7	1		11
21 to 50	17	7	7	4	4		4	10
51 to 100	2	1	6		1			9
101 to 250		1	14				1	4
251 to 500	2	1	1					7
501 to 1,000			1					
Over 1,000								

	New Mexico.	New York.	Ohio.	Oregon.	Pennsylvania.	Rhode Island.	South Dakota.	Tennessee.
Power:								
Number of establishments reporting	2	216	109	17	194	6	4	4
Total horsepower	62	33,941	21,157	1,085	30,335	2,045	218	1,350
Owned—								
Engines—								
Steam, number	3	696	394	34	669	23	7	36
Horsepower	62	33,061	20,742	1,048	29,269	1,126	214	1,270
Gas or gasoline, number		3	1	1	6			
Horsepower		5	5	2	200			
Water wheels, number		3	4	1				
Horsepower		95	113	10				
Electric motors, number		88	33	1	35	8		2
Horsepower		676	297	25	863	78		80
Other power, number						43	1	
Horsepower						841	4	
Rented—								
Electric, horsepower		89						
Other kind, horsepower		15			3			
Furnished to other establishments, horsepower		125			10			
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	3	225	112	24	208	6	4	4
No employees		3		4	1			
Under 5	2	24	12	11	20		1	
5 to 20	1	56	46	7	94		2	
21 to 50		72	31	2	61	4		1
51 to 100		54	18		25	1	1	1
101 to 250		18	7		7	1		2
251 to 500		3	3					
501 to 1,000								
Over 1,000								

TABLE 9.—LIQUORS, MALT, BY STATES AND TERRITORIES: 1900—Continued.

	Texas.	Utah.	Virginia.	Washington.	West Virginia.	Wisconsin.	Wyoming.	All other states.[1]
Power:								
Number of establishments reporting	7	5	6	19	8	134	3	5
Total horsepower	5,853	266	1,870	1,047	539	15,167	59	328
Owned—								
Engines—								
Steam, number	62	10	36	26	19	274	5	16
Horsepower	5,771	266	1,735	761	519	13,354	59	918
Gas or gasoline, number						6		
Horsepower						32		
Water wheels, number				3		5		
Horsepower				54		11		
Electric motors, number	9				1	84		1
Horsepower	82				20	1,766		10
Other power, number			2					
Horsepower			135					
Rented—								
Electric, horsepower				232		4		
Other kind, horsepower								
Furnished to other establishments, horsepower	10							
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	9	7	6	25	8	147	4	5
No employees	1			1		2		
Under 5	1	3		10	1	58	2	
5 to 20		2		9	3	61	2	2
21 to 50		1	3	4	2	14		2
51 to 100	2	1	2	1		5		1
101 to 250	5		1		2	4		
251 to 500								
501 to 1,000						2		
Over 1,000						1		

[1] Includes establishments distributed as follows: Arkansas, 1; Florida, 1; Kansas, 2; South Carolina, 1.

THE MANUFACTURE OF DISTILLED LIQUORS.

Table 10 shows the totals for the manufacture of distilled liquors as reported at the censuses of 1850 to 1900, inclusive, with the percentages of increase or decrease for the successive decades.

TABLE 10.—LIQUORS, DISTILLED: COMPARATIVE SUMMARY, 1850 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.						PER CENT OF INCREASE.				
	1900	1890	1880	1870	1860	1850	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870	1850 to 1860
Number of establishments	967	440	844	719	1,215	968	119.8	[1]47.9	17.4	[1]40.8	25.5
Capital	$82,551,604	$31,006,176	$24,247,595	$15,545,116	$12,445,675	$5,409,334	5.0	27.9	56.0	24.9	130.1
Salaried officials, clerks, etc., number	661	[2]581	[3]	[3]	[3]	[3]	13.8				
Salaries	$889,606	[2]$568,825	[3]	[3]	[3]	[3]	56.4				
Wage-earners, average number	3,722	4,762	6,502	5,131	5,624	4,008	[1]21.8	[1]26.8	26.7	[1]8.8	40.3
Total wages	$1,733,218	$2,246,064	$2,663,967	$2,019,810	$1,835,513	$1,089,864	[1]22.8	[1]15.7	31.9	10.0	68.4
Men, 16 years and over	3,628	4,753	6,452	5,068	5,613	3,985	[1]23.8	[1]26.3	27.3	[1]9.7	40.9
Wages	$1,715,552	$2,245,034	[3]	[3]	[3]	[3]	[1]23.6				
Women, 16 years and over	81	3	10	6	11	23	2,600.0	[1]70.0	66.7	[1]45.5	[1]52.2
Wages	$15,428	$390	[3]	[3]	[3]	[3]	3,855.9				
Children, under 16 years	18	6	40	57	[3]	[3]	200.0	[1]85.0	[1]29.8		
Wages	$2,238	$640	[3]	[3]	[3]	[3]	249.7				
Miscellaneous expenses	$73,218,227	$65,179,927	[4]	[4]	[4]	[4]	12.3				
Cost of materials used	$15,147,784	$14,909,173	$27,744,245	$19,729,432	$21,897,775	$10,543,201	1.6	[1]46.3	40.6	[1]9.9	107.7
Value of products	$96,798,443	$104,197,869	$41,063,663	$36,191,133	$30,936,585	$15,770,240	[1]7.1	153.7	13.5	17.0	96.2

[1] Decrease.
[2] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 16.)
[3] Not reported separately.
[4] Not reported.

As a rule, statistical inquiries of the Census Office pertaining to the value of manufactures contemplate value of products at factories, put up in marketable form and ready for shipment. If this principle were uniformly observed, the value of distillates would be placed upon them when in barrels, kegs, or other packages, with the necessary revenue stamps affixed, so that such value would always include the revenue tax. The values of products at different censuses would then be difficult to compare, because the tax varies with each legislative enactment. Since 1865 the tax on each proof gallon of distilled spirits has varied from 50 cents to $2, or from two to six times the value of the spirits alone.

The revenue, however, is not always included in reporting values. Distillers of grain or molasses must, in accordance with Government regulations, provide warehouses for their products. These are known as bonded warehouses, and are in charge of bonded officers of the Government. All spirits produced from molasses or grain must, before shipment, be placed in warehouses for record, even though they be alcohol, cologne spirits, or other classes that do not require aging and are immediately marketable; all whiskies that require aging are allowed by the Government to remain in bonded warehouses for a maximum period of eight years and no tax is collected until the whiskies are withdrawn. For this reason the quantity of spirits withdrawn for consumption and export in any year may be much less

or much more than the quantity deposited or manufactured during the same period, and may include a fraction of the quantity manufactured within each of the preceding eight years. As no fixed law governs the length of time whiskies remain in bond, the amount of revenue annually collected bears no fixed relation to the quantity of whisky concurrently manufactured, and is, therefore, indeterminate as a factor of value.

The manufacturers of alcohol, cologne spirits, and such other classes as do not require aging, reported the value of their products to the Census Office as including the revenue tax, while among manufacturers of whisky there was no uniform practice in this respect. A trade custom has grown up under which distillers of whisky seldom pay excise tax to the Government. They receive orders from purchasers in advance of manufacture. The orders are booked, filled in turn, the spirits warehoused, and the purchaser furnished a warehouse receipt, on which he makes payment to the distiller exclusive of revenue. The purchaser pays the tax when he withdraws the whisky from bond. Some manufacturers of whisky, in reporting their operations to the Census Office, computed revenue on their entire output, while others excluded it altogether; still others reported only what they actually paid on their own withdrawals during the census year.

It is not possible, in consideration of the practices above described, to determine with exactness the amount of tax included in the $96,798,443 reported as the value of the 103,330,423 gallons of spirits produced in 1900, on which the revenue alone, if all computed, would amount to $113,663,465. The value of the 103,330,423 gallons would, if all were tax-paid, approximate $140,000,000. The records of the Bureau of Internal Revenue show that in 1890, 111,101,738 gallons of spirits were manufactured, and in 1900, 109,245,187 gallons. In 1890, $76,539,003 in taxes were collected on 85,043,336 gallons of spirits, and in 1900, $104,375,921 were collected on 94,887,201 gallons. Evidently, therefore, the $104,197,869 reported as the value of products in 1890 includes a much greater proportion of revenue than the $96,798,443 reported for value of products in 1900. The $73,218,227 reported for miscellaneous expenses at the census of 1900 includes only such revenue as is also included in the $96,798,443 reported as the value of products, and the two amounts are, therefore, in correct proportion.

Prior to 1870 the factor of internal-revenue tax is not included in value of products as shown in Table 10. Excise taxes have followed the three principal wars of the United States, viz., the Revolutionary War, the War of 1812, and the Civil War. The first law went into effect in 1791 and continued in operation until the accession of President Jefferson, on whose recommendation it was repealed. The second law was enacted in 1813, and repealed in 1817 on the recommendation of President Monroe. The present system of internal taxation was established in 1862 and, with modifications, has remained constantly in force. Since that date statistics of the production of distilled and malt liquors have been more complete and reliable than formerly. For the fiscal year 1870, 72,560,929 gallons of spirits were manufactured, and taxes were paid on 78,490,198 gallons, yielding $39,245,099 revenue. In 1880, 91,378,417 gallons were manufactured, and taxes were paid on 62,132,415 gallons, contributing $55,919,119 to the revenue of the Government. The amounts shown in Table 10, as the value of products for those years, are $36,191,133 and $41,063,663, respectively, or less in each case than the amount of the internal-revenue tax collected. Judging from the quantities of spirits manufactured in those years, the values reported can include only a small portion of the excise tax.

As an industry the manufacture of distilled spirits is subject to many vicissitudes and undergoes curious modifications. In the settlement of a new country it tends to diffuse among the people in the form of numerous small distilleries, increasing the number of establishments without a proportionate increase of capital or output. Such establishments produce whiskies and brandies. In older portions of the country, where trade customs are more permanently fixed, and supply and demand approach nearer to a mathematical certainty, the industry tends to centralize into large establishments.

This is shown by the fluctuations in number of establishments and by the varying relations between them and the average number of wage-earners. In 1850, 968 establishments employed 4,008 wage-earners, or 4.1 each; in 1860, the corresponding figures were 1,215 and 5,624, or 4.6 wage-earners to each establishment; in 1870, 719 and 5,131, or 7.1 each; in 1880, 844 and 6,502, or 7.7 each; in 1890, 440 and 4,762, or 10.8 each. In 1900 the number of establishments had increased to 967, but statistics of wage-earners for 1900 are not comparable with previous censuses, as explained elsewhere.

In spite of the fluctuations in numbers of establishments and of wage-earners from decade to decade, the reports at successive censuses show a continuous increase in capital. In 1870 this increase, concurrent with a decrease in number of establishments and wage-earners, was mostly due to the fact that values were reported in a depreciated currency, the average value of the dollar for that year being 79.81 cents gold.

It seems that the census of 1890 concerned itself only with the largest and most important establishments, and considered each combination of distilleries operated by the same corporation as one establishment. It appears, too, that the very small fruit and grain distilleries distributed in great number through the Southern states, especially Virginia and North Carolina, were much more thoroughly canvassed in 1900 than in 1890. These facts explain the disproportionate increase in number of establishments during the last decade, as shown by Table 10.

The report of the Commissioner of Internal Revenue for the fiscal year ending June 30, 1900—a month later than the census year—shows that a total of 3,614 distil-

leries were operated within that year. Of these, 10 were given over to the distillation of molasses, 1,304 to grain, and 2,300 to fruit.[1] At the census of 1900, 646 small distilleries, each with an output less than $500 in value, were reported and not included in the 967 establishments shown in Table 10. These small distilleries reported 47 wage-earners, $6,505 wages, $142,709 capital, and products valued at $108,048. The 2,001 establishments of this class from which reports were not received by the Census Office in 1900 are of little consequence, except to the student of purely local statistics. As a rule they are operated but a few days in the autumn of each year, and the same still may be made to do service on several farms in the same season. The output in each case usually consists of a small quantity of fruit brandy. The entire capital is but a few dollars, invested in a still set up by a spring of water, and no building or land values are involved.

Table 11 shows the four divisions of capital for the censuses of 1890 and 1900, with the percentages of increase or decrease for the decade between.

TABLE 11.—LIQUORS, DISTILLED: COMPARATIVE SUMMARY, CAPITAL, 1890 AND 1900.

	1900	1890	Per cent of increase.
Total	$32,551,604	$31,006,176	5.0
Land	2,524,480	2,816,967	[2] 10.4
Buildings	6,430,565	6,299,511	2.1
Machinery, tools, and implements	7,535,050	7,856,249	[2] 4.1
Cash and sundries	16,061,509	14,033,449	[2] 4.5

[1] Report Internal Revenue Commissioner, 1900, page 96.
[2] Decrease.

The total capital for 1900 shown by this table is identical with the item of capital in Table 10, and is repeated to show its divisions, which are: Land, $2,524,480; buildings, $6,430,565; machinery, tools, and implements, $7,535,050; and cash and sundries, $16,061,509. This last item includes cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries. On June 30, 1900, however, there were 136,071,880 gallons of manufactured spirits in bonded warehouses,[1] and it is evident that only a very small part of such quantity could have been reported as owned by distillers and included by them in the $16,061,509 reported for cash and sundries. From 1890 to 1900, an increase of 5 per cent is shown for total capital, 2.1 per cent for buildings, and 14.5 per cent for cash and sundries. A decrease of 10.4 per cent is shown for land, and 4.1 per cent for machinery, tools, and implements. This seeming inconsistency is due to the policy of large combinations of capital in localizing the manufacture of certain classes of distillates at points favoring least cost of production, and closing several large plants at other points. At the census of 1900, 110 idle establishments were reported, with a total capital of $3,633,910, which is not included in Table 11. At the active plants, buildings were improved on less expensive grounds, and machinery and equipment were brought nearer to the limit of their capacity.

Table 12 is a comparative summary of the industry, by states and territories, for 1890 and 1900.

[1] Report Internal Revenue Commissioner, 1900, page 149.

TABLE 12.—LIQUORS, DISTILLED: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1890 AND 1900.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
United States	1900	967	$32,551,604	661	$889,606	3,722	$1,733,218	$73,218,227	$15,147,784	$96,798,443
	1890	440	31,006,176	[1] 581	[1] 568,825	4,762	2,246,064	65,179,927	14,909,173	104,197,869
Alabama	1900	15	33,650	1	1,200	15	5,080	116,090	25,262	152,758
	1890									
Arkansas	1900	18	48,738	1	150	23	6,378	48,764	18,591	95,487
	1890	14	47,075	7	2,959	31	4,582	28,170	11,085	62,775
California	1900	8	76,600			20	5,932	5,675	191,364	238,267
	1890	8	106,053	3	2,448	42	12,464	122,834	53,498	229,701
Connecticut	1900	15	200,442	4	5,000	20	11,205	179,152	49,471	292,057
	1890	8	255,241	10	18,335	44	20,085	142,028	88,110	293,149
Delaware	1900	12	45,690	4	1,340	16	4,330	16,991	12,618	51,431
	1890									
Georgia	1900	28	54,808	4	1,320	42	8,557	136,152	39,695	198,891
	1890	37	83,625	15	5,313	104	26,476	158,397	69,084	323,938
Illinois	1900	20	3,164,811	58	104,518	338	191,995	33,391,799	3,734,652	38,208,076
	1890	7	8,782,041	24	55,280	999	769,880	31,505,991	3,918,106	51,996,787
Indiana	1900	24	1,325,900	38	62,922	236	112,049	14,340,455	1,929,865	16,961,058
	1890	17	1,626,825	28	22,704	167	61,109	4,721,785	711,111	5,840,129
Kentucky	1900	177	12,280,054	248	327,657	1,112	559,439	4,182,373	3,605,316	9,780,527
	1890	126	10,966,210	248	196,014	1,744	543,367	7,631,619	3,876,501	15,159,648
Maryland	1900	26	2,326,272	43	74,216	186	95,172	172,785	815,381	1,616,362
	1890	18	1,498,607	6	9,361	177	96,404	1,510,009	757,892	2,663,650
Massachusetts	1900	8	553,874	18	21,180	29	21,920	441,231	308,414	857,096
	1890	8	608,333	15	18,968	40	23,650	924,630	279,662	1,372,807

[1] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 17.)

TABLE 12.—LIQUORS, DISTILLED: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1880 AND 1900—Cont'd.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
Missouri	1900	35	$147,895	3	$1,800	21	$5,473	$43,991	$24,898	$91,692
	1890	11	299,302	13	6,753	69	29,854	1,557,020	224,963	1,860,618
New Jersey	1900	31	304,934	3	7,320	71	30,278	633,516	126,707	884,802
	1890	4	14,700	3	640	5	1,087	3,535	3,697	10,599
New York	1900	16	394,906	19	24,468	62	26,621	909,958	141,626	1,201,851
	1890	6	195,793	8	4,473	48	22,073	261,257	118,750	422,824
North Carolina	1900	250	168,922	11	5,555	302	51,804	394,108	134,631	641,948
	1890	55	73,560	24	11,735	120	23,389	136,746	53,574	255,302
Ohio	1900	26	3,000,277	64	85,727	335	179,157	9,622,583	1,438,507	12,447,268
	1890	15	2,109,879	58	93,607	426	224,222	8,745,108	2,535,016	12,033,884
Oklahoma	1900	3	10,985	.....	.....	1	480	1,151	834	4,939
	1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania	1900	73	5,810,034	97	123,389	471	250,348	2,665,583	1,568,569	5,357,615
	1890	40	2,624,761	69	77,578	400	235,026	2,054,435	1,326,202	4,339,689
South Carolina	1900	22	20,893	1	500	31	4,792	54,121	31,285	105,788
	1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	1900	51	590,302	11	7,550	139	43,341	560,694	200,446	939,510
	1890	32	564,112	14	7,796	123	39,343	235,159	156,969	621,693
Texas	1900	5	24,426	.....	.....	6	1,955	10,814	4,446	20,657
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	1900	91	270,943	7	2,594	66	15,021	147,304	56,526	257,385
	1890	28	99,867	13	3,872	50	7,155	47,852	19,450	93,132
West Virginia	1900	3	416,967	5	7,300	44	16,778	10,024	67,963	113,906
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin	1900	5	773,890	11	11,000	53	29,979	2,280,404	342,296	2,698,984
	[1]1890	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other states	[2]1900	5	475,391	10	12,900	83	55,134	2,853,506	279,427	3,574,088
	[3]1890	11	1,050,192	23	35,989	173	105,938	5,398,352	705,463	6,622,594

[1] Included in "all other states."
[2] Includes establishments distributed as follows: Idaho, 1; Louisiana, 1; Nebraska, 2; New Hampshire, 1.
[3] Includes establishments distributed as follows: Minnesota, 2; Nebraska, 1; Texas, 2; Washington, 2; West Virginia, 2; Wisconsin, 2.

Of the 967 establishments reported at the census of 1900, 962 were returned from 23 states and 1 territory. The remaining 5 were distributed among 4 states. Twenty-seven states and 1 territory are, therefore, represented in the above table. The unusually thorough canvass of small distilleries for the census of 1900, and the lack of uniformity in including internal-revenue tax in reporting values, should be considered in making comparisons; these considerations will explain most of the seeming inconsistencies in Table 12. In some of the states, however, the decline shown is due to causes common to all classes of trade, and to changes in local liquor laws; in others it is due to the policy of corporations in closing establishments at certain points to concentrate manufacturing operations.

Illinois, with an output of 32,508,435 gallons of spirits, was the leading producer in 1900. Kentucky ranked second, with 21,709,873 gallons, and Indiana, Ohio, Pennsylvania, and Maryland followed in the order named with 17,494,779, 9,518,850, 7,189,655, and 3,812,856 gallons, respectively. In Illinois the industry is concentrated into a few large establishments, located principally in the city of Peoria, while in Kentucky it is well diffused. This in part explains the difference in capital reported from those two states. North Carolina, with the very small output of 599,540 gallons of spirits, was the leading state in number of establishments.

Table 13 shows the quantity and cost of materials and the quantity and value of products for the manufacture of distilled liquors in 1900.

TABLE 13.—LIQUORS, DISTILLED: MATERIALS AND PRODUCTS, 1900.

	Unit of measure.	Quantity.	Cost of materials used.	Value of products.
Materials:				
Total cost	.....	.....	$15,147,784	.....
Corn	Bushels	16,555,804	5,968,198	.....
Rye	Bushels	3,952,333	2,482,524	.....
Wheat	Bushels	17,419	10,340	.....
Barley	Bushels	109,115	57,421	.....
Malt	Bushels	3,623,829	1,956,934	.....
Fruits	.....	.....	256,551	.....
Wine	Gallons	1,339,606	67,047	.....
Molasses	Gallons	2,962,691	282,011	.....
Fuel, and rent of power and heat	.....	.....	896,631	.....
Mill supplies	.....	.....	74,976	.....
All other materials	.....	.....	2,976,182	.....
Freight	.....	.....	128,969	.....
Products:				
Total value	.....	.....	.....	$96,798,448
Alcohol and cologne spirits	Proof gallons	54,304,925	.....	62,617,892
Whisky	Proof gallons	45,488,592	.....	28,729,027
Brandy	Proof gallons	908,051	.....	758,231
Gin	Proof gallons	1,087,149	.....	1,425,717
Rum	Proof gallons	1,546,706	.....	1,033,117
Wine	Gallons	120,630	.....	25,689
All other products	.....	.....	.....	2,208,770

According to this table, the total quantity of all classes of distilled spirits reported at the census of 1900 was 103,330,423 gallons, which does not include the output of 2 large establishments in the state of New York (closed when the canvass was made); 102,028 gallons reported from 646 establishments, each with an output less than $500 in value; brandy used in the for-

tification of wines; and the output of about 2,000 small fruit distilleries from which reports were not sought. The combined quantity used for fortification and that not reported from New York approximates 4,000,000 gallons, making a total of more than 107,000,000 gallons identified by the Census Office. The comparatively small difference between this quantity and the 109,245,187 gallons reported to the Internal Revenue Bureau for the fiscal year ending June 30, 1900, is due to the different periods covered by the reports of the two bureaus and to the product of the 2,000 small establishments not canvassed by the Census Office.

Table 13 shows that a total of 24,258,500 bushels of grain, 1,339,606 gallons of wine, 2,962,691 gallons of molasses, and fruit (quantity not ascertained) costing $256,551, were used in manufacturing 103,330,423 gallons of spirits. It is not possible to reduce these quantities to correct equivalents, because of the lack of uniformity in the use of particular materials for particular products. Generally speaking, grain is used in the manufacture of gin, whisky, alcohol, and cologne spirits; fruit and wine in the manufacture of brandy; and molasses in the distillation of rum. According to this practice, 24,258,500 bushels of grain were used in the distillation of 100,875,666 gallons of gin, whisky, alcohol, and cologne spirits, or an average of 4.16 gallons of spirits for each bushel of grain. Wheat is little used because of its greater cost, and corn is largely used because of its cheapness. Of the total quantity of grain consumed, 68.2 per cent was corn. It is made into corn whisky, Bourbon whisky, alcohol, and neutral or cologne spirits. The 1,546,706 gallons of rum reported do not represent the quantity distilled from 2,962,691 gallons of molasses, as a part of the molasses reported was manufactured into pure spirits.

The determination to make, for the first time, the manufacture of alcoholic liquors the subject of special inquiry, was reached too late in the organization of the Census Office work to permit the drafting of special schedules designed to secure accurate data pertaining to the different classes of liquors. The reports of the several establishments were made on the general schedule for manufactures. The inquiries sought to elicit accurate statistics of the total quantity of spirits manufactured, but the importance of the several classes could not be emphasized. No great accuracy, therefore, is claimed for the classification of products as shown in Table 13. It is possible that the 54,304,925 gallons reported as alcohol and cologne spirits, and the 45,483,592 reported as whisky, both include some spirits that should receive a more definite classification. The distillation of alcohol and pure, neutral, or cologne spirits is largely confined to the states of Illinois and Indiana; that of Bourbon whisky to Kentucky; and that of rye whisky to Pennsylvania and Maryland.

Table 14 shows the quantity of distilled spirits manufactured and also the quantity on which revenue tax was paid, by fiscal years, from 1863 to 1900, inclusive.[1]

[1] Report of Commissioner of Internal Revenue, 1900, pages 440 and 441.

TABLE 14.—QUANTITY OF DISTILLED SPIRITS MANUFACTURED AND QUANTITY ON WHICH TAX WAS PAID, BY FISCAL YEARS, FROM 1863 TO 1900, INCLUSIVE.

YEAR.	Number of gallons manufactured.	Number of gallons on which tax was paid.	YEAR.	Number of gallons manufactured.	Number of gallons on which tax was paid.
1863	16,149,954	16,149,954	1882	107,283,215	71,976,398
1864	85,295,393	85,295,393	1883	75,294,510	76,762,963
1865	16,973,974	16,973,974	1884	76,531,167	79,616,301
1866	24,052,705	14,847,943	1885	76,405,074	69,158,925
1867	32,740,236	14,588,740	1886	81,849,260	70,851,356
1868	16,910,913	7,224,809	1887	79,433,445	67,380,391
1869	54,276,742	62,092,417	1888	71,688,188	71,565,486
1870	72,560,929	78,490,198	1889	91,133,550	77,183,529
1871	57,048,457	62,314,628	1890	111,101,733	85,043,386
1872	69,365,443	66,235,578	1891	117,767,101	88,473,437
1873	72,202,554	65,911,141	1892	118,436,506	95,045,767
1874	69,572,061	62,581,582	1893	131,010,330	99,145,889
1875	62,687,627	64,425,911	1894	92,153,651	88,777,387
1876	58,631,868	58,012,693	1895	81,909,771	75,555,742
1877	61,439,409	58,543,389	1896	89,992,555	68,480,720
1878	57,342,456	50,704,189	1897	64,279,075	69,979,362
1879	72,888,373	53,025,175	1898	83,668,411	79,764,749
1880	91,378,417	62,132,415	1899	100,162,334	85,125,532
1881	119,528,011	69,127,206	1900	109,245,187	94,887,201

An examination of this table shows that for a series of years the quantity of spirits manufactured fluctuates considerably more than the quantity withdrawn from bond, or tax paid. In 1881, 119,528,011 gallons, and in 1882, 107,283,215 gallons were distilled; in 1883 the quantity was but 75,294,510 gallons. The largest quantity manufactured in any year was 131,010,330 gallons, in 1893. In the succeeding year, 1894, only 92,153,651 gallons were produced. The quantities withdrawn and tax paid for the same years show more uniformity, and are more nearly representative of the annual consumption.

During the fiscal year ending June 30, 1900, internal-revenue tax was paid on 94,887,201 proof gallons of spirits, presumably withdrawn for consumption. In the same period 2,482,020 gallons were imported, of which 46,767 gallons were exported, leaving 2,435,253 gallons as the net imports for domestic consumption. This is an excess of 551,648 gallons over domestic exports, which amounted to 1,883,605 gallons.

A large quantity of distilled spirits is annually consumed in the arts and sciences, and in compounds and manufactures of medicines. At the census of 1890 this was reported as 10,976,842 gallons. At the census of 1900 no special inquiry was made as to the quantity so used, but it may safely be estimated to have exceeded the quantity consumed in 1890.

The output of illicit distilleries is large, but of course can not be estimated. The increase in volume of spirits passing through rectifying houses should also be considered in computing per capita consumption. With these various items taken into account it appears that the quantity consumed as a beverage by the people of the United States during 1900 could not have been far from 91,000,000 gallons, or a per capita consumption of approximately 1.2 gallons. Most of the distilled liquors consumed as a beverage by the American people pass through rectifying houses. The different classes of rectified spirits range from the cheapest concoctions of neutral spirits and drugs to the simple

blending of young and old whiskies. The number of gallons rectified in the United States during 1900 was 74,508,420.

Table 15 shows the quantity, value, and destination of distilled liquors exported from the United States during the fiscal year ending June 30, 1900.

TABLE 15.—EXPORTS OF LIQUORS, DISTILLED, BY COUNTRIES, 1900.[1]

COUNTRIES TO WHICH EXPORTED.	TOTAL.		ALCOHOL, INCLUDING PURE, NEUTRAL, OR COLOGNE SPIRITS.		BRANDY.		RUM.		WHISKY.			
									Bourbon.		Rye.	
	Gallons.	Value.	Proof gallons.	Value.	Proof gallons.	Value.	Proof gallons.	Value.	Proof gallons.	Value.	Proof gallons.	Value.
Total	1,883,605	$1,932,884	177,974	$59,277	83,259	$83,698	670,410	$903,808	863,241	$764,830	91,721	$121,241
EUROPE.												
Total	661,692	545,377	5	10	48,514	27,938	31,083	43,372	555,671	442,425	26,419	31,632
Austria-Hungary	75	261									75	261
Azores and Madeira Islands	71	99									71	99
Belgium	58	167									58	167
Denmark	305	502			97	85			2	5	206	412
France	3,796	7,495			42	129	864	1,800	875	679	2,015	4,887
Germany	574,218	460,735			353	265	63	49	554,661	441,592	19,141	18,829
Greenland, Iceland, etc	7	25	5	10	2	15						
Italy	125	299			36	79			30	20	59	200
Malta, Gozo, etc	170	305									170	305
Netherlands	19	84									19	84
Russia—Baltic and White seas	6	10									6	10
Sweden and Norway	290	424							103	129	187	295
Turkey in Europe	21,020	28,810					21,017	28,807			3	3
United Kingdom	61,537	46,161			47,984	27,365	9,139	12,716			4,414	6,080
NORTH AMERICA.												
Total	202,340	195,759	67,459	24,789	11,534	24,171	2,623	3,773	67,367	71,750	53,357	71,276
Bermuda	43,021	59,942	4,285	4,161	4,512	11,938			7,110	6,890	27,114	27,953
British Honduras	8,947	5,799	1,830	694					6,687	4,320	530	875
Dominion of Canada:												
Nova Scotia, New Brunswick, etc	1,771	2,702			1	4			1,202	2,024	568	674
Quebec, Ontario, Manitoba, etc	3,608	3,203	1,472	520	59	93	429	613	113	236	935	1,738
British Columbia	1,774	3,981	5	20	659	1,237			1,108	2,717	2	7
Central American states:												
Costa Rica	43,623	22,066	32,075	9,622					8,772	7,940	2,776	4,504
Guatemala	7,884	14,196	20	5	133	157			7,444	13,489	287	548
Honduras	4,768	7,927	350	111	297	441			1,690	2,787	2,431	4,588
Nicaragua	37,564	22,747	13,847	4,275	344	344			19,069	12,646	4,304	5,482
Salvador	760	1,714			36	60			724	1,654		
Mexico	24,834	25,283	12,445	4,412	5,267	9,452			4,794	7,890	2,328	3,529
Miquelon	2,203	3,197					2,194	3,160			9	37
West Indies:												
British	1,182	2,141							356	273	826	1,868
Cuba	13,710	19,169			80	30			5,534	6,269	8,136	12,870
Danish	280	284	172	84							108	250
Dutch	724	1,850									724	1,850
Haiti	971	1,155	932	1,012							39	143
Porto Rico	5,230	7,390			196	415			2,864	2,615	2,233	4,360
Santo Domingo	26	13	26	13								
SOUTH AMERICA.												
Total	8,625	11,962	3,135	1,274	201	406			1,826	3,344	3,443	6,938
Argentina	465	908							115	75	350	833
Brazil	463	946			42	110			144	72	277	764
Chile	1,204	1,897							542	965	662	942
Colombia	4,962	4,810	3,135	1,274	50	25			480	1,141	1,277	2,370
Ecuador	757	1,807			109	271			420	1,010	228	526
Guianas:												
British	51	16							51	16		
Dutch	161	269									161	269
Peru	250	709									250	709
Uruguay	146	181							74	75	72	106
Venezuela	166	419									166	419
ASIA.												
Total	263,490	118,393	104,936	32,374	1,216	2,093	702	1,190	155,656	80,751	980	1,985
Chinese Empire	10,112	11,338	5,301	1,608	100	125	656	1,160	3,586	7,372	469	1,073
East Indies:												
British	823	1,618			13	33			405	920	405	665
Dutch	15	25									15	25
Hongkong	11,179	14,152	3,000	1,000	150	250			8,029	12,932		
Japan	241,336	91,209	96,635	29,766	953	1,685	46	30	143,611	59,596	91	222
Korea	25	51							25	51		
OCEANIA.												
Total	111,354	205,724	2,419	880	18,794	29,090			82,721	166,560	7,420	9,214
British Australasia	3,934	6,462	50	45	9	24			2,106	4,389	1,769	2,004
Guam	15	42							15	42		
Hawaii	25,088	45,016	1,655	679	722	1,036			22,426	42,881	280	500
Philippine Islands	82,204	153,955	714	106	18,063	28,030			58,056	119,079	5,371	6,710
Tonga, Samoa, etc	113	249							113	249		
AFRICA.												
Total	636,104	855,669					636,002	855,473			102	196
British Africa	635,841	855,281					635,764	855,140			77	141
French Africa	238	333					238	333				
Portuguese Africa	25	55									25	55

[1] Commerce and Navigation of the United States: United States Treasury Department, 1900.

Table 16 presents detailed statistics of the manufacture of distilled liquors, by states and territories, for 1900.

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900.

	United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.	Georgia.	Illinois.
Number of establishments	967	15	18	8	15	12	28	20
Character of organization:								
Individual	727	10	12	5	12	12	22	6
Firm and limited partnership	138	4	6	3	2	.....	4	1
Incorporated company	102	1	.....	.....	1	.....	2	13
Established during the decade	464	9	10	3	3	10	14	8
Established during the census year	178	4	4	.....	.....	.....	9	1
Capital:								
Total	$32,551,604	$33,650	$48,738	$76,600	$200,442	$45,690	$54,808	$3,164,811
Land	$2,524,480	$3,970	$1,370	$2,100	$12,295	$2,525	$3,485	$192,936
Buildings	$6,430,565	$6,425	$8,500	$15,200	$44,450	$7,575	$10,350	$555,573
Machinery, tools, and implements	$7,535,050	$20,475	$12,225	$17,850	$44,425	$8,805	$17,000	$1,733,352
Cash and sundries	$16,061,509	$2,780	$26,643	$41,450	$99,272	$26,785	$23,973	$682,950
Proprietors and firm members	1,009	16	23	9	16	12	29	6
Salaried officials, clerks, etc.:								
Total number	661	1	1	.....	4	4	4	58
Total salaries	$889,606	$1,200	$150	.....	$5,000	$1,340	$1,320	$104,518
Officers of corporations—								
Number	99	.....	.....	.....	.....	.....	1	13
Salaries	$286,036	.....	.....	.....	.....	.....	$600	$47,836
General superintendents, managers, clerks, etc.—								
Total number	562	1	1	.....	4	4	3	45
Total salaries	$603,570	$1,200	$150	.....	$5,000	$1,340	$720	$56,682
Men—								
Number	542	1	1	.....	4	4	3	43
Salaries	$593,589	$1,200	$150	.....	$5,000	$1,340	$720	$55,643
Women—								
Number	20	.....	.....	.....	.....	.....	.....	2
Salaries	$10,081	.....	.....	.....	.....	.....	.....	$1,039
Wage-earners, including piece workers, and total wages:								
Greatest number employed at any one time during the year	6,767	32	55	30	43	53	55	543
Least number employed at any one time during the year	3,509	23	35	19	27	30	53	269
Average number	3,722	15	23	20	20	16	42	338
Wages	$1,733,218	$5,080	$6,378	$5,932	$11,205	$4,330	$8,557	$191,995
Men, 16 years and over—								
Average number	3,623	15	23	20	20	16	42	337
Wages	$1,715,552	$5,080	$6,378	$5,932	$11,205	$4,330	$8,557	$191,780
Women, 16 years and over—								
Average number	81	.....	.....	.....	.....	.....	.....	1
Wages	$15,428	.....	.....	.....	.....	.....	.....	$215

	Indiana.	Kentucky.	Maryland.	Massachusetts.	Missouri.	New Jersey.	New York.	North Carolina.	Ohio.
Number of establishments	24	177	26	8	35	31	16	250	26
Character of organization:									
Individual	13	87	12	5	28	27	10	241	16
Firm and limited partnership	6	44	4	2	5	2	5	8	5
Incorporated company	5	46	10	1	2	2	1	1	5
Established during the decade	13	82	8	.....	28	4	3	132	8
Established during the census year	2	17	1	1	2	1	.....	97	2
Capital:									
Total	$1,325,900	$12,280,054	$2,326,272	$553,874	$147,895	$304,934	$394,906	$168,922	$3,000,277
Land	$74,630	$1,204,073	$185,035	$72,575	$4,695	$8,010	$24,740	$8,575	$136,000
Buildings	$365,615	$2,250,022	$690,024	$120,000	$21,225	$50,775	$76,200	$27,170	$438,610
Machinery, tools, and implements	$444,605	$3,065,812	$315,310	$78,500	$26,972	$12,125	$82,731	$61,379	$305,275
Cash and sundries	$441,050	$5,760,147	$1,135,903	$282,799	$95,003	$204,024	$211,235	$71,798	$2,120,392
Proprietors and firm members	26	188	19	6	39	33	20	253	29
Salaried officials, clerks, etc.:									
Total number	38	248	43	18	3	3	19	11	64
Total salaries	$62,922	$327,657	$74,216	$21,180	$1,800	$7,320	$24,468	$5,555	$85,727
Officers of corporations—									
Number	2	45	10	.....	2	.....	1	2	9
Salaries	$13,296	$146,000	$43,200	.....	$1,200	.....	$1,000	$2,000	$14,904
General superintendents, managers, clerks, etc.—									
Total number	36	203	33	18	1	3	18	9	55
Total salaries	$49,626	$181,657	$31,016	$21,180	$600	$7,320	$23,468	$3,555	$70,823
Men—									
Number	36	197	33	17	1	3	18	9	47
Salaries	$49,626	$178,985	$31,016	$20,680	$600	$7,320	$23,468	$3,555	$66,323
Women—									
Number	.....	6	.....	1	.....	.....	.....	.....	8
Salaries	.....	$2,672	.....	$500	.....	.....	.....	.....	$4,500
Wage-earners, including pieceworkers, and total wages:									
Greatest number employed at any one time during the year	313	2,800	265	35	64	157	108	478	448
Least number employed at any one time during the year	235	919	197	32	46	112	74	399	271
Average number	236	1,112	186	29	21	71	62	302	335
Wages	$112,049	$559,489	$95,172	$21,920	$5,473	$30,278	$26,621	$51,804	$179,157
Men, 16 years and over—									
Average number	236	1,079	181	29	21	70	61	302	317
Wages	$112,049	$554,319	$94,212	$21,920	$5,473	$30,086	$26,361	$51,804	$174,793
Women, 16 years and over—									
Average number	.....	29	.....	.....	.....	1	1	.....	12
Wages	.....	$4,628	.....	.....	.....	$192	$260	.....	$3,868

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900—Continued.

	Oklahoma.	Pennsylvania.	South Carolina.	Tennessee.	Texas.	Virginia.	West Virginia.	Wisconsin.	All other states.[1]
Number of establishments	3	73	22	51	5	91	3	5	5
Character of organization:									
Individual	2	49	22	40	5	86	2	2	1
Firm and limited partnership	1	21	.....	9	.....	4	.....	.....	2
Incorporated company	.....	3	.....	2	.....	1	1	3	2
Established during the decade	.....	28	14	30	4	46	1	2	4
Established during the census year	3	.....	5	6	.....	23	.....	.....	.....
Capital:									
Total	$10,985	$5,840,034	$20,893	$590,302	$24,426	$270,943	$416,967	$773,890	$475,391
Land	$175	$387,340	$503	$20,027	$3,125	$8,390	$30,020	$64,534	$73,352
Buildings	$1,700	$1,322,203	$2,355	$64,677	$3,050	$34,140	$150,400	$102,326	$62,000
Machinery, tools, and implements	$2,300	$598,454	$13,250	$81,985	$5,400	$61,892	$98,247	$215,280	$181,401
Cash and sundries	$6,810	$3,532,037	$4,785	$423,613	$12,851	$166,521	$138,300	$391,750	$158,638
Proprietors and firm members	2	90	22	55	5	93	2	2	5
Salaried officials, clerks, etc.:									
Total number	.....	97	1	11	.....	7	5	11	10
Total salaries	.....	$123,389	$500	$7,550	.....	$2,594	$7,300	$11,000	$12,900
Officers of corporations—									
Number	.....	3	.....	3	.....	.....	2	5	1
Salaries	.....	$4,700	.....	$2,100	.....	.....	$3,500	$4,200	$1,500
General superintendents, managers, clerks, etc.—									
Total number	.....	94	1	8	.....	7	3	6	9
Total salaries	.....	$118,689	$500	$5,450	.....	$2,594	$3,800	$6,800	$11,400
Men—									
Number	.....	91	1	8	.....	7	3	6	9
Salaries	.....	$117,369	$500	$5,450	.....	$2,594	$3,800	$6,800	$11,400
Women—									
Number	.....	3	.....	.....	.....	.....	.....	.....	.....
Salaries	.....	$1,320	.....	.....	.....	.....	.....	.....	.....
Wage-earners, including pieceworkers, and total wages:									
Greatest number employed at any one time during the year	5	678	48	192	13	143	48	62	99
Least number employed at any one time during the year	4	328	37	152	11	113	32	46	45
Average number	1	471	31	139	6	66	44	53	83
Wages	$480	$250,348	$4,792	$43,341	$1,955	$15,021	$16,778	$29,979	$55,134
Men, 16 years and over—									
Average number	1	431	31	139	6	66	44	53	83
Wages	$480	$243,788	$4,792	$43,341	$1,955	$15,021	$16,778	$29,979	$55,134
Women, 16 years and over—									
Average number	.....	37	.....	.....	.....	.....	.....	.....	.....
Wages	.....	$6,265	.....	.....	.....	.....	.....	.....	.....

	United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.	Georgia.	Illinois.
Wage-earners, including pieceworkers, and total wages—Continued.								
Children under 16 years—								
Average number	18	.....	.....	.....	.....	.....	.....	.....
Wages	$2,238	.....	.....	.....	.....	.....	.....	.....
Average number of wage-earners, including pieceworkers, employed during each month:								
Men, 16 years and over—								
January	3,949	7	21	20	15	4	40	350
February	4,122	12	16	20	14	5	41	314
March	4,747	14	26	22	15	5	44	334
April	4,812	18	20	16	16	9	48	385
May	4,554	18	33	14	17	12	49	356
June	2,897	10	25	16	17	8	41	264
July	2,285	15	17	13	15	15	34	259
August	2,374	18	25	19	15	35	34	277
September	2,807	20	25	21	28	44	38	304
October	3,339	20	24	27	40	27	41	324
November	3,784	20	23	28	33	17	44	436
December	3,811	13	22	26	20	8	44	440
Women, 16 years and over—								
January	80	.....	.....	.....	.....	.....	.....	2
February	84	.....	.....	.....	.....	.....	.....	2
March	90	.....	.....	.....	.....	.....	.....	2
April	96	.....	.....	.....	.....	.....	.....	5
May	91	.....	.....	.....	.....	.....	.....	2
June	78	.....	.....	.....	.....	.....	.....	.....
July	76	.....	.....	.....	.....	.....	.....	.....
August	75	.....	.....	.....	.....	.....	.....	.....
September	70	.....	.....	.....	.....	.....	.....	.....
October	74	.....	.....	.....	.....	.....	.....	.....
November	76	.....	.....	.....	.....	.....	.....	.....
December	83	.....	.....	.....	.....	.....	.....	2
Children, under 16 years—								
January	17	.....	.....	.....	.....	.....	.....	.....
February	18	.....	.....	.....	.....	.....	.....	.....
March	18	.....	.....	.....	.....	.....	.....	.....
April	18	.....	.....	.....	.....	.....	.....	.....
May	18	.....	.....	.....	.....	.....	.....	.....
June	20	.....	.....	.....	.....	.....	.....	.....
July	18	.....	.....	.....	.....	.....	.....	.....
August	18	.....	.....	.....	.....	.....	.....	.....
September	18	.....	.....	.....	.....	.....	.....	.....
October	18	.....	.....	.....	.....	.....	.....	.....
November	18	.....	.....	.....	.....	.....	.....	.....
December	16	.....	.....	.....	.....	.....	.....	.....

[1] Includes establishments distributed as follows: Idaho, 1; Louisiana, 1; Nebraska, 2; New Hampshire, 1.

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900—Continued.

	Indiana.	Kentucky.	Maryland.	Massachusetts.	Missouri.	New Jersey.	New York.	North Carolina.	Ohio.
Wage-earners, including pieceworkers, and total wages—Continued.									
Children, under 16 years—									
Average number	.....	4	5	.....	.....	.....	.....	.....	6
Wages	.....	$492	$960	.....	.....	.....	.....	.....	$491
Average number of wage-earners, including pieceworkers, employed during each month:									
Men, 16 years and over—									
January	232	1,258	231	30	27	38	48	371	338
February	236	1,498	222	30	24	38	48	355	339
March	240	2,052	227	30	39	38	48	353	342
April	230	2,119	224	27	41	38	48	330	332
May	227	1,968	218	32	35	40	47	321	321
June	226	662	129	32	15	38	42	265	357
July	219	344	75	27	4	38	40	230	269
August	218	342	95	27	5	89	49	230	255
September	223	361	120	27	7	147	94	254	270
October	283	506	186	30	17	155	100	286	320
November	254	858	211	30	19	116	97	300	319
December	242	983	231	30	18	70	65	323	346
Women, 16 years and over—									
January	.....	30	.....	.....	.....	1	1	.....	10
February	.....	30	.....	.....	.....	1	1	.....	13
March	.....	33	.....	.....	.....	1	1	.....	15
April	.....	33	.....	.....	.....	1	1	.....	16
May	.....	33	.....	.....	.....	1	1	.....	14
June	.....	32	.....	.....	.....	1	1	.....	11
July	.....	26	.....	.....	.....	1	1	.....	12
August	.....	26	.....	.....	.....	1	1	.....	11
September	.....	26	.....	.....	.....	1	1	.....	10
October	.....	26	.....	.....	.....	1	2	.....	8
November	.....	26	.....	.....	.....	1	2	.....	10
December	.....	26	.....	.....	.....	1	2	.....	10
Children, under 16 years—									
January	.....	4	5	.....	.....	.....	.....	.....	5
February	.....	4	5	.....	.....	.....	.....	.....	6
March	.....	4	5	.....	.....	.....	.....	.....	6
April	.....	4	5	.....	.....	.....	.....	.....	6
May	.....	4	5	.....	.....	.....	.....	.....	6
June	.....	4	5	.....	.....	.....	.....	.....	8
July	.....	4	5	.....	.....	.....	.....	.....	6
August	.....	4	5	.....	.....	.....	.....	.....	6
September	.....	4	5	.....	.....	.....	.....	.....	6
October	.....	4	5	.....	.....	.....	.....	.....	6
November	.....	4	5	.....	.....	.....	.....	.....	6
December	.....	4	5	.....	.....	.....	.....	.....	4

	Oklahoma.	Pennsylvania.	South Carolina.	Tennessee.	Texas.	Virginia.	West Virginia.	Wisconsin.	All other states.[1]
Wage-earners, including pieceworkers, and total wages—Continued.									
Children, under 16 years—									
Average number	.....	3	.....	.....	.....	.....	.....	.....	.....
Wages	.....	$295	.....	.....	.....	.....	.....	.....	.....
Average number of wage-earners, including pieceworkers, employed during each month:									
Men, 16 years and over—									
January	1	495	32	130	11	51	48	58	93
February	1	490	33	127	11	51	48	56	93
March	.....	487	37	132	8	56	48	57	93
April	3	471	39	128	7	65	48	57	93
May	3	411	35	128	2	67	48	55	97
June	.....	406	33	125	2	51	32	54	47
July	1	312	27	140	.....	59	32	50	50
August	1	271	21	146	.....	70	32	49	51
September	1	360	19	161	.....	92	48	46	98
October	.....	476	32	157	6	88	48	49	97
November	1	509	33	154	13	74	48	51	96
December	.....	489	31	137	11	67	47	54	94
Women, 16 years and over—									
January	.....	36	.....	.....	.....	.....	.....	.....	.....
February	.....	37	.....	.....	.....	.....	.....	.....	.....
March	.....	38	.....	.....	.....	.....	.....	.....	.....
April	.....	40	.....	.....	.....	.....	.....	.....	.....
May	.....	40	.....	.....	.....	.....	.....	.....	.....
June	.....	33	.....	.....	.....	.....	.....	.....	.....
July	.....	36	.....	.....	.....	.....	.....	.....	.....
August	.....	36	.....	.....	.....	.....	.....	.....	.....
September	.....	32	.....	.....	.....	.....	.....	.....	.....
October	.....	37	.....	.....	.....	.....	.....	.....	.....
November	.....	37	.....	.....	.....	.....	.....	.....	.....
December	.....	42	.....	.....	.....	.....	.....	.....	.....
Children, under 16 years—									
January	.....	3	.....	.....	.....	.....	.....	.....	.....
February	.....	3	.....	.....	.....	.....	.....	.....	.....
March	.....	3	.....	.....	.....	.....	.....	.....	.....
April	.....	3	.....	.....	.....	.....	.....	.....	.....
May	.....	3	.....	.....	.....	.....	.....	.....	.....
June	.....	3	.....	.....	.....	.....	.....	.....	.....
July	.....	3	.....	.....	.....	.....	.....	.....	.....
August	.....	3	.....	.....	.....	.....	.....	.....	.....
September	.....	3	.....	.....	.....	.....	.....	.....	.....
October	.....	3	.....	.....	.....	.....	.....	.....	.....
November	.....	3	.....	.....	.....	.....	.....	.....	.....
December	.....	3	.....	.....	.....	.....	.....	.....	.....

[1] Includes establishments distributed as follows: Idaho, 1; Louisiana, 1; Nebraska, 2; New Hampshire, 1.

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900—Continued.

	United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.	Georgia.	Illinois.
Miscellaneous expenses:								
Total	$73,218,227	$116,090	$48,764	$5,675	$179,152	$16,991	$135,152	$33,391,799
Rent of works	$103,928	$40	.....	$100	.....	$137	$296	$32,170
Taxes, not including internal revenue	$202,762	$107	$309	$417	$862	$372	$1,158	$13,255
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$72,886,752	$115,783	$48,455	$5,083	$178,290	$16,482	$133,698	$33,346,374
Contract work	$24,785	$160	.....	$75	.....	.....	.....	.....
Materials used:								
Total cost	$15,147,784	$25,262	$18,591	$191,364	$49,471	$11,618	$39,695	$3,734,652
Corn, bushels	16,555,804	34,498	14,925	.....	16,700	1,333	58,730	5,983,014
Cost	$5,968,198	$17,225	$5,613	.....	$8,636	$600	$29,883	$1,981,179
Rye, bushels	3,952,333	691	288	.....	15,900	1,250	30	192,554
Cost	$2,482,524	$458	$194	.....	$11,073	$800	$15	$115,405
Wheat, bushels	17,419	.....	50	.....	.....	.....	.....	.....
Cost	$10,340	.....	$30	.....	.....	.....	.....	.....
Barley, bushels	109,115	163	145	.....	9,600	.....	175	.....
Cost	$57,421	$98	$93	.....	$6,240	.....	$99	.....
Malt, bushels	3,623,829	1,053	175	.....	1,300	1,500	2,568	1,252,709
Cost	$1,956,934	$742	$100	.....	$900	$900	$2,526	$604,875
Fruits	$256,551	$860	$7,765	$119,840	$6,342	$5,351	.....	$2,200
Wine, gallons	1,339,606	.....	.....	1,339,606	.....	.....	.....	.....
Cost	$57,047	.....	.....	$57,047	.....	.....	.....	.....
Molasses, gallons	2,962,691	.....	.....	.....	.....	.....	.....	.....
Cost	$282,011	.....	.....	.....	.....	.....	.....	.....
Fuel	$894,142	$2,400	$2,095	$2,859	$7,368	$1,357	$4,453	$208,351
Rent of power and heat	$2,489	.....	.....	.....	$35	.....	.....	.....
Mill supplies	$74,976	$225	$100	$15	$449	$35	$60	$16,778
All other materials	$2,976,182	$294	$2,507	$11,558	$6,668	$2,070	$2,361	$805,834
Freight	$128,969	$2,960	$94	$45	$1,760	$505	$298	$30
Products:								
Total value	$96,798,443	$152,758	$95,487	$238,267	$292,057	$51,431	$198,891	$38,208,076
Alcohol and cologne spirits, proof gallons	54,304,925	.....	17,000	.....	.....	.....	.....	31,843,146
Value	$62,617,892	.....	$18,000	.....	.....	.....	.....	$36,893,146
Whisky, proof gallons	45,483,592	113,434	31,984	.....	.....	14,000	178,580	301,121
Value	$28,729,027	$148,443	$34,301	.....	.....	$29,100	$197,137	$418,170
Brandy, proof gallons	908,051	1,900	25,549	551,116	15,499	7,645	.....	6,147
Value	$758,231	$4,115	$43,186	$210,772	$29,687	$18,692	.....	$6,767
Gin, proof gallons	1,087,149	.....	.....	.....	142,000	.....	.....	358,021
Value	$1,425,717	.....	.....	.....	$258,000	.....	.....	$501,229
Rum, proof gallons	1,546,706	.....	.....	.....	.....	.....	.....	.....
Value	$1,033,117	.....	.....	.....	.....	.....	.....	.....
Wine, gallons	120,630	.....	.....	116,050	.....	2,960	.....	620
Value	$25,689	.....	.....	$22,495	.....	$2,364	.....	$80
All other products	$2,208,770	$200	.....	$5,000	$4,370	$1,275	$1,754	$388,684

	Indiana.	Kentucky.	Maryland.	Massachusetts.	Missouri.	New Jersey.	New York.	North Carolina.	Ohio.
Miscellaneous expenses:									
Total	$14,340,455	$4,182,373	$172,785	$441,231	$43,991	$633,516	$909,958	$394,108	$9,622,583
Rent of works	.....	$10,231	$3,779	$3,000	$25	$9,180	$6,725	$852	$5
Taxes, not including internal revenue	$9,427	$67,205	$28,607	$6,058	$331	$1,727	$1,567	$1,017	$15,550
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$14,317,353	$4,094,989	$140,399	$432,173	$43,575	$622,409	$901,666	$392,033	$9,607,028
Contract work	$13,675	$9,948	.....	.....	$60	$200	.....	$206	.....
Materials used:									
Total cost	$1,929,865	$3,605,316	$815,381	$308,414	$24,898	$126,707	$141,626	$134,631	$1,438,507
Corn, bushels	3,397,188	3,619,023	222,824	800	34,220	45,375	116,920	162,285	1,727,552
Cost	$1,161,569	$1,470,554	$99,130	$400	$14,348	$18,150	$47,640	$84,942	$619,528
Rye, bushels	101,442	955,107	695,598	900	2,981	45,375	30,446	14,894	340,279
Cost	$58,972	$598,595	$456,877	$540	$1,703	$23,595	$15,583	$10,645	$202,197
Wheat, bushels	.....	53	500	.....	400	.....	.....	606	3,607
Cost	.....	$35	$325	.....	$280	.....	.....	$445	$2,614
Barley, bushels	.....	355	6,500	150	60	.....	.....	634	89,315
Cost	.....	$252	$3,900	$82	$42	.....	.....	$377	$45,176
Malt, bushels	524,664	756,699	106,607	.....	996	30,250	28,950	12,889	296,910
Cost	$200,121	$443,827	$69,597	.....	$683	$18,150	$17,370	$9,119	$159,446
Fruits	$12,552	$10,049	$3,554	$264	$670	$39,299	$22,529	$1,386	$6,803
Wine, gallons	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cost	.....	.....	.....	.....	.....	.....	.....	.....	.....
Molasses, gallons	.....	200,000	.....	1,843,865	.....	.....	.....	.....	.....
Cost	.....	$10,000	.....	$235,493	.....	.....	.....	.....	.....
Fuel	$102,507	$205,148	$50,956	$15,435	$3,473	$12,600	$12,321	$21,428	$75,541
Rent of power and heat	.....	$238	.....	.....	.....	.....	.....	.....	$2,000
Mill supplies	$9,387	$17,768	$1,851	$522	$211	$850	$1,588	$433	$9,374
All other materials	$294,637	$782,146	$123,458	$37,693	$2,907	$14,018	$24,305	$2,821	$311,417
Freight	$120	$66,704	$5,733	$17,985	$631	$145	$290	$3,035	$4,411
Products:									
Total value	$16,961,058	$9,786,527	$1,616,362	$857,096	$91,692	$884,802	$1,201,851	$641,948	$12,447,268
Alcohol and cologne spirits, proof gallons	14,677,104	.....	.....	.....	.....	.....	590,841	.....	3,276,790
Value	$16,020,740	.....	.....	.....	.....	.....	$749,293	.....	$4,022,649
Whisky, proof gallons	2,698,324	21,511,608	3,791,603	.....	138,231	465,000	79,715	595,338	5,818,810
Value	$775,874	$9,404,981	$1,554,157	.....	$89,140	$651,000	$117,601	$625,654	$6,768,081
Brandy, proof gallons	34,875	28,265	15,253	276	1,375	104,389	52,655	3,696	16,678
Value	$36,944	$39,992	$27,609	$548	$2,010	$174,382	$74,099	$5,546	$19,275
Gin, proof gallons	84,476	.....	6,000	6,187	.....	.....	76,309	506	406,577
Value	$23,225	.....	$1,350	$1,856	.....	.....	$106,832	$1,320	$522,640
Rum, proof gallons	.....	170,000	.....	1,354,206	.....	.....	.....	.....	.....
Value	.....	$147,500	.....	$852,992	.....	.....	.....	.....	.....
Wine, gallons	.....	.....	.....	.....	.....	.....	.....	.....	.....
Value	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other products	$104,275	$194,054	$33,246	$1,700	$542	$59,470	$154,026	$9,428	$1,114,623

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900—Continued.

	Oklahoma.	Pennsylvania.	South Carolina.	Tennessee.	Texas.	Virginia.	West Virginia.	Wisconsin.	All other states.[1]
Miscellaneous expenses:									
Total	$1,154	$2,665,583	$54,121	$560,694	$10,814	$147,304	$10,024	$2,280,404	$2,853,506
Rent of works		$36,420	$16	$631		$321			
Taxes, not including internal revenue	$18	$39,658	$97	$4,120	$71	$1,588	$1,418	$1,800	$6,923
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$1,136	$2,589,108	$54,008	$555,879	$10,743	$145,395	$8,606	$2,278,604	$2,847,483
Contract work		$397		$64					
Materials used:									
Total cost	$834	$1,568,569	$31,285	$200,446	$4,446	$56,520	$67,963	$342,296	$279,427
Corn, bushels	1,533	100,787	34,529	241,677	7,384	37,629	2,326	319,088	375,491
Cost	$383	$42,276	$19,410	$110,392	$2,039	$18,153	$999	$105,576	$109,573
Rye, bushels	14	1,341,496	4,601	20,022	403	18,454	52,996	100,677	15,935
Cost	$8	$855,548	$4,282	$12,137	$333	$11,828	$37,065	$56,503	$8,218
Wheat, bushels	18	6,393				828		1,464	4,000
Cost	$14	$4,259				$207		$581	$1,000
Barley, bushels			200	1,593	100	125			
Cost			$149	$795	$48	$70			
Malt, bushels	28	347,323	2,013	24,064	567	4,284	19,261	118,792	90,227
Cost	$17	$218,659	$1,417	$13,780	$331	$3,112	$13,483	$56,761	$31,018
Fruits		$1,473		$6,188		$8,966			$400
Wine, gallons									
Cost									
Molasses, gallons									916,826
Cost									$35,513
Fuel	$402	$76,060	$3,053	$18,245	$960	$8,715	$2,589	$28,355	$27,571
Rent of power and heat		$50	$6		$150	$10			
Mill supplies		$9,095	$156	$1,703	$50	$271	$115	$385	$3,355
All other materials		$352,477	$1,685	$29,035	$270	$4,396	$9,366	$93,945	$60,314
Freight	$10	$8,672	$1,177	$8,171	$265	$792	$4,346	$190	$600
Products:									
Total value	$4,939	$5,357,615	$105,788	$939,510	$20,657	$257,385	$113,906	$2,698,984	$3,574,088
Alcohol and cologne spirits, proof gallons								1,180,825	2,719,219
Value								$1,479,546	$3,434,518
Whisky, proof gallons	4,992	7,185,303	122,882	965,421	24,584	199,484	277,194	899,983	66,001
Value	$4,889	$5,335,799	$104,306	$913,038	$20,657	$218,301	$110,878	$1,117,377	$90,193
Brandy, proof gallons		4,352		15,612		21,774			1,000
Value		$6,677		$19,038		$38,192			$750
Gin, proof gallons								7,073	
Value								$9,265	
Rum, proof gallons									22,500
Value									$32,625
Wine, gallons									1,000
Value									$750
All other products	$100	$15,139	$1,482	$7,434		$892	$3,028	$92,796	$15,252

	United States.	Alabama.	Arkansas.	California.	Connecticut.	Delaware.	Georgia.	Illinois.
Comparison of products:								
Number of establishments reporting for both years	486	9	11	4	15	11	13	15
Value for census year	$81,578,320	$53,657	$35,088	$22,641	$292,057	$50,091	$116,643	$36,628,732
Value for preceding business year	$73,809,483	$44,991	$33,699	$32,590	$273,086	$42,120	$117,064	$33,107,855
Power:								
Number of establishments reporting	538	10	10	4	9	8	13	18
Total horsepower	31,679	226	124	110	295	112	219	3,698
Owned—								
Engines—								
Steam, number	869	10	12	5	15	8	13	45
Horsepower	30,779	226	124	110	176	112	211	3,698
Gas or gasoline, number	8							
Horsepower	81							
Water wheels, number	24				6		1	
Horsepower	377				119		8	
Electric motors, number	8							
Horsepower	252							
Other power, number	2							
Horsepower	41							
Rented—								
Electric, horsepower	100							
Other kind, horsepower	49							
Furnished to other establishments, horsepower	12							
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	967	15	18	8	15	12	28	20
No employees	67	1	1		3	1	5	
Under 5	626	11	14	4	9	6	21	5
5 to 20	194	3	3	4	3	5	2	2
21 to 50	42							
51 to 100	26							6
101 to 250	4							
251 to 500	7							7
501 to 1,000	1							

[1] Includes establishments distributed as follows: Idaho, 1; Louisiana, 1; Nebraska, 2; New Hampshire, 1.

TABLE 16.—LIQUORS, DISTILLED, BY STATES AND TERRITORIES: 1900—Continued.

	Indiana.	Kentucky.	Maryland.	Massachusetts.	Missouri.	New Jersey.	New York.	North Carolina.	Ohio.
Comparison of products:									
Number of establishments reporting for both years	11	87	22	5	19	17	10	85	18
Value for census year	$9,825,480	$6,605,159	$1,457,407	$814,740	$47,925	$115,463	$1,177,035	$302,897	$12,186,053
Value for preceding business year	$9,599,500	$5,173,003	$1,117,764	$679,921	$46,857	$53,155	$1,335,488	$253,733	$12,907,826
Power:									
Number of establishments reporting	17	126	20	6	22	25	14	53	25
Total horsepower	2,782	11,918	1,130	265	401	455	424	1,067	2,863
Owned—									
Engines—									
Steam number	31	321	30	5	23	25	21	62	49
Horsepower	2,758	11,831	1,049	240	401	398	409	1,067	2,565
Gas or gasoline, number	1	3	1			2			1
Horsepower	20	15	8			20			18
Water wheels, number	1		3	1		5	1		
Horsepower	4		73	25		37	15		
Electric motors, number		2							4
Horsepower		32							180
Other power, number		1							
Horsepower		40							
Rented—									
Electric, horsepower									100
Other kind, horsepower									
Furnished to other establishments, horsepower								12	
Establishments classified by number of persons employed, not including proprietors and firm members:									
Total number of establishments	24	177	26	8	35	31	16	250	26
No employees	2	9		1	7	2	1	11	1
Under 5	14	64	11	1	25	17	7	227	16
5 to 20	3	71	9	6	3	11	7	12	3
21 to 50	3	18	6			1			3
51 to 100	1	13					1		2
101 to 250	1	1							1
251 to 500									
501 to 1,000		1							

	Oklahoma.	Pennsylvania.	South Carolina.	Tennessee.	Texas.	Virginia.	West Virginia.	Wisconsin.	All other states.[1]
Comparison of products:									
Number of establishments reporting for both years		48	6	26	3	44		4	3
Value for census year		$5,304,146	$53,237	$597,623	$13,197	$151,697		$2,669,836	$3,556,916
Value for preceding business year		$3,792,606	$39,706	$459,745	$12,865	$90,518		$1,326,418	$3,268,973
Power:									
Number of establishments reporting	1	68	16	31	5	29	2	4	2
Total horsepower	10	3,424	232	700	109	494	96	260	265
Owned—									
Engines—									
Steam, number	1	96	17	30	3	28	3	6	10
Horsepower	10	3,341	232	683	65	493	80	235	265
Gas or gasoline, number									
Horsepower									
Water wheels, number		4		1			1		
Horsepower		63		17			16		
Electric motors, number		1						1	
Horsepower		15						25	
Other power, number						1			
Horsepower						1			
Rented—									
Electric, horsepower									
Other kind, horsepower		5			44				
Furnished to other establishments, horsepower									
Establishments classified by number of persons employed, not including proprietors and firm members:									
Total number of establishments	3	73	22	51	5	91	3	5	5
No employees		8	1	1		12			
Under 5	3	33	19	34	4	74	2	2	3
5 to 20		21	2	15	1	5		2	1
21 to 50		9		1				1	
51 to 100		1					1		1
101 to 250		1							
251 to 500									
500 to 1,000									

[1] Includes establishments distributed as follows: Idaho, 1; Louisiana, 1; Nebraska, 2; New Hampshire, 1.

Table 17 is a comparative summary of statistics for wine manufacture as returned at the censuses of 1860 to 1900, inclusive, with the percentages of increase for each decade.

TABLE 17.—LIQUORS, VINOUS: COMPARATIVE SUMMARY, 1860 TO 1900, WITH PER CENT OF INCREASE FOR EACH DECADE.

	DATE OF CENSUS.					PER CENT OF INCREASE.			
	1900	1890	1880	1870	1860	1890 to 1900	1880 to 1890	1870 to 1880	1860 to 1870
Number of establishments	359	236	117	398	32	52.1	101.7	[1]70.6	1,143.8
Capital	$9,838,015	$5,792,783	$2,581,910	$2,334,394	$306,300	69.8	124.4	10.6	662.1
Salaried officials, clerks, etc., number	344	[2]234	[3]	[3]	[3]	47.0	.....	.....	.....
Salaries	$365,498	[2]$181,280	[3]	[3]	[3]	101.6	.....	.....	.....
Wage-earners, average number	1,163	1,048	967	1,486	106	11.0	8.4	[1]34.9	1,301.9
Total wages	$446,055	$299,453	$216,559	$230,650	$48,208	49.0	38.3	[1]6.1	378.4
Men, 16 years and over	1,099	1,016	781	1,426	102	8.2	30.1	[1]45.2	1,298.0
Wages	$436,857	$291,323	[3]	[3]	[3]	50.0	.....	.....	.....
Women, 16 years and over	61	26	57	32	4	134.6	[1]54.4	78.1	700.0
Wages	$8,808	$7,582	[3]	[3]	[3]	16.2	.....	.....	.....
Children, under 16 years	3	6	129	28	[3]	[1]50.0	[1]95.3	360.7	.....
Wages	$390	$548	[3]	[3]	[3]	[1]28.8	.....	.....	.....
Miscellaneous expenses	$552,338	$270,377	[4]	[4]	[4]	104.3	.....	.....	.....
Cost of materials used	$3,689,330	$1,818,012	$1,340,629	$1,203,172	$196,075	179.9	[1]1.7	11.4	513.7
Value of products	$6,547,310	$2,846,148	$2,169,193	$2,225,238	$400,791	130.0	31.2	[1]2.5	455.2

[1] Decrease.
[2] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 22.)
[3] Not reported separately.
[4] Not reported.

The decade closing with 1860 witnessed the birth of commercial wine manufacture in the United States. The experiments of Nicholas Longworth at Cincinnati, Ohio, hereinafter referred to, were followed by the development of wine manufacture in the Hudson River Valley and the lake districts of New York, and in the Lake Erie district, comprising the southern shore of that lake and adjacent islands. At the census of 1860 California, New York, and Ohio were the leading three states in wine production. In 1870 the wine product of Missouri exceeded that of any other state, and in 1890 exceeded that of New York, though not that of California. With these exceptions, California, New York, and Ohio have been throughout the leading states in this industry. In 1900 their combined output was 22,404,085 gallons of wine, out of a total of 23,425,567 gallons for the United States.

From Table 17 it appears that while the industry made rapid progress from 1860 to 1870, in the succeeding ten years, from 1870 to 1880, there was a decrease in number of establishments of 281, or 70.6 per cent; in average number of wage-earners of 519, or 34.9 per cent; and in value of products of $56,045, or 2.5 per cent. During this decade a substantial increase in the industry was shown in Ohio and New York, and the decline for the entire United States, shown by the table, was chiefly due to conditions in the states of California and Missouri. Between 1870 and 1875 an enthusiastic interest in viniculture spread over California, resulting in a great increase in the acreage of vineyards. This caused an overproduction of wine, which was followed by ruinous depreciation in prices, entailing heavy losses to all classes of producers. Many vineyards were uprooted and the land given over to other lines of horticulture. In 1870 California reported 139 establishments, and in 1880 only 45. The large producers, however, as a rule had faith in the future, and continued to improve their properties, so that capital for the decade ending with 1880 showed a decline of only $18,820, or 2.8 per cent for the state, while there was an increase for the United States of $247,516, or 10.6 per cent. By 1879, as a result of the widening market for California wines, consumption had overtaken production and prices advanced, so that in 1880, notwithstanding the depreciation experienced during a portion of the decade, statistics for the state show a slight increase in value of products. The decline from $2,225,238 to $2,169,193 in the value of products for the United States was largely due to the general depression of the industry in Missouri, caused by the blight which greatly injured the grape crops of the state. Since 1880 the progress of wine manufacture in the United States has been continuous. During the forty years ending with 1900 the industry increased in number of establishments from 32 to 359; in capital, from $306,300 to $9,838,015; in number of wage-earners, from 106 to 1,163; in wages, from $48,208 to $446,055; and in value of products, from $400,791 to $6,547,310.

Table 18 is a comparison of the several items of capital as reported at the censuses of 1890 and 1900.

TABLE 18.—LIQUORS, VINOUS: COMPARATIVE SUMMARY, CAPITAL, 1890 AND 1900.

	1900	1890	Per cent of increase.
Total	$9,838,015	$5,792,783	69.8
Land	364,075	367,010	[1]0.8
Buildings	1,927,731	1,049,005	83.8
Machinery, tools, and implements	1,237,948	1,290,598	[1]4.1
Cash and sundries	6,308,261	3,086,170	104.4

[1] Decrease.

From Table 18 it appears that at the census of 1900 the capital amounted to $9,838,015, an increase of $4,045,232, or 69.8 per cent for the decade. This amount was distributed as follows: Land, $364,075; buildings, $1,927,731; machinery, tools, and implements, $1,237,948; and cash and sundries, $6,308,261. Of the four divisions of capital, cash and sundries shows the largest percentage of increase. This includes cash on hand, bills receivable, unsettled ledger accounts, raw materials, stock in process of manufacture, finished products on hand, and other sundries. In 1900 the amount reported for these items was $6,308,261, and in 1890, $3,086,170, an increase of $3,222,091, or 104.4 per cent. As wine requires maturing or aging before it is marketable, and increases in value with each succeeding year, the quantity carried over by manufacturers from season to season is influenced by prices and general market conditions, and may be out of proportion to the quantity annually produced. For this reason the increase or decrease of live capital may, through "finished products on hand," be disproportionate to an advance or decline in the general conditions of the industry.

A slight decrease in the value of land is shown for the decade, but this is due to differences in inventories and estimates. While the capital invested in vineyards is increasing rapidly, the value of land actually utilized in the manufacture of wine may change but little. Wine-making establishments are often difficult of correct classification, because the industry includes both agricultural and manufacturing enterprise. In almost every state considerable quantities of wine are made from small vineyards attached to gardens or farms. Wine, when so manufactured, belongs to the agricultural products of the country, and at the Twelfth Census was returned to the division of agriculture. Such wines are made primarily for home consumption, although small quantities are often retailed in the neighborhood. In contradistinction to this class of producers are the large establishments, not engaged directly or indirectly in grape growing, which manufacture wine from must and grapes purchased in the open market, or on contract with vineyardists; these are purely manufacturing enterprises. Intermediate between these extremes are those establishments engaged in both grape growing and wine making, the winery being attached to the vineyard, and working into the finished product not only its own crops, but also those of neighboring vineyards. In such cases the two branches of enterprise in which each establishment is engaged have been separated, and there is included in this report only statistics of that branch of the industry relating to manufactures. Statistics pertaining to the growing and harvesting of grapes are included in the reports of the division of agriculture.

A slight decrease is shown in capital invested in machinery, tools, and implements, which decrease is due to the differences incident to inventories and estimates. The growth of the equipment for wine manufacture is better shown by the capital invested in buildings, which increased during the decade from $1,049,005 to $1,927,731, or 83.8 per cent. In this item increased cellarage, tanks, and cisterns are included. The equipment for wine making consists for the most part of tanks, cisterns, cooperage, cellarage, machinery for stemming and crushing grapes, and pumps and hose for moving the wine at different stages in the process of maturing. In California machines capable of stemming and crushing 300 tons of grapes daily are in use, and tanks or cisterns with a capacity for 25,000 to 30,000 gallons are common; the largest cistern in the state was constructed by the Italian-Swiss colony, and holds 500,000 gallons.

Table 18 does not include, for 1900, 12 idle establishments, with a capital of $70,026, and 113 active establishments, each with a product less than $500, with a capital of $55,542. The combined capital of these two classes was $125,568, making an aggregate capital for the industry of $9,963,583.

Table 19 summarizes, by states and territories, the statistics for the industry as reported at the censuses of 1890 and 1900.

TABLE 19.—LIQUORS, VINOUS: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1890 AND 1900.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
United States	1900	359	$9,838,015	344	$365,498	1,163	$446,055	$552,338	$3,689,330	$6,547,310
	1890	236	5,792,783	234	[1] 181,280	1,048	299,453	270,377	1,818,012	2,846,148
California	1900	187	4,658,625	106	124,465	526	224,849	265,487	2,526,768	3,937,871
	1890	128	3,729,413	121	99,872	735	190,558	142,512	840,222	1,788,868
Georgia	1900	6	38,360	8	1,350	6	1,225	3,482	7,815	15,875
	[2] 1890									
Illinois	1900	8	19,146			6	906	605	6,174	13,265
	[3] 1890									
Indiana	1900	3	26,720			13	4,612	1,652	6,070	18,400
	[3] 1890									
Iowa	1900	6	2,100			2	578	322	1,410	4,119
	[3] 1890									

[1] Includes proprietors and firm members, with their salaries; number only reported in 1900. (See Table 22.)
[2] No establishments reported.
[3] Included in "all other states" for 1890.

TABLE 19.—LIQUORS, VINOUS: COMPARATIVE SUMMARY, BY STATES AND TERRITORIES, 1890 AND 1900—Continued.

STATES AND TERRITORIES.	Year.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products.
				Number.	Salaries.	Average number.	Total wages.			
Massachusetts	1900	6	$33,700			5	$2,700	$1,589	$5,791	$19,685
	[1] 1890									
Michigan	1900	5	53,700	5	$2,085	5	1,975	1,400	6,878	15,109
	[2] 1890									
Missouri	1900	7	506,600	19	37,650	48	22,405	39,908	83,166	190,150
	1890	9	425,090	23	28,098	66	38,342	22,459	87,263	244,300
ebraska	1900	3	2,880			2	350	6	1,077	2,381
	[1] 1890									
New Jersey	1900	11	879,096	21	9,404	43	17,461	12,500	53,456	241,777
	1890	7	29,075	6	888	16	700	889	3,136	21,510
New York	1900	38	2,157,322	104	102,341	244	83,464	132,891	382,887	942,648
	1890	11	264,141	9	6,450	35	15,140	23,705	71,651	166,740
North Carolina	1900	5	76,190	25	37,000	56	9,030	16,585	109,695	224,980
	[3] 1890									
Ohio	1900	52	1,621,836	58	49,259	179	68,163	69,718	428,879	801,684
	1890	58	989,207	54	36,195	123	41,767	70,855	246,956	550,777
Pennsylvania	1900	3	130,631			7	1,700	961	29,446	53,300
	[1] 1890									
Virginia	1900	4	63,632	2	1,800	5	1,200	2,110	16,413	29,970
	[2] 1890									
Wisconsin	[3] 1900									
	1890	3	17,230	3	721	1	100	162	1,266	5,720
All other states	[4] 1900	15	67,477	1	144	16	5,437	3,127	13,405	26,116
	[5] 1890	20	338,027	18	9,056	72	12,846	9,795	62,518	128,238

[1] No establishments reported.
[2] Included in "all other states" for 1890.
[3] Included in "all other states" for 1900.
[4] Includes establishments distributed as follows: Alabama, 2; Arizona, 1; Florida, 1; Kansas, 2; Mississippi, 2; New Hampshire, 1; New Mexico, 1; Texas, 2; West Virginia, 1; Wisconsin, 2.
[5] Includes establishments distributed as follows: Connecticut, 1; Florida, 2; Illinois, 2; Indiana, 1; Iowa, 2; Michigan, 2; New Hampshire, 1; North Carolina, 2; Oregon, 1; Rhode Island, 1; South Carolina, 1; Texas, 2; Virginia, 2.

At the census of 1900, 15 states reported 344 establishments out of a total of 359 for the United States. In capital and value of products California ranked first, New York second, and Ohio third. In number of establishments these positions were reversed for New York and Ohio. The combined capital of these 3 states was $8,437,783, out of a total of $9,838,015 for the United States, and their combined product was valued at $5,682,103, out of a total value of $6,547,310. In this group of states New York showed the greatest percentage of increase in number of establishments, capital, and value of products, due to the growth of champagne manufacture in the Keuka Lake district.

Table 20 shows the quantity and cost of materials used and the quantity and value of products for the census year ending May 31, 1900.

TABLE 20.—LIQUORS, VINOUS: MATERIALS AND PRODUCTS, 1900.

	Unit of measure.	Quantity.	Cost of materials.	Value of products.
Materials:				
Total cost			$3,689,330	
Grapes	Pounds	376,503,987	2,752,416	
Fuel, and rent of power and heat			79,313	
Mill supplies			9,021	
All other materials			782,254	
Freight			66,326	
Products:				
Total value				$6,547,310
Still wines	Gallons	23,256,512		5,680,869
Effervescing wines	Gallons	169,055		664,972
Brandy	Proof gallons	114,185		100,651
All other products				98,793
Custom work				2,025

It appears from Table 20 that 23,425,567 gallons of wine were manufactured, of which 23,256,512 were still wines and 169,055 were effervescing wines, or champagnes. The total quantity shown in the table does not include 61,346 gallons reported from 113 small establishments, each with a product less than $500; 120,630 gallons reported from distilleries which made wine manufacture subsidiary to the distillation of spirits; and 8,217,512 gallons made on farms and reported on the agricultural schedules. The combined output of these three sources of supply was 8,399,488 gallons, which increased the total production of the United States to 31,825,055 gallons. The quantity of wine exported from the United States for the fiscal year ending June 30, 1900, one month later than the census year, was 1,438,421 gallons. The quantity imported for the same period was 4,412,035 gallons, of which 40,436 were exported, leaving 4,371,599 imported for domestic consumption. This was an excess of imports over exports of 2,933,178 gallons, which, added to the total production of the country, gives 34,758,233 gallons as the annual consumption of the United States, or less than one-half gallon per capita. Figures representing annual consumption are, at best, but close approximations. The quantity of domestic wine actually consumed does not correspond exactly with the excess of production over exports, because no fixed law governs the length of time wine is carried for aging or held by manufacturers for better prices; neither does the quantity of foreign wine consumed

within a given year correspond exactly with the importations. Data for closer approximations, however, are impossible to obtain.

Table 20 shows that 376,503,987 pounds, or 188,252 tons, of grapes were used to produce 23,425,567 gallons of wine, or an average of 124.4 gallons to each ton of grapes.

The average value of champagne was $3.93 per gallon and of still wine 24.4 cents. Contrary to popular supposition, California is not an extensive producer of champagnes. Of the 169,055 gallons of sparkling or effervescing wines reported for the United States at the census of 1900, 8,880 were returned from California, 15,600 from Ohio, 29,400 from Missouri, and 113,435 from New York.

In Ohio the quantity of wine produced from each ton of grapes was 154.8 gallons; in New York it was 151.5; and in California 118.8 gallons. These differences are due to the varying character of the seasons and to the different varieties of grapes grown for different classes of wine. Different kinds of grapes vary from 60 to 80 per cent in the yield of must. The average cost of grapes per ton in California, New York, and Ohio was $13.49, $18.94, and $19.71, respectively.

The production of brandy by wineries was reported as 114,185 gallons, of which 60,785 gallons were from California. This, however, is only a small fraction of the entire brandy product of the state, which approximated 3,000,000 gallons, of which more than 2,000,000 gallons were used for fortification of wine, and not separately reported. Brandy is a natural by-product of wine manufacture, being distilled from cheese, wash, or piquette. The quantity reported was so manufactured, or was distilled from wine, and does not change the figures in Table 20, from which the above averages were computed. Fifteen gallons of cheese, 10 to 12½ gallons of wash, or 7 gallons of piquette will produce 1 gallon of brandy. Certain grades of wine are sometimes distilled into brandy when the relative activity of the market in the two commodities makes it advantageous to do so; 5 gallons of sweet or 7 gallons of sour wine will, in distillation, produce 1 gallon of brandy. The internal-revenue tax of $1.10, which is collected on each proof gallon of distilled spirits, does not apply to brandy used in the fortification of wines, or to that deposited in bonded warehouses until it is withdrawn therefrom. According to the report of the Commissioner of Internal Revenue for the fiscal year ending June 30, 1900, 2,137,067 gallons of grape brandy were used in the fortification of angelica, port, sherry, Tokay, muscatel, and other varieties of sweet wines. This quantity was added to 7,544,342 gallons of wine, producing 8,815,441 gallons after fortification.

The wine product of the United States is small compared with that of other wine-producing countries. The estimated crop of the world, by countries, for the year 1901, was as follows:[1]

	Gallons.
France	1,530,223,200
Italy	1,013,760,000
Spain	520,080,000
Portugal	155,760,000
Algeria	146,440,800
Austria	116,160,000
Roumania	87,120,000
Chile	87,120,000
Russia	76,560,000
Bulgaria	73,920,000
Germany	60,720,000
Argentine Republic	55,440,000
Turkey and Cyprus	50,160,000
United States	39,600,000
Peru	36,960,000
Switzerland	31,680,000
Servia	23,760,000
Brazil	12,672,000
Australia	8,316,000
Madeira	7,920,000
Tunis	4,488,000
Cape Country	3,168,000
Uruguay	2,376,000
Mexico	924,000
Persia	765,600
Bolivia	660,000

According to this estimate, the United States ranked fourteenth in production, and the world's supply for 1901 was 4,146,753,600 gallons, or about 2.8 gallons per capita. In the opinion of United States Consul Covert, of Lyon, France, a general crisis for wine producers is impending, because of an overproduction in the entire world.[2]

Table 21 shows the quantity, value, and destination of wine exported from the United States for the fiscal year ending June 30, 1900.

TABLE 21.—LIQUORS, VINOUS: EXPORTS BY COUNTRIES, 1900.[3]

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
Aggregate	9,854	$49,927	1,408,859	$575,665
EUROPE.				
Total	1,155	8,992	451,670	209,917
Belgium	2	5	24,831	10,399
Denmark			3,972	1,622
France	318	1,712	10,442	6,608
Germany	267	1,164	132,738	78,320
Greenland, Iceland, etc.	1	10		
Italy	2	10	9	5
Netherlands			6,471	3,053
Russia—Baltic and White seas	5	28	4,631	3,152
Sweden and Norway			14,476	8,832
Switzerland			6,469	1,950
United Kingdom	560	6,068	247,631	95,976

[1] Advance Sheets, No. 1274, Consular Reports, February 25, 1902.
[2] Ibid.
[3] Commerce and Navigation of the United States: United States Treasury Department, Annual Report, 1900.

TABLE 21.—LIQUORS, VINOUS: EXPORTS BY COUNTRIES, 1900—Continued.

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
NORTH AMERICA.				
Total	3,922	$18,162	448,526	$177,489
Bermuda			374	184
British Honduras	45	225	5,185	2,060
Dominion of Canada:				
Nova Scotia, New Brunswick, etc.	1	10	249	172
Quebec, Ontario, Manitoba, etc.	89	436	3,277	1,783
British Columbia	417	1,906	40,762	16,974
Central American states:				
Costa Rica	121	465	9,732	4,364
Guatemala	760	2,879	46,347	19,363
Honduras	503	2,222	19,229	8,460
Nicaragua	413	1,639	31,428	14,540
Salvador	244	1,185	42,369	18,165
Mexico	926	4,456	211,780	76,285
Miquelon	15	51		
West Indies:				
British	181	1,598	6,814	3,130
Cuba	103	473	15,133	5,510
Danish	4	12	101	38
Haiti			1,829	664
Porto Rico	90	523	13,027	5,365
Santo Domingo	10	82	940	432
SOUTH AMERICA.				
Total	190	1,080	79,775	28,758
Argentina	1	8		
Brazil			1,330	658
Chile	22	141	3,384	1,427
Colombia	81	599	51,788	16,805
Ecuador	22	77	20,095	8,650
Peru	50	200	1,500	470
Venezuela	14	55	1,678	748

TABLE 21.—LIQUORS, VINOUS: EXPORTS BY COUNTRIES, 1900—Continued.

COUNTRIES.	IN BOTTLES.		IN OTHER COVERINGS.	
	Dozens of quarts.	Value.	Gallons.	Value.
ASIA.				
Total	1,419	$5,609	140,370	$50,792
Chinese Empire	410	1,725	38,756	15,395
East Indies, British	11	51	5,573	2,693
Hongkong	55	282	17,555	6,465
Japan	919	3,446	77,726	25,460
Korea	24	105	360	129
Russia—Asiatic			400	250
OCEANIA.				
Total	3,166	16,077	288,492	108,686
British Australasia	47	265	3,198	1,580
French Oceania	1	6	59,997	16,498
Guam	12	54	540	173
Hawaii	1,927	10,889	214,632	86,642
Philippine Islands	1,170	4,818	9,535	3,579
Tonga, Samoa, etc	9	45	592	214
AFRICA.				
Total	2	7	26	23
Liberia			26	23
Portuguese Africa	2	7		

This table shows that the exports were 1,438,421 gallons, with a value of $625,592. The United Kingdom purchased the greatest quantity, followed by Hawaii, Mexico, and Germany in the order named.

HISTORICAL AND DESCRIPTIVE.

Wine was manufactured before the dawn of history. The explanation of this is simple. It is the product of natural forces requiring neither mechanical powers nor manufacturing appliances. In the laboratory of earth and air, sugar is developed in the grape and in turn converted into alcohol. The vine and its fruit are as ancient and as widely distributed as the virgin forests of the earth. The accidental crushing of the grape and collecting of small quantities of its juice were followed by the discovery of its transformation and intoxicating properties after exposure to the air. Systematic observation followed close on accidental discovery, until chance gave way to design, and primitive wine making was ushered in.

The domestication of the vine and scientific methods of wine manufacture came many centuries later, and were among the first achievements of ancient husbandry. The time and labor required to plant and mature vineyards make them too valuable to be abandoned when once established. The cultivation of the vine was, therefore, incompatible with the pursuits of nomadic or seminomadic peoples, and the grape, like the olive, was, among the ancients, the symbol of settled and cultured life. The vine is especially susceptible to modification through culture or deterioration by transplantation, and while it is certain that the ancients cultivated many varieties, it is not possible to identify any of them with a modern botanical classification. The wines of Greece and Rome were highly flavored with spices and aromatic herbs, and in those countries viniculture attained its highest development in the vicinity of the Surrentine Hills and on the islands of the Ionian and Ægean seas. A detailed description of ancient methods of manufacture and the progress of viniculture westward with the movements of civilization to its installation and development in the modern wine provinces of Europe does not, however, fall within the scope of this report.

In that portion of the New World now within the boundaries of the United States, the native vines were distributed from ocean to ocean and from Michigan to Florida. Pre-Columbian adventurers from the North, driven by gales to the shores of the Atlantic, gave the name of Vinland to a portion of the coast; and all the American explorers after Columbus, at whatever point they touched the shore, or however far they penetrated the interior, found grapes in profusion and variety. The American colonists all came from countries in Europe where the manufacture of wine had for centuries been an important industry. It is true that viniculture in England had declined owing to the importation of French wines after the Norman Conquest, but the English colonists were none the less familiar with the beverage and its uses. It is but natural, therefore, that the attention of the different colonies should have been early attracted to the cultivation of the native

grape and its manufacture into wine as a possible source of revenue in the new country. Their hopes and expectations were greatly accentuated by the early writers, who gave florid descriptions of the abundance and luxuriance of the vines. In consequence, the efforts to introduce the culture of the grape for wine manufacture, made during our colonial period, were numerous, and common to all the settlements. Almost without exception, however, they were expensive and discouraging. In the more northern colonies the attempts were not long persevered in. This is particularly true of the colonies of New England. Massachusetts and her neighboring settlements had wild grapes, perhaps in as great abundance as Virginia, but interest in viniculture languished as the colony increased its exports of fish, lumber, and breadstuffs to the West Indies, Spain, Portugal, and the Wine Islands, receiving from those countries wines in reciprocal trade. In common with all the other colonies those of the South failed in their efforts to introduce European varieties of grapes and failed also in attempts to domesticate the native vine. The work of caring for vineyards, particularly the dressing of vines in a way to secure best results, requires workmen of a high order of intelligence, the exercise of which was incompatible with the system of slavery under which the vignerons were at first compelled to toil.

After the failure to acclimate European vines it is not strange that colonial wine manufacture proved unprofitable, because the product of the native grape could not, as an article of export, compete with the products of other countries, perfected by the accumulated experience of centuries of wine making; and domestic consumption in a new country is always insufficient to create a profitable demand. Wine making is profitable only in an advanced state of society with accumulated riches for the gratification of luxurious tastes.

The first wine manufactured in the United States was made from the native wild grapes by the Spanish colonists in Florida, about 1565. An attempt at grape culture was made in Virginia in 1610, three years after the settlement of Jamestown, by Frenchmen who came to the colony to plant a vineyard. Later, about 1620, the London Company sent French vineyardists to the colony for the same purpose. As far west as Kaskaskia, Ill., the French colonists in 1769 made wine from the wild grapes. In 1802 Congress made grants on the Ohio River in Indiana to John J. Dufour, a native of Switzerland, who had been experimenting with foreign varieties of grapes near Lexington, Ky., and who represented a colony of Swiss emigrants, including several members of his own family. The colony settled at New Switzerland (now Vevay, Ind.) to engage in the planting of vineyards and the making of wine. These emigrants carried on the culture of the grape in a small way for a number of years, attaining moderate success with the Madeira and other foreign varieties, but a greater measure of success with the Schuylkill, an offspring of the native fox grape. In 1810 the settlement had 8 acres in vineyards and made 2,400 gallons of wine, valued at $6,000. In 1818, 5,000 gallons were made which sold at $1 a gallon, but the fact that this product was from small vineyards attached to separate farms would seem to indicate that the industry was being neglected for other lines of agriculture.

The first statistical reports of the United States Government on wine manufacture are contained in the abstract of the census of 1810, compiled by Tench Coxe, and published at Philadelphia in 1814. From this abstract it appears that there were reported at the Third Census 14,191 distilleries, producing 22,977,167 gallons of spirits from fruit and grain and 2,827,625 gallons from molasses; 132 breweries making 182,690 barrels, or 5,754,735 gallons, of malt liquors; and wineries (number not mentioned) producing 11,755 gallons of wine, of which 9,230 gallons were made from currants and 2,525 from grapes. Of the total quantity of wine reported, 4,875 gallons were from Rhode Island, 4,480 from Pennsylvania, and 2,400 from Indiana. The Moravians had long carried on the manufacture of currant wine at Bethlehem, Pa., and Mr. Coxe in his report strongly urged its manufacture as being more profitable than that of grape wine. The total quantity of wine reported at the Third Census seems a small product after two hundred years of effort. It probably fell short of the real production, because it could not have included limited quantities made for home consumption from small and widely scattered vineyards attached to farms.

The first really successful attempt at wine making, and the one which might be regarded as the first of commercial importance, was made by Nicholas Longworth at Cincinnati, Ohio. He experimented first with vines procured from the Swiss settlement at Vevay, Ind., but later abandoned these for the Catawba, which he procured from John Adlum, of Georgetown, D. C. This particular variety of grape has played an important part in the development of the wine industry of the United States. In 1820 Mr. Adlum called the attention of Congress to the fact that he had succeeded in making a superior quality of wine from the Catawba grape, and asked the use of certain public lands in the District of Columbia for an experimental vineyard. His request was refused. Previously, in 1819, he had discovered a vine of the Catawba growing in the garden of an inn at Clarksburg, Md., and secured cuttings, which he planted in his vineyard on Rock Creek; and it was from him that Mr. Longworth, in 1825, secured cuttings for his vineyards at Cincinnati. This grape, when found by Mr. Adlum, was supposed to be a European variety, but is now thought to be a pure native. It was traced back to the Catawba River in North Carolina, from which it takes its name.

After the decline of the industry at Cincinnati, the

cultivation of the Catawba was continued on the islands near the southern shore of Lake Erie. It is still cultivated there, and on the mainland in the vicinity of Sandusky, with considerable success. The greatest Catawba region at the present day, however, is the Keuka Lake district in central New York, where the grapes ripen on the hillsides sloping down to the lake. In both the Ohio and New York districts this variety is largely used for the manufacture of American champagne. Mr. Longworth spent about forty years in trying to make American wine manufacture a success on the banks of the Ohio River, and at one time, about 1860, it was estimated that there were 2,000 acres in vineyards in the vicinity of Cincinnati. The decline of the industry in the Cincinnati district was due to the destruction of the vineyards by the black rot and the susceptibility to that disease of the varieties of grapes there cultivated.

Since the beginning of commercial wine manufacture, the states of New York and Ohio have maintained supremacy over the other states east of the Rocky Mountains, except at the census of 1870, when the product of Missouri exceeded the combined product of both those states, and at the census of 1890 exceeded that of New York. At the census of 1860 the total value of the product for the United States was $400,791; for New York, $155,966; and for Ohio, $47,275. At the census of 1870 the value for the United States was $2,225,238; for Missouri, $934,442; for New York, $296,668; and for Ohio, $309,375. At the census of 1880 the value for the United States was $2,169,193; for Missouri, $185,900; for New York, $375,150; and for Ohio, $773,110. At the census of 1890 the value for the United States was $2,846,148; for Missouri, $244,300; for New York, $156,740; and for Ohio, $550,777. At the census of 1900 the value for the United States was $6,547,310; for Missouri, $199,130; for New York, $942,548; and for Ohio, $801,634.

East of the Rocky Mountains the transplantation of European varieties of grapes for wine manufacture has not, to the present day, been attended with any measure of success. The Lake Erie district in Ohio, the lake districts of central New York, and the Hudson River Valley are the only producing sections of real importance, and here the rigors of the climate are inimical to the success of foreign varieties. All the wine manufactured in these districts is from pure natives or from natural and artificial hybrids.

In the state of California wine manufacture has had a rapid growth. There, contrary to the universal experience east of the Rocky Mountains, efforts to supplant indigenous vines by the acclimation of foreign varieties have been attended with a marked degree of success. Of the 23,425,567 gallons of wine reported at the census of 1900, 19,028,258 gallons were made in California. This is more than four times the combined output of all the other states, and practically all was made from European varieties which have adapted themselves to their new environment. The introduction of the foreign vine into California dates back to 1771. It was brought from Spain by way of Mexico through the instrumentality of the Catholic missions. The mission of San Gabriel planted the first vineyard, and the planting of vines extended from mission to mission until vineyards comprising from 5 to 30 acres stretched from San Diego to Sonoma. The labor was performed by the native Indians, whom the Spaniards reduced to slavery and taught the elementary lessons of grape culture. The variety cultivated was what is now known as the Mission grape. It proved to be of lasting favor with the Spanish fathers, because its wine resembled somewhat the red wines of old Castile. All the missions grew this one variety, but with the characteristic susceptibility of the vine to soil and climatic conditions the fruit took on various modifications in size, appearance, and flavor in the different localities where cultivated. For this reason, and because of different methods of treating the expressed juices, there was much variation in the general character and fineness of the wine. The Mission grape produced from 700 to 1,000 gallons of wine to the acre, and practically all was consumed in the neighborhood. There were no facilities for export; neither were there casks or bottles. For these reasons the industry can hardly be said to have reached the dignity of commercial importance, and its products were seldom seen in the marts of trade. The wine was fermented in cemented cisterns, where it was allowed to remain, or was drawn into hides or earthenware jars.

With the downfall of the Spanish power in Mexico the California missions waned, and with them viticulture declined also. In 1845 the missions were abolished and confiscated, and the Americans, when they came into possession, found both missions and vineyards in ruins. The concentrated interest of the people in the mining of gold, following its discovery in 1849, resulted in the neglect of agricultural pursuits, and grape growing and wine making remained undeveloped.

In 1856 statistics for the state showed approximately 1,500,000 vines, of which the Spanish settlement at Los Angeles had about 750,000. The others were scattered among the missions and Spanish ranches and were nurtured by irrigation. A. Haraszthy was the first to demonstrate the possibility of maturing grapes without irrigation by a system of stirring the soil around the roots of the vine. In 1858 he wrote an essay on vine planting and wine making which, with other literature on the subject, was given wide circulation by the State Agricultural Society. This so stimulated interest in viniculture that by 1862 the standing committee of the legislature reported 20,000,000 vines planted throughout the state.[1]

In 1861 a joint resolution of the legislature of Cali-

[1] Harper's Magazine, 1864, vol. 29, page 24.

fornia authorized and requested Governor Downey to appoint a commission to report "upon the ways and means best adapted to promote the improvement and growth of the grapevine in California."[1] Mr. Haraszthy, as a representative of this commission, visited the famous wine districts of Europe and purchased 100,000 vines, embracing about 1,400 different varieties, which were propagated at Sonoma. Cuttings from these vines were distributed among growers in different parts of the state. From that time the manufacture of wine in California has had a continuous and marvelous growth, interrupted only by the depreciation of prices through overproduction in certain years. In prolific seasons must has sold as low as 7 or 8 cents a gallon, which hardly equaled the cost of production. In 1860 the value of the product was $160,300; in 1870, $602,553, in 1880, $622,087; in 1890, $1,738,863; and in 1900, $3,937,871.

Since the introduction of European vines the product of California has included duplications, more or less perfect, of most of the well-known varieties of European wines. California embraces nearly ten degrees of latitude. With the ocean on the west and the altitudes rising into the mountains on the east, with the hills, valleys, rivers, and slopes, the state has such a variety of soil, slope, elevation, temperature, and climatic conditions as to reproduce, somewhere within its borders, any wine now manufactured. At present, however, the dry wines have the characteristic heaviness common to the wines of all southern countries, where warmth and sunshine develop a large proportion of sugar in the grape, which in fermentation is transformed into an excess of alcohol. In time, however, through the discovery of new districts, the evolution of new varieties of grapes, the accumulated experience of vineyardists and wine makers, and the adaptability of consumers to the article consumed, California will resolve itself into wine districts, the products of which will be prized as those of the famous wine provinces of Europe.

CLASSIFICATION AND NOMENCLATURE.

According to the quantity of sugar retained by the arrest of fermentation, wines are divided into sweet and dry; according to color, into red and white; and according to the quantity of carbonic acid gas generated in fermentation and retained under pressure, into still and effervescing wines (champagnes). The quantity of sugar contained in grapes used for wine making is influenced by many conditions, such as the variety of the grape, soil, climate, and the vicissitudes of the seasons, and will vary from 13 to 30 per cent. In fermentation sugar is converted into alcohol, and for the sweet wines the grapes rich in sugar content are chosen; before enough of the sugar is fermented out to convert the juice into a dry wine, some form of alcohol, preferably grape brandy, is added to give the requisite alcoholic strength and to arrest fermentation. Alcohol, by preventing further fermentation, fortifies against deterioration; hence the name "fortified," applied to all classes of sweet wines. Such wines invite adulteration or a deviation from natural processes of manufacture. Sugar, alcohol, and water may be added to the juice to the point of sacrificing its characteristic flavor, which would insure detection. In all wines there is considerable sugar remaining after the first violent fermentation, and by natural process this ferments out slowly through a considerable period of time. The extent to which it is fermented out determines the degree of dryness, as wines shade easily into either classification. Usually, however, grapes lighter in sugar content are chosen for dry wines, because the desired dryness can be secured by the fermentation of less sugar, leaving the wine of less alcoholic strength.

Red wines are made from grapes with highly colored skins, which are fermented with the juice, and from which the alcohol, formed by the fermentation of the sugar, absorbs the coloring matter. The alcohol also takes up certain acids and other ingredients from skins and stems, which give the red wines a distinct physiological effect, principally through the astringent properties of tannin. White wines are usually made from distinct types of light-colored grapes fermented without the skins.

Champagne is an effervescing wine, named from the province in France where it was first manufactured. Distinct types of grapes, as well as districts that will produce them, are necessary for its perfect production. The effervescence is due to carbonic acid gas generated in fermentation and retained under pressure. After the juice has passed through certain stages of fermentation it is bottled in heavy glass and tightly corked, the cork being bound in by wire passed over the mouth and around the neck of the bottle. Fermentation continues and the gas generated is confined, producing a natural "charging" which, on the opening of the bottle, gives to the wine its effervescence. The manufacture of champagne entails great labor, time, and skill. About three years are necessary to perfect it, and all this time it requires constant care and handling; at different stages of the process it must be uncorked to expel sediment. There are all grades of champagne sold in the markets, from an inferior grade of wine artificially "charged," to the wine of the highest type of grapes, perfected by natural processes.

Sweet and dry wines shade off into several types, rather than distinct classifications, and may be red or white, still or sparkling. These types take their names from provinces or from cities and towns in wine districts. Under these types are numerous brands named after valleys, villages, provinces, estates or chateaux, or after some fanciful name of the producer. A modern first-class hotel usually lists its wines under the headings of champagnes, clarets, Sauternes, Rhine wines, Burgundies, sherries, Madeiras, and ports. Champagnes are subdivided into foreign and domestic, and are classed as sweet, dry, and extra dry. Claret is a name given to dry reds or those of a general Bordeaux

[1] Appendix to Journals of Senate and Assembly, California, thirteenth session, 1862.

type; Sauternes, from a city near Bordeaux, are dry whites; Rhine wines are those from the wine districts of Germany along the Rhine River and are dry wines, usually white, but sometimes red; Burgundies, named from Burgundy, are dry wines, red or white, still or sparkling; sherries, from Xeres, Spain, are fortified wines, but, as some are much sweeter than others, they are designated as sweet or dry sherries, and are white or tinted still wines; Madeiras, after the island of Madeira, are much like sherries; ports, from Oporto, Portugal, are still wines, sweet, and usually red. Among the sweet wines, California manufactures large quantities of ports and sherries, and among the dry wines, clarets and Sauternes.

Table 22 gives detailed statistics of the wine industry, by states and territories, as reported at the census of 1900.

TABLE 22.—LIQUORS, VINOUS, BY STATES: 1900.

	United States.	California.	Georgia.	Illinois.	Indiana.	Iowa.	Massachusetts.	Michigan.
Number of establishments	359	187	6	8	3	6	6	5
Character of organization:								
Individual	236	124	4	7	1	6	5	3
Firm and limited partnership	47	27		1	2		1	1
Incorporated company	75	35	2					1
Established during the decade	123	58	5	5	1	1	2	1
Established during the census year	8	4					1	
Capital:								
Total	$9,838,015	$4,658,625	$38,360	$19,146	$26,720	$2,100	$33,700	$53,700
Land	$364,075	$139,315	$240	$1,550	$520	$160	$2,300	$500
Buildings	$1,927,731	$866,971	$5,900	$4,950	$7,400	$910	$6,450	$2,200
Machinery, tools, and implements	$1,237,948	$699,750	$6,320	$2,160	$3,800	$715	$2,200	$9,000
Cash and sundries	$6,308,261	$2,952,589	$25,900	$10,486	$15,000	$315	$22,750	$42,000
Proprietors and firm members	329	172	4	9	5	6	7	5
Salaried officials, clerks, etc.:								
Total number	344	106	3					5
Total salaries	$365,498	$124,465	$1,350					$2,085
Officers of corporations—								
Number	64	24	2					2
Salaries	$114,614	$42,370	$1,250					$600
General superintendents, managers, clerks, etc.—								
Total number	280	82	1					3
Total salaries	$250,884	$82,095	$100					$1,485
Men—								
Number	256	80	1					3
Salaries	$242,695	$80,895	$100					$1,485
Women—								
Number	24	2						
Salaries	$8,189	$1,200						
Wage-earners, including pieceworkers, and total wages:								
Greatest number employed at any one time during the year	2,358	1,173	8	28	15	13	5	16
Least number employed at any one time during the year	1,082	554	8	7	8	12	5	6
Average number	1,163	526	6	6	13	2	5	5
Wages	$446,055	$224,849	$1,225	$906	$4,612	$578	$2,700	$1,975
Men, 16 years and over—								
Average number	1,099	526	6	3	13	2	5	5
Wages	$436,857	$224,849	$1,225	$500	$4,612	$578	$2,700	$1,975
Women, 16 years and over—								
Average number	61			2				
Wages	$8,808			$256				
Children, under 16 years—								
Average number	3			1				
Wages	$390			$150				

	Missouri.	Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Virginia.	All other states.[1]
Number of establishments	7	3	11	38	5	52	3	4	15
Character of organization:									
Individual	3	3	6	22	3	33	3	3	10
Firm and limited partnership				5	2	6			2
Incorporated company	4		5	11		13		1	3
Established during the decade	2	2	4	19		16		2	5
Established during the census year				1	1		1		
Capital:									
Total	$506,600	$2,880	$379,096	$2,157,322	$76,190	$1,621,886	$130,631	$63,632	$67,477
Land	$13,800	$120	$12,850	$99,695	$5,160	$81,235	$2,700	$1,075	$2,855
Buildings	$138,100	$950	$84,840	$420,635	$35,375	$307,745	$16,700	$14,660	$13,955
Machinery, tools, and implements	$28,200	$560	$18,688	$185,555	$23,205	$238,969	$2,231	$7,275	$9,320
Cash and sundries	$326,500	$1,250	$262,718	$1,451,437	$12,450	$993,887	$109,000	$40,632	$41,347
Proprietors and firm members	3	3	6	31	7	49	3	3	16
Salaried officials, clerks, etc.:									
Total number	19		21	104	25	58		2	1
Total salaries	$37,650		$9,404	$102,341	$37,000	$49,259		$1,800	$144
Officers of corporations—									
Number	7		1	11		16			1
Salaries	$20,750		$1,200	$27,100		$21,200			$144
General superintendents, managers, clerks, etc.—									
Total number	12		20	93	25	42		2	
Total salaries	$16,900		$8,204	$75,241	$37,000	$28,059		$1,800	
Men—									
Number	12		13	84	22	39		2	
Salaries	$16,900		$6,860	$71,596	$36,000	$27,059		$1,800	
Women—									
Number			7	9	3	3			
Salaries			$1,344	$3,645	$1,000	$1,000			
Wage-earners, including pieceworkers, and total wages:									
Greatest number employed at any one time during the year	58	9	101	454	104	311	27	8	23
Least number employed at any one time during the year	38	6	31	179	45	154	10	4	15
Average number	48	2	43	244	56	179	7	5	16

[1] Includes establishments distributed as follows: Alabama, 2; Arizona, 1; Florida, 1; Kansas, 2; Mississippi, 2; New Hampshire, 1; New Mexico, 1; Texas, 2; West Virginia, 1; Wisconsin, 2.

TABLE 22.—LIQUORS, VINOUS, BY STATES: 1900—Continued.

	Missouri.	Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Virginia.	All other states.
Wage-earners, including pieceworkers, and total wages—Continued.									
Wages	$22,405	$350	$17,461	$83,464	$9,030	$68,163	$1,700	$1,200	$5,437
Men, 16 years and over—									
Average number	45	2	37	220	39	170	7	5	14
Wages	$21,960	$350	$16,321	$79,473	$6,930	$67,227	$1,700	$1,200	$5,257
Women, 16 years and over—									
Average number	3	.....	6	24	17	8	.....	.....	1
Wages	$445	.....	$1,140	$3,991	$2,100	$756	.....	.....	$120
Children, under 16 years—									
Average number	.....	.....	.....	.....	.....	1	.....	.....	1
Wages	.....	.....	.....	.....	.....	$180	.....	.....	$60

	United States.	California.	Georgia.	Illinois.	Indiana.	Iowa.	Massachusetts.	Michigan.
Average number of wage-earners, including pieceworkers, employed during each month:								
Men, 16 years and over—								
January	837	368	4	3	8	2	5	4
February	827	353	4	3	13	.....	5	4
March	847	352	4	4	13	3	5	4
April	863	331	4	5	15	2	5	4
May	881	330	4	5	15	.....	5	4
June	856	322	4	3	15	.....	5	4
July	836	319	8	2	15	.....	5	4
August	1,019	453	11	2	15	4	5	6
September	1,671	997	8	5	15	7	5	8
October	1,939	1,100	5	4	15	.....	5	14
November	1,564	879	5	3	10	.....	5	4
December	1,038	513	5	2	8	2	5	4
Women, 16 years and over—								
January	22	.....	1	.....	.....	.....	.....	.....
February	23	.....	1	.....	.....	.....	.....	.....
March	28	.....	4	.....	.....	.....	.....	.....
April	37	.....	4	.....	.....	.....	.....	.....
May	84	.....	3	.....	.....	.....	.....	.....
June	82	.....	2	.....	.....	.....	.....	.....
July	59	.....	4	.....	.....	.....	.....	.....
August	55	.....	1	.....	.....	.....	.....	.....
September	127	.....	4	.....	.....	.....	.....	.....
October	145	.....	3	.....	.....	.....	.....	.....
November	52	.....	1	.....	.....	.....	.....	.....
December	25	.....	1	.....	.....	.....	.....	.....
Children, under 16 years—								
January	2	.....	.....	.....	.....	.....	.....	.....
February	2	.....	.....	.....	.....	.....	.....	.....
March	2	.....	.....	.....	.....	.....	.....	.....
April	2	.....	.....	.....	.....	.....	.....	.....
May	2	.....	.....	.....	.....	.....	.....	.....
June	3	.....	.....	1	.....	.....	.....	.....
July	3	.....	.....	1	.....	.....	.....	.....
August	4	.....	.....	1	.....	.....	.....	.....
September	4	.....	.....	1	.....	.....	.....	.....
October	4	.....	.....	1	.....	.....	.....	.....
November	3	.....	.....	1	.....	.....	.....	.....
December	3	.....	.....	1	.....	.....	.....	.....

	Missouri.	Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Virginia.	All other states.[1]
Average number of wage-earners, including pieceworkers, employed during each month:									
Men, 16 years and over—									
January	43	.....	24	181	38	142	2	4	9
February	42	.....	24	183	38	141	2	4	11
March	41	.....	33	191	38	140	2	4	13
April	44	.....	30	199	38	167	2	4	13
May	41	.....	26	225	38	167	2	4	15
June	47	1	26	206	38	165	2	4	14
July	46	7	25	195	38	151	2	4	15
August	42	9	30	195	38	161	22	8	18
September	49	4	52	221	40	213	22	8	17
October	48	.....	79	345	40	240	22	4	18
November	48	.....	72	287	40	192	2	4	13
December	47	.....	24	212	41	161	2	4	8
Women, 16 years and over—									
January	3	.....	5	9	.....	3	.....	.....	1
February	4	.....	5	9	.....	3	.....	.....	1
March	4	.....	5	11	.....	3	.....	.....	1
April	3	.....	6	20	.....	3	.....	.....	1
May	4	.....	5	34	35	2	.....	.....	1
June	4	.....	5	33	35	2	.....	.....	1
July	4	.....	5	10	33	2	.....	.....	1
August	.....	.....	5	14	32	2	.....	.....	1
September	3	.....	11	40	32	36	.....	.....	1
October	3	.....	10	58	34	36	.....	.....	1
November	3	.....	9	36	.....	2	.....	.....	1
December	3	.....	6	11	.....	3	.....	.....	1
Children, under 16 years—									
January	.....	.....	.....	.....	.....	1	.....	.....	1
February	.....	.....	.....	.....	.....	1	.....	.....	1
March	.....	.....	.....	.....	.....	1	.....	.....	1
April	.....	.....	.....	.....	.....	1	.....	.....	1
May	.....	.....	.....	.....	.....	1	.....	.....	1
June	.....	.....	.....	.....	.....	1	.....	.....	1
July	.....	.....	.....	.....	.....	1	.....	.....	1
August	.....	.....	.....	.....	.....	2	.....	.....	1
September	.....	.....	.....	.....	.....	2	.....	.....	1
October	.....	.....	.....	.....	.....	2	.....	.....	1
November	.....	.....	.....	.....	.....	1	.....	.....	1
December	.....	.....	.....	.....	.....	1	.....	.....	1

[1] Includes establishments distributed as follows: Alabama, 2; Arizona, 1; Florida, 1; Kansas, 2; Mississippi, 2; New Hampshire, 1; New Mexico, 1; Texas, 2; West Virginia, 1; Wisconsin, 2.

TABLE 22.—LIQUORS, VINOUS, BY STATES: 1900—Continued.

	United States.	California.	Georgia.	Illinois.	Indiana.	Iowa.	Massachusetts.	Michigan.
Miscellaneous expenses:								
Total	$552,338	$265,487	$3,482	$605	$1,652	$322	$1,589	$1,400
Rent of works	$39,017	$24,059	$120	.....	.....	$125	$190	$360
Taxes, not including internal revenue	$42,476	$24,984	$160	$70	$90	$47	$184	$330
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$470,708	$216,444	$3,202	$535	$1,562	$150	$1,215	$710
Contract work	$137	.....	.....	.....	.....	.....	.....	.....
Materials used:								
Total cost	$3,689,330	$2,526,768	$7,815	$6,174	$6,070	$1,410	$5,791	$6,878
Grapes, pounds	376,503,987	320,398,267	729,000	356,300	426,000	115,388	110,200	410,000
Cost	$2,752,416	$2,160,655	$6,980	$5,504	$4,520	$1,398	$1,671	$4,850
Fuel	$77,688	$62,197	$50	$30	$30	.....	$100	$52
Rent of power and heat	$1,625	$225	.....	.....	.....	.....	.....	.....
Mill supplies	$9,021	$6,210	.....	.....	$10	.....	$2	$25
All other materials	$782,254	$259,267	$785	$640	$1,510	$12	$4,000	$1,951
Freight	$66,326	$38,214	.....	.....	.....	.....	$18	.....
Products:								
Total value	$6,547,310	$3,937,871	$15,875	$13,265	$18,400	$4,119	$19,685	$15,109
Still wines, gallons	23,256,512	19,019,378	69,700	28,100	35,500	9,308	12,586	33,666
Value	$5,680,869	$3,817,582	$15,775	$12,675	$18,400	$3,919	$18,100	$14,519
Effervescing wines, gallons	169,055	8,880	.....	.....	.....	.....	.....	.....
Value	$664,972	$27,200	.....	.....	.....	.....	.....	.....
Brandy, gallons	114,185	60,785	.....	295	.....	.....	.....	.....
Value	$100,651	$36,635	.....	$590	.....	.....	.....	.....
All other products	$98,793	$56,454	.....	.....	.....	$200	$1,585	$99
Custom work	$2,025	.....	$100	.....	.....	.....	.....	$500
Comparison of products:								
Number of establishments reporting for both years	269	127	4	8	3	6	5	5
Value for census year	$5,203,519	$2,910,409	$2,525	$13,265	$18,400	$4,119	$18,725	$15,109
Value for preceding business year	$4,561,378	$2,397,211	$2,600	$14,050	$25,600	$3,910	$13,500	$15,700
Power:								
Number of establishments reporting	158	102	1	1	2	.....	1	1
Total horsepower	3,446	2,402	20	6	4	.....	8	10
Owned:								
Engines:								
Steam, number	172	104	1	1	2	.....	1	1
Horsepower	3,083	2,160	20	6	4	.....	8	10
Gas or gasoline, number	30	28	.....	.....	.....	.....	.....	.....
Horsepower	185	178	.....	.....	.....	.....	.....	.....
Water wheels, number	7	4	.....	.....	.....	.....	.....	.....
Horsepower	61	22	.....	.....	.....	.....	.....	.....

	Missouri.	Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Virginia.	All other states.[1]
Miscellaneous expenses:									
Total	$39,903	$6	$12,500	$132,891	$16,585	$69,718	$961	$2,110	$3,127
Rent of works	$5,313	.....	$850	$1,925	.....	$4,810	$25	.....	$240
Taxes, including internal revenue	$865	$6	$933	$6,172	$113	$7,154	$368	$400	$900
Rent of offices, interest, insurance, and all sundry expenses not hitherto included	$32,725	.....	$10,692	$124,794	$16,172	$57,754	$456	$1,710	$2,587
Contract work	.....	.....	$25	.....	.....	.....	$112	.....	.....
Materials used:									
Total cost	$33,166	$1,077	$63,456	$382,887	$109,695	$428,879	$29,446	$16,413	$13,405
Grapes, pounds	2,581,400	42,600	3,205,600	16,904,642	2,745,500	27,078,190	141,600	396,000	863,300
Cost	$37,929	$852	$43,311	$160,095	$37,580	$266,854	$1,281	$9,420	$9,516
Fuel	$1,115	$65	$480	$4,081	$500	$8,627	.....	$108	$253
Rent of power and heat	.....	.....	.....	$180	.....	$1,220	.....	.....	.....
Mill supplies	$65	.....	$70	$1,113	$50	$1,101	.....	.....	$375
All other materials	$43,057	$160	$18,910	$209,548	$63,523	$143,270	$25,540	$6,885	$3,196
Freight	$1,000	.....	$685	$7,870	$8,042	$7,807	$2,625	.....	$65
Products:									
Total value	$199,130	$2,981	$241,777	$942,548	$224,980	$801,684	$53,800	$29,970	$26,116
Still wines, gallons	140,177	3,550	218,170	1,167,076	301,625	2,079,716	51,800	38,800	47,300
Value	$55,780	$2,835	$235,377	$479,812	$199,975	$698,965	$53,800	$28,200	$25,155
Effervescing wines, gallons	29,400	.....	1,440	113,435	.....	15,600	.....	300	.....
Value	$143,100	.....	$5,400	$449,472	.....	$39,000	.....	$800	.....
Brandy, gallons	.....	.....	.....	15,623	.....	36,592	.....	400	490
Value	.....	.....	.....	$9,110	.....	$52,685	.....	$970	$661
All other products	$250	$146	$1,000	$4,129	$25,005	$9,734	.....	.....	$200
Custom work	.....	.....	.....	$25	.....	$1,300	.....	.....	$100
Comparison of products:									
Number of establishments reporting for both years	6	3	9	30	2	45	1	3	12
Value for census year	$198,450	$2,981	$235,385	$870,012	$179,275	$633,898	$50,000	$26,850	$24,116
Value for preceding business year	$225,800	$2,750	$236,100	$699,272	$152,000	$690,300	$30,000	$29,700	$22,880
Power:									
Number of establishments reporting	2	.....	2	18	1	26	.....	.....	1
Total horsepower	46	.....	20	395	70	459	.....	.....	6
Owned—									
Engines—									
Steam, number	5	.....	2	22	1	31	.....	.....	1
Horsepower	46	.....	20	385	20	398	.....	.....	6
Gas or gasoline, number	.....	.....	.....	1	.....	1	.....	.....	.....
Horsepower	.....	.....	.....	1	.....	6	.....	.....	.....
Water wheels, number	.....	.....	.....	1	2	.....	.....	.....	.....
Horsepower	.....	.....	.....	4	35	.....	.....	.....	.....

[1] Includes establishments distributed as follows: Alabama, 2; Arizona, 1; Florida, 1; Kansas, 2; Mississippi, 2; New Hampshire, 1; New Mexico, 1; Texas, 2; West Virginia, 1; Wisconsin, 2.

TABLE 22.—LIQUORS, VINOUS, BY STATES: 1900—Continued.

	United States.	California.	Georgia.	Illinois.	Indiana.	Iowa.	Massachusetts.	Michigan.
Power—Continued.								
Owned—								
Electric motors, number	5	2	.....	.....	.....	.....	.....	.....
Horsepower	30	15	.....	.....	.....	.....	.....	.....
Rented—								
Electric, horsepower	87	27	.....	.....	.....	.....	.....	.....
Furnished to other establishments, horsepower	30	30	.....	.....	.....	.....	.....	.....
Establishments classified by number of persons employed, not including proprietors and firm members:								
Total number of establishments	359	187	6	8	3	6	6	5
No employees	36	12	.....	1	.....	.....	4	1
Under 5	183	100	5	6	2	6	2	1
5 to 20	105	62	1	.....	1	.....	.....	3
21 to 50	30	11	.....	1	.....	.....	.....	.....
51 to 100	5	2	.....	.....	.....	.....	.....	.....

	Missouri.	Nebraska.	New Jersey.	New York.	North Carolina.	Ohio.	Pennsylvania.	Virginia.	All other states.[1]
Power—Continued.									
Owned—									
Electric motors, number	.....	.....	.....	.....	3	.....	.....	.....	.....
Horsepower	.....	.....	.....	.....	15	.....	.....	.....	.....
Rented—									
Electric, horsepower	.....	.....	.....	5	.....	55	.....	.....	.....
Furnished to other establishments, horsepower	.....	.....	.....	.....	.....	.....	.....	.....	.....
Establishments classified by number of persons employed, not including proprietors and firm members:									
Total number of establishments	7	3	11	38	5	52	3	4	15
No employees	.....	1	3	2	2	1	.....	3	6
Under 5	5	1	2	8	1	34	1	1	8
5 to 20	.....	1	4	18	.....	13	1	.....	1
21 to 50	2	.....	1	9	1	4	1	.....	.....
51 to 100	.....	.....	1	1	1	.....	.....	.....	.....

[1] Includes establishments distributed as follows: Alabama, 2; Arizona, 1; Florida, 1; Kansas, 2; Mississippi, 2; New Hampshire, 1; New Mexico, 1; Texas, 2; West Virginia, 1; Wisconsin, 2.

O

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 181. WASHINGTON, D. C. June 4, 1902.

AGRICULTURE.

GEORGIA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of Georgia, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of Georgia, June 1, 1900, numbered 224,691, and were valued at $183,370,120. Of this amount, $44,854,690, or 24.5 per cent, represents the value of buildings, and $138,515,430, or 75.5 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was $9,804,010, and of live stock, $35,200,507. These values, added to that of farms, give the "total value of farm property." For Georgia this value in 1900 was $228,374,637.

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $104,304,476, of which amount, $17,959,133, or 17.2 per cent, represents the value of animal products, and $86,345,343, or 82.8 per cent, the value of crops, including forest products cut or produced on farms. The "total value of farm products" for 1899 exceeds that for 1889 by $20,932,994, or 25.1 per cent.

The "gross farm income" is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was $12,158,800, leaving $92,145,676 as the gross farm income for that year. The ratio which this amount bears to the "total value of farm property" is referred to in this bulletin as the "percentage of gross income upon investment." For Georgia in 1899 it was 40.3 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States. The present publication is designed to present a summarized advance statement for Georgia.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

CP 15M

AGRICULTURE IN GEORGIA.

GENERAL STATISTICS.

Georgia has a total land area of 58,980 square miles, or 37,747,200 acres, of which 26,392,057 acres, or 69.9 per cent, are included in farms.

The surface presents five physical divisions. The swamp region, which extends from the Savannah River 100 miles south along the coast and 25 miles inland, is a rich, alluvial delta, bordered on the coast line by islands separated from the mainland by numerous sounds and creeks.

Back of the swamp region the land rises abruptly to a terrace formation 100 feet in height, which extends inland for about 20 miles, where another equally high terrace appears. This second table-land extends to the middle of the state, and together with the first terrace, constitutes what is known as the "pine barrens." From this division to the Chattahoochee River the surface is broken by valleys and foothills.

That part of the state lying west and north of the Chattahoochee River is traversed by parallel mountain ranges with outlying spurs, and forms a watershed which determines the direction of the rivers flowing into the Gulf of Mexico and the Atlantic Ocean. The elevation of this division of the state varies from 2,500 to 4,000 feet above sea level.

The soil of the greater part of the state is fertile, and may be highly developed under proper cultivation. Its several varieties may be classified as red and brown loams, gray gravelly lands, and the flatwood soil of the north. The islands are very fertile, and along the coast the soil is alluvial and the vegetation semitropical. The interior of the state is well adapted to fruit growing. The state is well watered by numerous streams, and has a mean annual rainfall of 48 inches.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	224,691	26,392,057	10,615,644	15,776,413	117.5	40.2
1890	171,071	25,200,485	9,582,866	15,617,569	147.3	38.0
1880	138,626	26,043,282	8,204,720	17,838,562	187.9	31.5
1870	69,956	23,647,941	6,831,856	16,816,085	338.0	28.9
1860	62,003	26,650,490	8,062,758	18,587,732	429.8	30.2
1850	51,759	22,821,379	6,378,479	16,442,900	440.9	27.9

The number of farms reported, June 1, 1900, was over four times as great as in 1850, and 31.3 per cent greater than in 1890. The total acreage has increased slowly, the gain since 1850 being but 15.6 per cent, and that in the last decade only 4.7 per cent; the area of improved land, however, has increased steadily since 1870, and constituted a larger percentage of the total area in 1900 than ever before. The decrease in the average size of farms, together with this increase in the percentage of improved acreage, indicates a progressive division of farm holdings and a more complete utilization of the soil.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[1]
1900	$228,374,637	$183,370,120	$9,804,010	$35,200,507	$104,304,476
1890	189,249,198	152,006,230	5,764,978	31,477,990	83,371,482
1880	143,158,308	111,910,540	5,317,416	25,930,352	67,028,929
1870[2]	129,330,486	94,559,468	4,614,701	30,156,317	[3]80,890,228
1860	202,289,924	157,072,803	6,844,387	38,372,734	----------
1850	127,376,011	95,753,445	5,894,150	25,728,416	----------

[1] For year preceding that designated.
[2] Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years, they must be diminished one-fifth.
[3] Includes betterments and additions to live stock.

This table shows the remarkable growth of agriculture in the decade from 1850 to 1860, the disastrous effects of the Civil War, and the subsequent recovery of the state, which has now more than regained its former position in all classes of farm property except live stock.

The progress made during the last decade is especially noteworthy, the gain in the total value of farm property being $39,125,439, or 20.7 per cent. In the value of land, buildings, and improvements the increase was $31,363,890, or 20.6 per cent; in implements and machinery it was $4,039,032, or 70.1 per cent; and in live stock it was $3,722,517, or 11.8 per cent. Of the total value of farm property in 1900, land, buildings, and improvements represented 80.3 per cent; implements and machinery, 4.3 per cent; and live stock, 15.4 per cent. The value of farm products in 1899 was 25.1 per cent greater than the value reported for 1889. A portion of this increase, and of that shown for implements and machinery, is doubtless the result of a more detailed enumeration in 1900 than in previous census years.

COUNTY STATISTICS.

Table 3 presents the general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH GROSS INCOME (PRODUCTS OF 1899 NOT FED TO LIVE STOCK), AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.					EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.	Gross income (products of 1899 not fed to live stock).	Labor.	Fertilizers.
The State	224,691	215,855	26,392,057	10,615,644	$138,515,480	$44,854,690	$9,804,010	$35,209,507	$92,145,676	$7,244,520	$5,738,520
Appling	1,323	1,292	340,742	44,415	620,680	247,130	46,830	324,770	542,130	21,600	32,450
Baker	994	963	102,554	59,452	218,090	90,050	30,770	147,113	325,688	31,370	11,020
Baldwin	1,355	1,309	143,413	71,537	737,300	275,350	66,960	209,407	614,440	61,070	27,040
Banks	1,726	1,611	182,121	55,423	892,180	236,690	55,050	199,252	577,921	16,800	43,400
Bartow	2,134	2,033	208,602	103,766	1,906,870	582,610	136,230	398,100	997,842	63,630	57,150
Berrien	1,852	1,814	413,718	71,205	1,100,910	433,450	85,530	407,313	926,504	49,510	58,320
Bibb	1,250	1,208	131,668	70,984	1,636,040	529,730	85,630	244,804	647,293	87,430	34,700
Brooks	1,823	1,780	288,055	107,695	1,339,410	422,150	95,430	366,093	1,032,018	104,430	57,470
Bryan	675	672	189,882	29,083	314,490	149,530	30,750	150,683	297,770	25,850	10,350
Bulloch	2,220	2,179	438,694	107,943	1,967,450	718,960	123,750	498,350	1,208,908	89,040	96,710
Burke	4,169	4,104	412,270	253,815	2,120,590	737,560	232,660	602,849	2,816,715	307,660	161,360
Butts	1,517	1,453	107,530	61,814	982,100	332,190	61,320	203,518	642,562	33,700	41,140
Calhoun	1,282	1,271	113,858	60,883	646,650	177,350	42,670	166,342	529,467	79,440	36,750
Camden	876	852	182,973	14,404	899,430	231,210	32,560	168,094	216,390	31,960	1,260
Campbell	1,269	1,173	119,865	55,193	911,720	244,300	52,850	106,717	529,456	23,290	31,300
Carroll	3,699	3,590	265,853	141,802	2,146,450	690,840	157,360	546,416	1,560,596	42,660	111,650
Catoosa	952	895	86,527	43,514	614,640	182,890	47,080	159,960	244,471	8,790	9,250
Charlton	416	414	161,051	9,688	114,810	59,100	11,550	119,095	128,261	3,700	2,670
Chatham	640	562	74,976	17,681	1,409,390	263,450	48,770	147,446	455,127	69,780	22,240
Chattahoochee	615	608	135,423	41,506	423,010	105,780	23,800	106,384	320,984	43,290	15,620
Chattooga	1,625	1,548	153,580	65,028	1,049,530	330,090	66,900	297,945	567,154	19,910	20,460
Cherokee	2,292	2,229	203,699	67,711	1,079,570	300,750	76,320	295,724	600,709	11,890	28,550
Clarke	889	812	61,310	38,567	627,460	271,240	48,460	110,142	277,103	33,800	27,130
Clay	1,049	998	117,154	68,932	668,810	192,690	40,010	164,272	485,852	51,110	31,180
Clayton	1,280	1,248	87,560	47,636	985,260	382,020	58,780	170,296	585,258	34,190	35,710
Clinch	642	613	260,618	28,860	294,680	97,680	27,040	218,847	238,909	14,370	9,460
Cobb	2,684	2,571	192,673	98,468	1,792,860	676,060	134,620	377,193	1,018,151	46,570	53,840
Coffee	1,257	1,224	494,029	55,328	898,040	261,830	55,160	340,750	523,454	37,920	47,660
Colquitt	1,169	1,155	219,650	41,050	722,330	183,930	48,370	251,264	452,973	17,290	25,110
Columbia	1,429	1,363	136,496	68,910	628,360	280,590	49,860	181,759	546,720	59,970	25,660
Coweta	2,855	2,750	219,294	133,563	1,804,520	593,420	124,780	411,029	1,391,663	188,350	108,860
Crawford	1,358	1,274	161,250	79,656	688,740	242,790	54,080	178,845	569,082	48,430	19,920
Dade	586	587	52,308	19,741	381,950	116,820	21,050	95,668	121,883	3,310	700
Dawson	976	950	111,545	34,203	408,670	111,670	24,310	112,695	247,037	5,090	7,820
Decatur	3,082	3,020	414,260	148,040	1,860,620	521,800	129,770	584,584	995,331	112,870	65,840
Dekalb	2,274	2,170	150,651	74,948	2,538,000	730,570	129,020	352,438	845,935	52,770	40,480
Dodge	1,567	1,504	235,508	81,414	1,091,750	288,030	68,940	295,871	669,470	56,450	55,310
Dooly	2,225	2,168	307,795	162,303	1,746,350	454,500	130,530	429,619	1,225,252	140,920	80,160
Dougherty	1,020	1,014	130,934	80,517	571,960	142,360	52,080	160,918	540,050	54,990	28,170
Douglas	1,290	1,244	96,073	45,179	696,880	238,050	53,600	153,113	503,899	19,110	27,870
Early	1,717	1,656	158,697	84,919	684,970	216,240	50,800	252,885	618,257	32,040	30,610
Echols	267	266	127,331	15,953	166,550	56,910	18,240	86,520	122,595	9,160	3,800
Effingham	753	727	193,506	28,260	311,240	180,000	30,270	143,444	228,810	16,970	16,490
Elbert	2,572	2,445	201,496	105,579	1,448,480	453,300	100,450	278,925	811,545	69,860	69,270
Emanuel	2,232	2,204	439,135	115,461	1,702,230	651,170	108,800	473,186	1,117,494	65,970	81,320
Fannin	1,714	1,616	193,475	48,551	492,560	132,520	25,870	184,831	275,632	6,930	750
Fayette	1,545	1,475	118,950	66,285	971,790	265,710	59,180	189,891	699,528	18,490	43,770
Floyd	2,632	2,582	246,508	110,420	2,240,560	646,530	134,420	490,317	1,154,066	63,110	42,500
Forsyth	1,835	1,790	141,450	62,249	741,470	240,160	58,380	221,007	627,373	7,370	38,150
Franklin	2,849	2,665	184,936	90,380	1,476,020	418,520	91,190	314,696	901,046	27,670	81,140
Fulton	1,175	1,137	72,221	30,185	2,566,110	669,050	78,970	227,888	628,252	71,310	13,580
Gilmer	1,655	1,627	218,455	44,801	526,760	132,810	32,170	202,593	379,711	6,380	3,140
Glascock	624	593	73,358	36,619	301,640	130,160	25,380	81,343	241,311	18,190	18,380
Glynn	225	220	77,933	5,593	264,470	112,470	13,200	67,334	100,150	27,360	930
Gordon	1,903	1,847	194,516	87,903	1,897,050	405,080	101,110	330,826	663,032	21,880	24,230
Greene	2,111	2,039	210,556	91,666	1,134,850	410,860	89,400	265,425	692,895	61,990	40,270
Gwinnett	3,442	3,245	283,362	147,256	1,920,550	624,510	138,770	440,964	1,294,105	80,690	85,940
Habersham	1,461	1,409	188,013	46,691	740,520	259,070	44,070	156,984	303,347	8,710	8,550
Hall	2,489	2,436	231,147	91,577	1,267,770	363,550	83,250	308,157	728,898	17,940	46,300
Hancock	2,215	2,125	248,470	133,507	1,139,910	391,880	96,570	343,474	926,894	69,480	53,640
Haralson	1,517	1,435	128,226	48,921	749,280	217,390	49,340	170,066	455,363	12,830	22,040
Harris	2,592	2,510	251,780	110,468	1,347,900	420,280	93,150	336,260	1,098,651	101,570	69,890
Hart	2,089	2,016	145,883	76,616	1,105,820	311,700	79,260	238,690	734,099	17,360	76,570
Heard	1,681	1,649	149,191	78,652	753,820	235,080	72,550	242,644	790,752	22,970	50,870
Henry	2,471	2,354	186,847	108,711	1,820,170	569,820	126,890	365,816	1,209,400	75,620	82,530
Houston	1,972	1,881	270,389	157,724	1,748,340	568,780	123,820	345,628	1,157,248	196,920	75,060
Irwin	1,321	1,211	311,964	52,041	1,241,500	328,580	89,470	275,827	542,078	37,580	36,350
Jackson	3,185	3,110	244,400	138,488	1,935,760	692,700	132,230	436,772	1,281,507	61,740	100,990
Jasper	2,181	1,952	178,823	94,037	1,013,780	373,630	79,390	245,389	772,693	77,390	50,140
Jefferson	2,114	1,924	278,725	140,225	1,288,860	489,430	103,670	506,284	1,017,383	126,820	67,150
Johnson	1,384	1,346	149,820	75,281	812,710	284,930	54,180	228,701	681,765	38,740	49,640
Jones	1,472	1,445	193,546	81,826	890,040	311,510	65,010	254,502	685,508	64,650	28,120
Laurens	2,900	2,810	330,721	154,164	1,843,460	552,180	130,990	526,168	1,241,106	87,070	96,120
Lee	1,329	1,281	170,433	100,489	668,610	221,620	72,640	219,668	625,723	95,450	35,070
Liberty	1,710	1,683	264,647	41,813	528,880	267,570	49,810	271,089	360,451	15,110	12,400
Lincoln	1,029	970	121,310	44,200	442,740	195,810	42,430	139,886	344,420	48,750	23,180
Lowndes	1,768	1,672	268,691	77,967	771,800	230,650	64,730	315,213	878,829	56,190	65,020
Lumpkin	1,012	979	109,826	28,468	276,890	87,400	17,970	103,184	196,365	4,320	2,840
McDuffie	1,218	953	125,550	65,963	550,000	238,990	45,280	153,764	413,585	30,120	31,370
McIntosh	406	374	55,607	7,667	220,700	99,180	13,780	71,716	113,598	13,060	750

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH GROSS INCOME (PRODUCTS OF 1899 NOT FED TO LIVE STOCK), AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Gross income (products of 1899 not fed to live stock).	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
Macon	1,332	1,258	175,842	94,891	$1,040,740	$282,050	$72,670	$228,440	$798,331	$98,590	$59,620
Madison	2,148	2,003	160,436	78,147	1,088,120	367,030	83,210	238,165	691,247	21,220	66,040
Marion	1,262	1,228	186,053	103,524	707,450	254,010	67,560	202,732	647,383	52,720	30,010
Meriwether	2,939	2,872	260,097	144,939	2,089,900	657,730	126,280	449,261	1,554,938	105,310	105,550
Miller	715	699	118,573	40,463	279,000	86,140	31,630	139,093	335,802	18,170	19,140
Milton	1,104	1,052	82,823	38,666	551,720	172,110	48,840	141,116	419,713	10,270	32,420
Mitchell	1,785	1,694	227,137	111,321	1,060,950	320,720	95,800	342,259	729,082	42,580	40,460
Monroe	2,518	2,416	269,405	137,487	1,670,920	585,850	118,600	375,561	1,083,603	125,160	54,180
Montgomery	1,560	1,524	282,819	64,724	1,125,170	415,830	76,700	386,129	711,141	46,440	42,090
Morgan	1,989	1,946	177,952	100,283	1,283,110	430,980	115,870	267,004	846,286	73,790	65,820
Murray	1,158	1,127	151,919	52,196	672,620	190,890	50,320	209,783	347,412	8,460	9,900
Muscogee	1,020	993	95,836	49,353	997,620	379,040	66,250	150,332	508,873	61,470	28,070
Newton	2,124	2,019	150,636	90,337	1,216,470	382,850	77,960	268,172	868,278	43,320	69,660
Oconee	1,171	1,127	102,524	53,314	741,990	319,080	57,330	169,120	395,748	45,440	37,910
Oglethorpe	2,488	2,367	239,326	119,163	1,717,800	503,350	106,890	336,835	1,006,513	128,240	83,390
Paulding	2,159	2,041	168,988	81,418	932,360	260,650	76,870	250,898	699,363	12,320	43,930
Pickens	1,145	1,110	128,611	31,881	406,420	118,620	29,770	121,905	237,745	2,470	6,080
Pierce	861	848	258,265	27,997	551,430	226,830	42,630	247,043	342,966	17,260	21,210
Pike	1,940	1,857	176,601	105,881	1,364,990	515,840	94,900	308,918	899,482	92,150	53,090
Polk	1,775	1,669	140,083	69,179	1,117,350	381,700	82,830	258,318	707,652	29,000	38,310
Pulaski	1,984	1,887	246,204	131,339	1,697,030	467,810	94,070	368,337	942,645	160,880	68,300
Putnam	1,546	1,488	189,029	94,201	981,330	338,970	94,500	243,045	571,590	70,870	27,300
Quitman	613	599	80,373	45,284	355,040	114,780	17,650	94,805	267,890	16,300	12,250
Rabun	1,067	1,026	196,096	30,351	333,210	81,390	20,110	128,906	208,885	4,590	1,980
Randolph	2,219	2,104	214,135	130,759	1,275,970	341,100	71,440	312,100	982,300	63,890	82,980
Richmond	1,053	1,006	115,883	53,335	1,008,750	408,580	79,230	179,645	542,998	90,340	30,550
Rockdale	1,082	921	78,300	46,840	622,390	212,370	43,020	122,473	399,584	20,910	29,130
Schley	802	759	92,974	53,844	390,430	125,600	26,960	103,261	352,041	27,140	26,980
Screven	2,275	2,212	352,256	132,011	1,474,220	501,370	130,970	398,808	1,131,287	95,810	78,560
Spalding	1,272	1,201	119,187	71,440	1,024,450	386,440	75,070	208,256	553,224	65,280	41,670
Stewart	1,751	1,680	243,921	114,619	1,209,060	318,690	76,220	289,308	926,853	165,670	46,970
Sumter	2,882	2,134	286,096	161,308	1,992,920	591,460	154,410	406,949	1,392,001	153,450	91,300
Talbot	1,398	1,331	184,418	79,768	696,800	272,360	58,440	205,931	556,739	50,670	23,730
Taliaferro	1,129	1,026	88,273	47,813	469,220	170,590	39,850	186,369	331,555	27,040	19,500
Tattnall	2,086	2,037	393,726	76,100	1,885,750	535,760	93,240	468,634	944,892	57,580	73,410
Taylor	1,045	1,008	173,394	64,949	622,330	168,710	47,330	165,977	473,296	34,510	31,330
Telfair	881	805	161,902	36,288	498,660	187,740	32,170	220,312	510,420	16,890	18,820
Terrell	2,189	2,162	189,897	123,710	1,237,820	452,320	86,380	297,914	1,171,948	164,050	101,340
Thomas	3,183	3,137	342,336	150,124	1,621,420	563,890	131,490	488,814	1,127,342	92,880	57,860
Towns	665	654	80,016	24,385	205,880	60,690	14,950	86,580	139,331	250	100
Troup	2,324	2,225	225,522	116,810	1,693,370	482,690	101,150	356,367	1,189,898	96,540	75,570
Twiggs	1,166	1,146	135,518	67,528	654,850	206,600	39,410	151,622	486,422	42,410	25,200
Union	1,444	1,415	171,533	41,151	409,290	117,560	27,200	167,529	243,216	2,910	880
Upson	1,472	1,349	171,735	77,367	907,220	286,900	71,070	216,427	575,043	52,660	30,200
Walker	2,038	1,988	195,598	87,945	1,264,390	412,060	83,480	374,617	628,256	19,430	21,480
Walton	2,737	2,629	208,463	119,969	1,528,080	515,470	103,620	344,217	1,097,829	83,270	100,330
Ware	667	653	140,131	19,939	353,950	148,980	31,820	186,389	243,890	13,820	10,750
Warren	1,377	1,335	142,328	72,285	787,400	300,680	52,980	199,627	626,272	72,450	39,580
Washington	3,419	3,267	354,745	215,598	1,945,790	611,980	140,200	492,082	1,843,163	147,470	126,050
Wayne	934	917	311,951	27,204	492,580	199,750	32,600	244,144	348,498	11,150	16,120
Webster	1,005	971	113,415	57,439	454,640	148,820	34,990	137,573	372,089	26,650	31,980
White	1,008	978	120,954	28,961	394,670	117,210	24,310	124,727	211,409	6,920	4,770
Whitfield	1,526	1,467	154,243	69,488	895,080	314,110	79,820	262,470	547,056	16,920	15,970
Wilcox	897	875	177,521	44,021	665,260	179,340	37,460	198,424	375,994	25,680	24,960
Wilkes	2,321	2,270	272,584	120,170	1,999,040	533,920	111,470	356,330	1,007,713	125,820	71,000
Wilkinson	1,642	1,568	231,613	102,966	803,150	325,090	66,040	287,285	721,108	41,780	38,680
Worth	1,961	1,936	307,110	98,658	1,426,760	390,090	92,390	386,700	940,668	64,280	53,840

The number of farms increased in the last decade in nearly all counties, Banks, Camden, Dodge, Johnson, Laurens, Marion, Telfair, and Terrell, each reporting more than twice as many in 1900 as in 1890. Baker, Chatham, Echols, Glynn, Putnam, and Talbot show decreases. Increases in the total farm acreage are shown for more than one-half of the counties, the decreases being mostly in the western part of the state. The decrease in improved acreage since 1890, reported for a number of counties, is largely due to a more strict interpretation of the term "improved land" by the Twelfth Census than by preceding censuses. The average size of farms for the state is 117.5 acres, the farms of the largest size being located in the southeastern counties, where corn and sea-island cotton are cultivated most extensively.

In a few counties the average value of farms exceeds $2,000, but, in general, there are no marked variations from the state average of $816.10. Four-fifths of the counties show gains over the values reported in 1890.

The average value of implements and machinery is $43.63 per farm, being lowest as a rule in the counties where corn is the leading crop. Notwithstanding the decreases shown in a number of counties, the total value of live stock reported in 1900 is greater than in 1890.

The expenditures for labor in 1899 varied greatly in different sections of the state. In many counties but little

cash is expended for labor, the farmers, as a rule, exchanging work. The total expenditure for fertilizers in 1899 was slightly greater than in 1889, but the average per farm, $26, was considerably less.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. Tenants are divided into two groups: "Cash tenants," who pay a rental in cash or in a stated amount of labor or farm produce, and "share tenants," who pay as rental a stated share of the products.

In Table 5 the tenure of farms in 1900 is given by race of farmer, and "farms operated by owners" are subdivided in Table 5 into groups designated as "owners," "part owners," "owners and tenants," and "managers." These groups comprise respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	224,691	90,131	58,750	75,810	40.1	26.2	33.7
1890	171,071	79,477	29,413	62,181	46.5	17.2	36.3
1880	138,626	76,451	18,557	43,618	55.1	13.4	31.5

[1]Including "part owners," "owners and tenants" and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	224,691	81,603	6,033	893	1,602	58,750	75,810
White	141,865	72,056	4,271	827	1,394	24,022	39,295
Colored[1]	82,826	9,547	1,762	66	208	34,728	36,515

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	36.3	2.7	0.4	0.7	26.2	33.7
White	100.0	50.8	3.0	0.6	1.0	16.9	27.7
Colored[1]	100.0	11.5	2.1	0.1	0.3	41.9	44.1

[1]Including 3 Indians and 1 Chinese.

In the last two decades, the total number of farms has increased 86,065, or 62.1 per cent. During the same time the number of farms operated by owners increased 13,680, or 17.9 per cent; by cash tenants, 40,193, or 216.6 per cent; and by share tenants, 32,192, or 73.8 per cent. These increases have been continuous through both decades, and except in the case of share tenants, they have been at a more rapid rate since 1890 than during the ten years preceding. The percentage of owners has steadily decreased, that of cash tenants has increased, while that of share tenants increased between 1880 and 1890, but decreased between 1890 and 1900.

In 1900 nearly sixty per cent of the entire number of farms, and three-fourths of all the cotton farms in the state, were operated by tenants. In the extreme northern and southern parts of the state, a majority of the farms were operated by owners, while in the central portion tenant-operated farms predominated.

Of the total number of farms, 63.1 per cent were operated by white farmers and 36.9 per cent by colored farmers. Of the white farmers 54.4 per cent owned all or part of the farms they operated, and 45.6 per cent operated farms owned by others. For the colored farmers, the corresponding percentages were 13.7 and 86.3.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number of farms conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,691	117.5	26,392,057	100.0	$228,374,637	100.0
White farmers	141,865	147.4	20,917,083	79.3	179,665,683	78.7
Colored farmers[1]	82,826	66.1	5,474,974	20.7	48,708,954	21.3
Owners	81,603	179.8	14,672,579	55.6	116,497,334	51.0
Part owners	6,033	120.7	727,898	2.8	7,261,497	3.2
Owners and tenants	893	164.5	146,930	0.6	1,279,711	0.6
Managers	1,602	496.4	795,177	3.0	8,330,731	3.6
Cash tenants	58,750	89.6	5,266,660	19.9	47,882,730	21.0
Share tenants	75,810	63.1	4,782,813	18.1	47,122,634	20.6

[1]Including 3 Indians and 1 Chinese.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$616	$199	$44	$157	$410	40.3
White farmers	747	268	57	194	458	36.2
Colored farmers[1]	393	82	20	93	328	55.8
Owners	800	328	71	229	483	33.8
Part owners	702	268	56	183	441	36.6
Owners and tenants	812	319	67	235	462	32.2
Managers	3,418	1,023	224	535	1,318	25.4
Cash tenants	536	129	30	120	384	47.1
Share tenants	414	92	20	96	329	53.0

[1] Including 8 Indians and 1 Chinese.

More than one-third of the farms of the state, comprising about one-fifth of the total farm acreage and a little over one-fifth of the total value of all farm property, were operated by colored farmers in 1899. As shown in Table 5, however, but 11.5 per cent of the colored farmers own the farms which they operate and the value of their holdings constitutes only about one-thirtieth of the total value of the farm property of the state.

The low average value of the farm property of negroes is due to the small average size of their farms, which is but 66.1 acres as compared with 147.1 acres for white farmers. The average value per acre of their land, exclusive of buildings, however, is higher than for the farms of white farmers, and it appears from Table 7 that they obtained in 1899 a much higher percentage of gross income on their investment in farm property than did white farmers.

These apparent anomalies are traceable, in general, to certain distinguishing racial characteristics, and, in particular, to the contract system under which nearly all negro tenants lease their lands. The first point relates to the recognized tendency on the part of the more progressive white farmer to constantly improve his property, especially his buildings and fences, thus adding to its market value, although not materially increasing its productive capacity per acre. The colored farmer, on the other hand, adds comparatively little to his fixed capital in the way of improvements and his income per acre naturally represents a higher percentage of the capital invested than in the case of the white farmer. In addition, under the prevailing contract system, the negroes lease small tracts of the best and most highly improved land of the plantations which they cultivate under the supervision of the land owner or his manager. This land appears in the census reports as farms of negro tenant. Unimproved and less productive tracts of land constitute the greater part of the farms of the white plantation owners as reported by the census. The white landlord commonly owns the greater part of the working animals and most of the implements and machinery used by his colored tenants. These, being kept for the most part on the farm where the landlord resides, were reported as part of his property, while the products obtained through their use were reported under the names of the tenants.

The above considerations, it is believed, not only explain the high per cent of gross income shown for the negro farmers but also the low rates shown for managers and owners as compared with those given for cash tenants and share tenants.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,691	117.5	26,392,057	100.0	$228,374,637	100.0
Under 3 acres	451	2.0	910	(1)	264,053	0.1
3 to 9 acres	5,604	6.2	34,554	0.1	2,841,044	1.0
10 to 19 acres	13,301	14.2	188,221	0.7	5,881,222	2.4
20 to 49 acres	73,408	33.0	2,421,384	9.2	33,399,879	14.6
50 to 99 acres	52,251	66.5	3,472,677	13.2	41,395,933	18.1
100 to 174 acres	41,661	123.6	5,150,210	19.5	48,937,881	21.5
175 to 259 acres	18,646	210.2	3,919,027	14.9	30,876,011	13.5
260 to 499 acres	12,793	355.7	4,550,080	17.2	30,356,255	13.3
500 to 999 acres	4,718	651.6	3,074,445	11.6	18,696,494	8.2
1,000 acres and over	1,858	1,927.1	3,580,549	13.6	16,725,265	7.3

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$616	$199	$44	$157	$410	40.3
Under 3 acres	273	243	16	55	190	33.4
3 to 9 acres	196	156	16	50	119	26.5
10 to 19 acres	217	112	16	60	159	39.4
20 to 49 acres	266	86	19	84	283	62.1
50 to 99 acres	471	152	35	134	396	50.0
100 to 174 acres	710	232	51	182	475	40.5
175 to 259 acres	1,011	326	72	247	574	34.6
260 to 499 acres	1,447	476	105	345	711	30.0
500 to 999 acres	2,516	744	174	529	1,025	25.9
1,000 acres and over	6,170	1,508	349	975	1,829	20.3

The group of farms of from 20 to 49 acres each contains a larger number of farms than any other class, but the group containing 100 to 174 acres each constitutes the largest percentage of the total acreage and of the total value of farm property.

With a few exceptions, the average values of all forms of farm property increase with the size of the farms, while the average gross income per acre shows a corresponding decrease. For the group of farms of less than 3 acres each, all values are comparatively high, as this class contains 19 of the 33 florists' establishments of the state, and many market gardens, poultry farms, and city dairies. The incomes from these industries depend less upon the area of land used than upon the amount of capital invested, and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, $94.18; 3 to 9 acres, $19.29; 10 to 19 acres, $11.25; 20 to 49 acres, $8.57; 50 to 99 acres, $5.96; 100 to 174 acres, $3.85; 175 to 259 acres, $2.73; 260 to 499 acres, $2.00; 500 to 999 acres, $1.57; and 1,000 acres and over, $0.95.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the value of products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive their principal income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,691	117.5	26,392,057	100.0	$228,374,637	100.0
Hay and grain	17,995	119.6	2,152,966	8.2	19,235,046	8.4
Vegetables	3,355	127.6	428,001	1.6	4,550,760	2.0
Fruit	723	83.6	60,412	0.2	835,873	0.4
Live stock	10,706	195.7	2,095,434	8.0	13,736,872	6.0
Dairy produce	1,353	114.3	154,664	0.6	4,014,777	1.8
Tobacco	186	189.2	35,194	0.1	307,161	0.1
Cotton	160,865	102.6	16,501,673	62.5	151,372,672	66.3
Rice	624	185.5	115,768	0.5	816,906	0.3
Sugar	165	210.3	34,705	0.1	185,306	0.1
Flowers and plants	33	5.7	188	(1)	312,319	0.1
Nursery products	29	170.0	4,929	(1)	182,800	0.1
Miscellaneous	28,657	167.8	4,808,123	18.2	32,824,145	14.4

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$616	$199	$44	$157	$410	40.3
Hay and grain	681	205	43	140	282	26.4
Vegetables	859	286	47	164	392	28.9
Fruit	715	294	41	106	331	28.6
Live stock	680	290	57	256	323	25.2
Dairy produce	1,788	628	91	460	776	26.1
Tobacco	936	418	67	230	798	48.3
Cotton	581	176	41	144	431	45.9
Rice	885	280	65	129	399	30.5
Sugar	541	262	82	238	582	51.8
Flowers and plants	5,388	3,850	170	56	4,005	42.3
Nursery products	4,022	1,924	137	220	5,458	86.6
Miscellaneous	648	257	51	189	377	32.9

For the several classes of farms the average values per acre of products not fed to live stock are as follows: Farms whose operators derive their principal income from flowers and plants, $703.03; nursery products, $32.11; dairy products, $6.79; tobacco, $4.22; cotton, $4.21; fruit, $3.96; vegetables, $3.07; sugar, $2.76; hay and grain, $2.36; miscellaneous, $2.25; rice, $2.15; and live stock, $1.65. In computing these averages the total area of the farms of each group is used and not the acreage devoted to the crop from which the principal income is derived.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that in computing gross income no deduction is made for expenditures. For florists' establishments, nurseries, and market gardens, the average expenditure for such items as labor and fertilizers represents a far larger percentage of the gross income than in the case of "hay and grain," "live-stock," or "miscellaneous" farms. Were it possible to present the average net incomes, the variations shown would be much smaller.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,691	117.5	26,392,057	100.0	$228,374,637	100.0
$0	1,809	58.7	106,179	0.4	914,240	0.4
$1 to $49	8,864	44.5	394,176	1.5	3,195,440	1.4
$50 to $99	13,176	56.2	740,484	2.8	5,382,640	2.4
$100 to $249	64,800	70.8	4,585,184	17.4	35,620,700	15.6
$250 to $499	85,539	98.3	8,408,922	31.8	72,381,257	31.7
$500 to $999	39,318	179.1	7,041,539	26.7	61,887,970	27.1
$1,000 to $2,499	9,754	378.6	3,692,410	14.0	34,379,540	15.0
$2,500 and over	1,431	994.5	1,423,163	5.4	14,612,850	6.4

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$616	$199	$44	$157	$410	40.3
$0	345	91	15	54		
$1 to $49	230	69	12	49	24	6.7
$50 to $99	248	87	14	60	76	18.5
$100 to $249	338	104	21	87	185	33.5
$250 to $499	519	158	34	135	366	43.3
$500 to $999	933	319	70	252	694	44.1
$1,000 to $2,499	2,081	763	174	507	1,433	40.7
$2,500 and over	6,498	1,935	525	1,264	4,455	43.6

There were 1,809 farms reporting no income in 1899. Some of these farms were summer homes held for pleasure rather than for profit, some were farms partially abandoned in 1899, while others had changed hands shortly before the date of enumeration, and the persons in charge, June 1, 1900, were unable to give definite information concerning the products of the preceding year. To this extent the reports fall short of giving a complete statement of farm income in 1899.

Of the total number of farms in the state, 39.5 per cent yielded gross incomes in 1899 of less than $250; 38.1 per cent yielded between $250 and $500; and 22.4 per cent yielded over $500.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the Twelfth Census. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and to the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	211,579	$770,968	$3.64	3,464
Steers	1 and under 2	62,128	343,053	5.52	1,618
Steers	2 and under 3	36,100	271,966	7.53	777
Steers	3 and over	31,254	403,983	12.93	1,631
Bulls	1 and over	24,769	229,015	9.25	467
Heifers	1 and under 2	93,585	680,407	7.27	2,073
Cows kept for milk	2 and over	276,024	4,658,971	16.81	20,938
Cows and heifers not kept for milk.	2 and over	164,052	1,470,135	8.96	1,918
Colts	Under 1	4,028	99,935	24.81	120
Horses	1 and under 2	4,525	189,539	41.89	225
Horses	2 and over	118,854	6,862,754	57.24	20,759
Mule colts	Under 1	1,489	44,951	32.19	31
Mules	1 and under 2	5,021	261,684	52.12	109
Mules	2 and over	200,811	14,148,187	70.46	7,460
Asses and burros	All ages	519	45,850	88.34	126
Lambs	Under 1	77,384	84,163	1.09	1,147
Sheep (ewes)	1 and over	162,704	221,603	1.36	2,513
Sheep (rams and wethers).	1 and over	96,190	132,597	1.38	2,102
Swine	All ages	1,424,298	2,577,950	1.81	40,157
Goats	All ages	84,624	61,972	0.73	2,046
Fowls:[1]					
Chickens[2]		4,549,144	1,458,055		
Turkeys		103,416			
Geese		208,997			
Ducks		64,895			
Bees (swarms of)		187,919	242,769	1.29	
Value of all live stock			$35,200,507		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was $35,200,507. Of this amount 41.1 per cent represents the value of mules; 20.2 per cent, the value of horses; 13.2 per cent, that of dairy cows; 11.8 per cent, that of other neat cattle; 7.3 per cent, that of swine; 4.1 per cent, that of poultry; 1.3 per cent, that of sheep; and 1.0 per cent, that of all other live stock.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, however, the value of all domestic animals not on farms is $2,281,059. Exclusive of poultry and bees not on farms, the total value of live stock in the state is approximately $37,481,566.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	276,024	623,467	127,407	207,840	258,894	1,424,298
1890	287,717	586,209	103,501	157,377	440,459	1,396,362
1880	315,073	594,338	98,520	132,078	527,589	1,471,003
1870	231,310	466,593	81,777	87,426	419,465	988,566
1860	299,688	706,194	130,771	101,068	512,618	2,036,116
1850	334,223	763,305	151,331	57,379	560,435	2,168,617

[1] Lambs not included.

With the exception of mules and asses more domestic animals of all kinds were reported in 1850 than in any succeeding census year. At that time the raising of live stock was one of the most important branches of agriculture in many of the Southern states. In the decade which followed, the remarkable development in cotton production resulted in an increase in the area of improved land and in the breaking up for cultivation of many acres of grazing land. Mules and working oxen increased in number, while all other animals decreased, indicating a tendency on the part of the farmers to transfer their attention from stock raising to the more remunerative industry of cotton planting. The figures for 1870 show clearly the effects of the Civil War, while the steady increase in the number of horses and mules since that date marks the continued development of those branches of agriculture which involve the use of working animals.

During the last decade the number of all neat cattle has decreased 2.9 per cent. The decrease shown in the number of dairy cows is believed to be more apparent than real, as 54.9 per cent more milk was reported in 1900 than in 1890. It is probable that many of the 164,052 "cows and heifers not kept for milk" (see Table 14) were milked at some time in the year. Since 1870 a steady increase, amounting in the last decade to 23.1 per cent, is shown in the number of horses. Mules and asses show the most constant and rapid growth of any class, the gain since 1890 being 32.1 per cent. Since 1880, when other interests began to displace the wool-growing industry, the number of sheep reported has rapidly decreased, the loss in the last decade amounting to 41.2 per cent. The number of swine has fluctuated since 1850, but in the last decade has increased 2.0 per cent.

In comparing the poultry report for 1900 (see Table 14) with that of 1890, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than three months old, while in 1890 no such limitation was made. This fact doubtless explains the decreases shown in the number of all kinds of fowls. Compared with the figures for 1890, the present census shows decreases as follows: Ducks, 38.5 per cent; chickens, 38.2 per cent; turkeys, 30.5 per cent; and geese, 28.3 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the products of the animal industry.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS, IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	777,189	$155,811
Mohair and goat hair	Pounds	726	215
Milk	Gallons	[1] 82,438,532	[2] 5,954,575
Butter	Pounds	15,111,494	
Cheese	Pounds	2,236	
Eggs	Dozens	15,505,330	1,615,538
Poultry			2,481,610
Honey	Pounds	1,650,745	169,723
Wax	Pounds	78,372	
Animals sold			1,689,615
Animals slaughtered			5,892,046
Total			17,959,133

[1] Includes all milk produced, whether sold, consumed, or made into butter or cheese.
[2] Includes the value of all milk sold and consumed and of all butter and cheese made.

The value of the animal products of the state in 1899 was $17,959,133, or 17.2 per cent of all farm products, and 19.5 per cent of the gross farm income. Of the total amount, 42.2 per cent represents the value of animals sold or slaughtered on farms; 33.2 per cent, that of dairy products; 22.8 per cent, that of poultry and eggs; 0.9 per cent, that of honey and wax; and 0.9 per cent, that of wool, mohair, and goat hair.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms in 1899 was $7,581,661, or 8.2 per cent of the gross farm income. Of all farmers reporting live stock, 50,805, or 23.6 per cent, reported sales of live animals, and 155,246, or 72.0 per cent, reported animals slaughtered, the average values per farm being $33.26 for the former and $37.95 for the latter. In obtaining these reports, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

DAIRY PRODUCTS.

In 1899 the proprietors of 1,353 farms, or 0.6 per cent of the total number, derived their principal income from dairy produce. The production of milk was 29,204,024 gallons greater than in 1889, a gain of 54.9 per cent. In 1899, 15,111,494 pounds of butter were made on farms, or 4.3 per cent more than in 1889. The quantity of cheese made on farms in 1889 was more than five times as great

as in 1899, the production having been largely transferred from the farm to the cheese factory.

Of the $5,954,575 given in Table 16 as the value of dairy products, $4,925,941, or 82.7 per cent, represents the value of such products consumed on farms, and $1,028,634, or 17.3 per cent, the amount realized from sales. Of the latter amount, $567,142 was received from the sale of 3,920,412 gallons of milk; $453,703, from 2,542,127 pounds of butter; $7,781, from 9,585 gallons of cream; and $8, from 62 pounds of cheese.

POULTRY AND EGGS.

Of the $4,097,148 given as the value of the products of the poultry industry in 1899, $2,481,610, or 60.6 per cent, represents the value of poultry raised, and $1,615,538, or 39.4 per cent, the value of eggs produced. There were 3,982,542 dozen more eggs produced in 1899 than ten years before, a gain of 34.6 per cent.

WOOL.

The production of wool was greatest in 1880, when 1,289,560 pounds were reported. Since that time there has been a steady decrease, amounting in the last decade to 7.6 per cent.

HONEY AND WAX.

In the last decade the production of honey decreased 6.1 per cent, while that of wax increased 46.9 per cent. The product of 1899 was 1,650,745 pounds of honey and 73,372 pounds of wax.

HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the specified classes of farms, the number reporting horses, mules, and dairy cows, and the average number of these animals per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.		MULES.		DAIRY COWS.	
	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.
Total	92,060	1.4	133,148	1.6	146,044	1.9
White farmers	70,374	1.4	81,117	1.7	110,318	2.0
Colored farmers	21,686	1.1	52,031	1.3	35,726	1.4
Owners[1]	49,845	1.5	51,931	1.8	73,627	2.3
Managers	946	2.1	1,173	4.3	1,160	3.7
Cash tenants	22,255	1.2	37,489	1.4	32,516	1.6
Share tenants	19,014	1.2	42,555	1.3	38,741	1.3
Under 20 acres	5,894	1.1	4,193	1.3	7,802	1.5
20 to 99 acres	42,463	1.2	72,975	1.2	72,844	1.5
100 to 174 acres	20,196	1.4	28,000	1.6	33,112	1.9
175 to 259 acres	10,382	1.5	13,253	1.9	15,549	2.4
260 acres and over	13,125	1.9	14,727	2.9	16,737	3.6
Hay and grain	7,439	1.5	7,582	1.7	11,201	1.6
Vegetable	1,723	1.4	1,107	1.9	1,788	2.3
Fruit	271	1.4	195	1.7	336	1.7
Live stock	6,501	1.6	5,120	1.9	9,437	2.3
Dairy	918	1.8	588	2.0	1,363	8.2
Tobacco	114	1.6	98	2.1	188	2.3
Cotton	59,701	1.3	105,175	1.5	98,371	1.7
Rice	234	1.5	87	8.2	274	2.3
Sugar	106	1.6	86	1.7	118	3.1
Miscellaneous[2]	15,053	1.4	13,115	1.6	23,028	2.4

[1] Including "part owners" and "owners and tenants."
[2] Including florists' establishments and nurseries.

In Georgia, as in all states where cotton is a staple crop and much of the farm labor is performed by negroes, large numbers of mules are used as work animals; and for most classes of farms, the average number of mules exceeds that of horses. If the numbers of horses and mules be combined, the average number of work animals per farm compares favorably with the corresponding figures for the intensively cultivated farms of New England.

CROPS.

The following table gives the statistics of the principal crops of 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	3,477,684	Bushels	34,032,280	$17,155,868
Wheat	319,161	Bushels	1,765,947	1,547,773
Oats	318,433	Bushels	3,115,610	1,383,758
Barley	395	Bushels	2,290	2,048
Rye	13,185	Bushels	54,492	52,937
Buckwheat	4	Bushels	26	23
Broom corn	31	Pounds	18,100	972
Rice	21,998	Pounds	11,174,562	338,557
Kafir corn	26	Bushels	369	133
Clover seed		Bushels	3	11
Grass seed		Bushels	503	431
Hay and forage	187,312	Tons	287,148	3,084,932
Sea-island cottonseed		Tons	[1]26,761	342,041
Upland cottonseed		Tons	[2]588,565	6,105,256
Sea-island cotton	170,756	Bales	56,270	2,922,770
Upland cotton	3,343,083	Bales	1,231,722	39,611,465
Tobacco	2,304	Pounds	1,105,600	159,659
Peanuts	100,589	Bushels	1,435,775	935,749
Dry beans	1,927	Bushels	17,489	17,982
Dry peas	167,032	Bushels	1,130,441	958,241
Potatoes	8,477	Bushels	553,129	326,853
Sweet potatoes	70,620	Bushels	5,087,674	2,354,390
Onions	418	Bushels	44,618	44,592
Miscellaneous vegetables	73,489			3,009,306
Sugar cane	26,056	Tons	[3]284,410	
a Cane sold		Tons	18,868	72,822
b Cane kept for seed		Tons	104,224	364,784
c Sugar made		Pounds	226,730	9,176
d Molasses and sirup made		Gallons	3,226,367	1,033,922
Sorghum cane	11,553	Tons	[4]5,576	16,106
Sorghum sirup		Gallons	767,024	234,486
Small fruits	1,634			90,785
Grapes	[5]4,751	Centals	83,305	[6]170,603
Orchard fruits	[5]140,808			[7]497,847
Tropical fruits				742
Nuts				3,997
Forest products				3,217,119
Flowers and plants	77			154,888
Seeds	51			3,669
Nursery products	958			172,143
Miscellaneous	89			1,337
Total	8,412,907			86,345,848

[1] Exclusive of 1,412 tons, valued at $18,045, sold in seed cotton and included with the cotton.
[2] Exclusive of 5,566 tons, valued at $57,719, sold in seed cotton and included with the cotton.
[3] Estimated product; four succeeding items represent its equivalent.
[4] Sold as cane.
[5] Estimated from number of vines or trees.
[6] Including value of raisins, wine, etc.
[7] Including value of cider, vinegar, etc.

Of the total value of crops in 1899, cotton constituted 56.7 per cent; corn, 19.9 per cent; vegetables, including potatoes, sweet potatoes, and onions, 6.6 per cent; cereals other than corn and including rice and Kafir corn, 3.9 per cent; forest products, 3.7 per cent; hay and forage, 3.5 per cent; fruits and nuts, 0.9 per cent; and all other products, 4.8 per cent.

Cotton, occupying 41.8 per cent of the total area in crops in 1899, yielded 56.7 per cent of the total receipts; while corn, which occupied 41.3 per cent of the total area, yielded only 19.9 per cent of the total receipts.

The average values per acre of the several crops were as follows: Flowers and plants, $2,011.53; nursery prod-

ucts, $179.69; onions, $106.68; tobacco, $69.30; potatoes, $38.56; sweet potatoes, $33.34; cotton, including seed, $13.94; peanuts, $9.30; dry pease and dry beans, $5.75; cereals, $4.93; and other orchard fruits, $3.54. The crops yielding the greatest returns were grown upon the most highly improved land and required relatively large expenditures for labor and fertilizers.

COTTON.

The following table presents the changes in cotton production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF COTTON: 1849 TO 1899.

YEAR.[1]	ACREAGE.		PRODUCTION.		
	Total.	Per cent of increase.	Commercial bales.	Pounds.	Per cent of increase.
1899	3,513,839	5.0	1,287,992	616,341,981	8.4
1889	3,345,104	27.8	1,191,846	568,510,542	54.1
1879	2,617,138		814,441	368,941,773	79.4
1869				205,687,356	[2]34.1
1859				312,318,800	56.4
1849				199,636,400	

[1] No statistics of acreage were secured prior to 1879.
[2] Decrease.

Georgia has long held a leading position among the cotton-producing states. The area devoted to the crop has increased steadily since 1870, and with the single exception of the Civil War decade, the number of pounds produced has increased steadily since 1849.

In 1889, 183,907 farmers devoted to cotton a total area of 3,513,839 acres, or 33.1 per cent of the total improved farm land, an average of 19.1 acres per farm reporting. Of the total acreage, 3,343,083 acres, or 95.1 per cent, were seeded to upland cotton, and 170,756 acres, or 4.9 per cent, to sea-island cotton.

The total quantity of cotton obtained from this land was 616,341,981 pounds, an average of 3,351 pounds per farm, and 175 pounds per acre. Of this product, the upland cotton constituted 1,231,722 bales, or 594,168,407 pounds, and the sea-island cotton, 56,270 bales, or 22,173,574 pounds.

The total value of the cotton crop, including the value of the cottonseed, was $48,981,532, or 53.2 per cent of the gross farm income—the value of the upland cotton being $45,716,721, and that of the sea-island, $3,264,811. The average value per farm was $266.34, and the average value per acre, $13.94.

With the exception of the extreme northeastern counties of Fannin, Rabun, and Towns, all the counties of the state produced cotton in 1899. Those devoting the greatest area to sea-island cotton were in the southern part of the state.

CEREALS.

Table 20 is an exhibit of the changes in cereal production since 1849.

TABLE 20.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rice.	Rye.	Wheat.
1899	375	4	3,477,684	318,433	21,998	13,185	319,161
1889	549	332	2,582,316	516,886	18,126	20,949	196,633
1879	1,439	58	2,538,733	612,778	34,973	25,854	475,684

[1] No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.[2]

1899	2,290	26	34,032,230	3,115,610	11,174,562	54,492	1,765,947
1889	6,053	3,162	29,261,422	4,767,821	14,556,432	87,021	1,096,312
1879	18,662	402	23,202,618	5,548,743	25,369,687	101,716	3,159,771
1869	5,640	402	17,646,459	1,904,601	22,277,380	82,549	2,127,017
1859	14,682	2,063	30,776,293	1,231,817	52,507,652	115,532	2,544,913
1849	11,501	250	30,080,099	3,820,044	58,950,691	53,750	1,088,584

[2] Rice reported in pounds.

The total area devoted to cereals in 1879 was 3,689,519 acres; in 1889, 3,335,791 acres; and in 1899, 4,150,866 acres, an increase in the last decade of 24.4 per cent. In addition to the cereals mentioned in the table the acreage given for 1899 includes 26 acres of Kafir corn. The rates of increase in acreage for the various cereals, in the decade from 1889 to 1899, were as follows: Wheat, 62.3 per cent; corn, 34.7 per cent; and rice, 21.4 per cent. The area devoted to buckwheat decreased 98.8 per cent; that of oats, 38.4 per cent; rye, 37.1 per cent; and barley, 31.7 per cent.

Exclusive of rice, the total number of bushels of grain reported for 1849 was 35,053,928, and for 1899, 38,970,964, showing an increase for the half century of 11.2 per cent. The production of rice shows a decrease in the same time, amounting to 71.3 per cent.

Of the total area under cereals in 1899, 83.8 per cent was devoted to corn; 7.7 per cent, to wheat; 7.7 per cent, to oats; 0.5 per cent, to rice; and 0.3 per cent, to rye, barley, buckwheat, and Kafir corn.

Corn, wheat, oats, and rye are grown in nearly all parts of the state. Barley is grown in 35 counties, but 50.9 per cent of the acreage of this crop is furnished by the 3 counties of Fannin, Morgan, and Oglethorpe. Buckwheat and Kafir corn are each grown in about half a dozen counties in the northern part of the state. Rice is reported from 81 counties, but of the entire acreage reported in 1900, 63.4 per cent was furnished by the southeastern coast counties of Bryan, Camden, Chatham, Glynn, Liberty, and McIntosh.

HAY AND FORAGE.

In 1900, 107,648 farmers, or 47.9 per cent of the total number, reported hay and forage crops. Exclusive of cornstalks and corn strippings, they obtained an average yield of 1.09 tons per acre. The total area in hay and forage in 1899 was 137,312 acres, exceeding the acreage reported ten years before by 115.1 per cent.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, and prairie

grasses, 6,101 acres and 5,935 tons; millet and Hungarian grasses, 4,506 acres and 5,523 tons; clover, 2,112 acres and 2,339 tons; other tame and cultivated grasses, 62,087 acres and 66,061 tons; grains cut green for hay, 40,525 acres and 42,211 tons; crops grown for forage, 21,981 acres and 28,155 tons; cornstalks and corn strippings, 751,608 acres and 136,924 tons.

In Table 18 the production of cornstalks and corn strippings is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

SUGAR CANE.

Table 21 presents a comparative exhibit of the acreage of sugar cane in 1879, 1889, and 1899, and the production of sugar, sirup, and molasses from 1849 to 1899.

TABLE 21.—ACREAGE OF SUGAR CANE, AND PRODUCTION OF SUGAR AND SIRUP: 1849 TO 1899.

YEAR.[1]	SUGAR.			SIRUP.	
	Acreage in cane.	Production in pounds.	Average yield per acre in pounds.	Production in gallons.	Average yield per acre in gallons.
1899	26,056	226,730	8.7	3,226,367	123.8
1889	20,238	1,307,625	64.6	3,223,194	159.3
1879	15,058	721,200	47.9	1,565,784	104.0
1869	----------	772,800	----------	553,192	----------
1859	----------	1,400,400	----------	546,749	----------
1849	----------	1,970,400	----------	----------	----------

[1] No statistics of acreage were secured prior to 1879.

The present census shows that in 1899, 46,335 farmers raised 26,056 acres of sugar cane, selling therefrom 18,868 tons of cane for $72,822 and manufacturing from the remaining cane 226,730 pounds of sugar valued at $9,176, and 3,226,367 gallons of sirup and molasses valued at $1,033,922. This was an increase in acreage, since 1889, of 5,818 acres, or 28.8 per cent, and in quantity of sirup and molasses made, of 3,173 gallons, or 0.1 per cent. The quantity of sugar produced, however, decreased 1,080,895 pounds, or 82.7 per cent. The total value of sugar cane products was $1,115,920, an average of $24.08 for each farm reporting. Exclusive of the product of the 18,868 tons of cane sold, the average yield per acre in 1899 was 8.7 pounds of sugar, and 123.8 gallons of molasses and sirup. In addition to the above, it is estimated that in 1899, 104,224 tons of cane, valued at $364,784, were kept for seed.

Sugar cane was cultivated in more than 100 counties of the state, the area devoted to its production ranging from 4 acres in Lincoln county to 2,058 acres in Thomas county. The average area for each farm reporting was 0.6 acres.

SORGHUM CANE.

The total area devoted to sorghum cane in 1899 was 11,553 acres, an average of 0.5 of an acre for each of the 22,600 farms reporting. From this area, 5,576 tons of cane were sold for $16,106, and from the remaining product 767,024 gallons of sirup, valued at $234,486, were manufactured. This was a decrease for the last decade of 47.7 per cent in acreage, and of 42.9 per cent in production. The total value of sorghum cane products was $250,592, an average of $11.09 for each farm reporting. The average yield per acre was 66.4 gallons, and the average value per gallon, 30.6 cents.

TOBACCO.

The total production of tobacco in 1849 was 423,924 pounds. The crop of 1859 showed an increase of 495,894 pounds, or 116.9 per cent, but in each of the two decades succeeding, a decrease occurred, the crop of 1869 being less than that of 1859 by 630,722 pounds, or 68.6 per cent, and the crop of 1879 falling below that of 1869 by 60,006 pounds, or 20.9 per cent.

The present census shows that in 1899 tobacco was grown by 3,525 farmers, who obtained from 2,304 acres, a yield of 1,105,600 pounds, valued at $159,659. The area devoted to the crop in 1899 exceeded that reported ten years before by 1,504 acres, or 188.0 per cent, while, in production, there was a gain of 841,848 pounds, or 319.2 per cent. The average yield per acre in 1899 was 479.9 pounds, as compared with 329.7 pounds in 1889, and 270.3 pounds in 1879.

While tobacco was grown in 88 counties of the state in 1899, 61.6 per cent of the entire crop was raised in Decatur county, which reported a product valued at $113,563, or 71.1 per cent of the total.

PEANUTS.

Peanuts were grown in 1899 by 24,918 farmers, who devoted to their cultivation 100,589 acres, securing therefrom 1,435,775 bushels, or an average of 14.3 bushels per acre.

Increases of 92.6 per cent in area, and of 129.9 per cent in production, are shown for the last decade. The extreme southern counties of Brooks, Thomas, Decatur, and Lowndes, ranking in the order named, report the largest crops; these counties, with eight others in the southern part of the state, reporting more than half of the total acreage.

A part of the crop, approximating 30.0 per cent, was not harvested, but was fed in the field, and is not included in the above figures.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 22.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	2,359,975	1,845,501	670,889	2,118,055
Apricots	3,115	1,460	98	2,238
Cherries	115,092	19,454	5,950	10,495
Peaches	7,668,639	2,787,546	259,728	5,525,119
Pears	385,166	112,800	49,497	118,368
Plums and prunes	686,251	131,805	36,920	49,063

The census of 1900 shows an increase since 1890 of 6,853,910, or 155.8 per cent, in the number of fruit trees,

the gains being general throughout the state. The number of cherry and plum and prune trees in 1900 is more than five times as great, and that of pear trees more than three times as great as the number reported in 1890; peach trees increased 175.1 per cent; apricot trees, 113.4 per cent; and apple trees, 75.4 per cent.

Of the total number of trees in 1900, 68.2 per cent were peach trees; 21.0 per cent, apple trees; 6.1 per cent, plum and prune trees; 3.4 per cent, pear trees; and 1.3 per cent, cherry, apricot, and unclassified fruit trees. The latter class, which is not included in the table, numbered 33,748 and yielded 5,751 bushels of fruit.

Houston, Whitfield, Gordon, Macon, Cobb, and Bartow counties, ranking in the order named, lead in the number of peach trees, reporting 30.0 per cent of the total and showing large increases since 1890. Gilmer, Gwinnett, Whitfield, Cobb, and Carroll counties, respectively, have the most apple trees. The greatest numbers of pear trees are reported from Thomas, Houston, and Liberty counties. Fulton and Irwin counties, which in 1890 reported no apricot trees, in 1900 reported the largest numbers. The remaining fruit trees were quite evenly distributed over the state.

The value of orchard fruits, given in Table 18, includes the value of 1,538 barrels of cider, 860 barrels of vinegar, and 188,460 pounds of dried and evaporated fruits. Comparisons of the yields of orchard fruits, when made by decennial years, are of little significance, as the yield of any given year is largely determined by the nature of the season.

SEMITROPICAL FRUITS AND NUTS.

The total number of fig trees in the state, June 1, 1900, was 12,152, from which, in 1899, 31,880 pounds of figs, valued at $742, were produced. In addition, 30,455 pecan trees, yielding 27,440 pounds of nuts; 2,681 Persian and English walnut trees, yielding 2,970 pounds; and 6,438 unclassified nut-bearing trees, yielding 3,026 pounds, were reported. The total value of nuts was $3,997.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 1,634 acres, distributed among 2,804 farms. The value of the fruits grown was $90,785, an average of $32.38 per farm. Of the total area, 1,423 acres, or 87.1 per cent, were devoted to strawberries, the total production of which was 1,385,728 quarts. They were grown principally in the northwestern counties. The acreage and production of other berries were as follows: Blackberries and dewberries, 143 acres and 144,060 quarts; raspberries and Logan berries, 43 acres and 41,750 quarts; and all other berries, 25 acres and 26,390 quarts.

VEGETABLES.

The total area used in the cultivation of vegetables, including potatoes, sweet potatoes, and onions was 153,004 acres. Of this acreage, 48.0 per cent was devoted to miscellaneous vegetables, 46.2 per cent to sweet potatoes, 5.5 per cent to potatoes, and 0.3 per cent to onions.

Sweet potatoes were grown in 1899 by 103,983 farmers, or 46.3 per cent of the total number in the state. The average area per farm reporting was 0.7 of an acre, and the average yield per acre, 72 bushels.

No detailed reports were received of 38,504 acres, or 52.4 per cent, of the 73,489 acres used in the cultivation of miscellaneous vegetables. The areas devoted to the vegetables reported in detail were as follows: 27,874 acres, to watermelons; 2,871, to cabbages; 1,707, to muskmelons; 900, to tomatoes; and 1,633, to other vegetables.

FLORICULTURE.

The area devoted to the cultivation of flowers and ornamental plants in 1899 was 308 acres, and the value of the products sold therefrom was $154,888. These flowers and plants were grown by 59 farmers and florists, of whom 33 made commercial floriculture their principal business.

These 33 florists reported greenhouses with a glass surface of 501,231 square feet. The capital invested in land, buildings, implements, and live stock was $312,319, of which $127,050 represents the value of buildings. Their sales of flowers and plants amounted to $131,330, and the other products raised were worth $840, making the average value of products not fed to live stock $4,005 for each farm reporting.

In addition to the 33 florists' establishments, 127 farmers and market gardeners made use of glass in the propagation of flowers, plants, or vegetables. They had an area of 113,017 square feet under glass, making, with the 375,923 square feet belonging to the florists' establishments, a total of 488,940 square feet.

NURSERIES.

The total value of the nursery stock sold in 1899 was $172,143, reported by the operators of 66 farms and nurseries. Of this number, 29 derived their principal income from the nursery business. They had 4,029 acres of land, valued at $116,650; buildings worth $55,800; implements and machinery valued at $3,970; and live stock valued at $6,380. Their total gross income was $158,290, of which $153,329 was derived from the sale of trees, shrubs, and vines, and $4,961 from the sale of other farm products. The average gross income per acre was $32.11, and for each farm reporting, $5,458.

LABOR AND FERTILIZERS.

The total expenditures for labor on farms in 1899, including the value of board furnished, was $7,244,520, an average of $32 per farm. The average was highest on the most intensively cultivated farms, being $1,405 for nurseries; $938 for florists' establishments; $134 for tobacco farms; $115 for rice farms; $83 for dairy farms; $61 for sugar farms; $48 for vegetable farms; $36 for fruit farms; $34 for cotton farms; $21 for live-stock farms; and $20 for hay and grain farms. "Managers" expended on an average $307; "owners," $49; "share tenants," $26; and "cash tenants," $12. White farmers expended $43 per farm, and colored farmers $15.

Fertilizers purchased in 1899 cost $5,738,520, an average of $26 per farm, and a total gain of $14,333 since 1890. The average expenditure was $86 for tobacco farms, $76 for nurseries, $64 for florists' establishments, $40 for sugar farms, $30 for cotton farms, $25 for vegetable farms, $17 for miscellaneous farms, $15 for dairy farms, $12 for hay and grain farms, $11 each for live-stock farms and fruit farms, and $4 for rice farms.

IRRIGATION.

In Georgia irrigation of crops other than rice is practically unknown, and is confined entirely to the southeastern coast counties, where the rice planters cultivate lands adjacent to fresh water tidal rivers. These delta lands, unless protected by systems of levees or dikes, are subject to overflow at high tide. After the land is thus protected, the method of irrigation is comparatively simple. At regular intervals along the dikes, the planter controls the ingress and egress of the water of the stream by means of gates. The land cultivated is divided into small sections containing from 5 to 30 acres, which are subdivided by ditches into beds. Each section is supplied with water through an opening in the dike and is drained through the same opening. The rising tide floods the fields, the water being retained by closing the gates. To drain the fields, it is only necessary to open the gates during low tide.

The average cost of preparing land for irrigation, including the construction of ditches, trunks, check banks, and dikes, is $31.85 per acre.

In 1899, 13,956 acres of rice were irrigated, producing 8,936,322 pounds, or an average of 640 pounds per acre. This constitutes more than 63.0 per cent of the total rice acreage, and 80.0 per cent of the entire yield of the state. Irrigation was reported in the coast counties—Bryan, Camden, Chatham, Glenn, Liberty, and Mackintosh. Aside from that used in the cultivation of rice, the only irrigation system worthy of note was in Chatham county. It consisted of an artesian well, with pipes and equipment similar to that used by Florida truck farmers, and its total cost was $1,000. The area irrigated was 8 acres, principally in cucumbers and lettuce, and the value of the product was $2,500, or about $312 per acre. Only three other reports were received, and these were from truck farmers who cultivated an acre or less.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 182. WASHINGTON, D. C. June 5, 1902.

AGRICULTURE.

INDIANA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of Indiana, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides and all other buildings used by him in connection with his farming operations.

The farms of Indiana, June 1, 1900, numbered 221,897, and were valued at $841,735,340. Of this amount $154,101,880, or 18.3 per cent, represents the value of buildings, and $687,633,460, or 81.7 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was $27,330,370, and that of live stock, $109,550,761. These values, added to that of farms, give $978,616,471, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of all such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $204,450,196, of which amount $81,947,922, or 40.1 per cent, represents the value of animal products, and $122,502,274, or 59.9 per cent, the value of crops, including forest products. The "total value of farm products" for 1899 exceeds that for 1889 by $109,690,934, or 115.8 per cent. A part of this increase is doubtless due to a more detailed enumeration in 1900 than in 1890.

The value of "net farm products" or the "gross farm income" is obtained by deducting the value of the products fed to live stock on the farms of the producers from the "total value of farm products." In 1899, the reported value of products fed was $48,469,400, leaving $155,980,796 as the gross farm income for that year. The ratio which this latter amount bears to the "total value of farm property" is referred to in this bulletin as the "percentage of gross income upon investment." For Indiana in 1899 it was 15.9 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for live stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the report on agriculture in the United States. The present publication is designed to present a summarized advance statement for Indiana.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

CP 15M

AGRICULTURE IN INDIANA.

GENERAL STATISTICS.

Indiana has a total land area of 35,910 square miles, or 22,982,400 acres, of which 21,619,623 acres, or 94.1 per cent, are included in farms.

The surface of the state is an undulating plain, broken by rugged hills in a portion of the south central section and by a few sand hills near Lake Michigan. In the west and northwest are broad areas of fertile prairies, with rich, black soil. The numerous streams afford excellent drainage. The more important rivers are the Wabash, White, Kankakee, and Whitewater. The Ohio forms the southern boundary.

By an extensive system of drainage, the waters of numerous swamps and ponds have been removed, and the black, alluvial soil, forming their beds, converted into rich agricultural lands.

The soil throughout the state is generally suitable for the cultivation of the principal agricultural products of the temperate zone and is nearly everywhere very fertile and productive.

Owing to the numerous cities in the state, and the proximity of Chicago, Cincinnati, and Louisville, there is an excellent market. The superior transportation facilities supplied by the railroads have contributed largely to the development of the agricultural interests of the state.

The raising of blooded stock has grown to be a very important industry.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	221,897	21,619,623	16,680,358	4,939,265	97.4	77.2
1890	198,167	20,362,516	15,107,482	5,255,034	102.8	74.2
1880	194,013	20,420,933	13,933,738	6,487,245	105.3	68.2
1870	161,289	18,119,648	10,104,279	8,015,369	112.3	55.8
1860	131,826	16,388,292	8,242,183	8,146,109	124.3	50.3
1850	93,896	12,793,422	5,046,543	7,746,879	136.3	39.4

Between 1850 and 1900 the number of farms more than doubled, and during the last decade there was a gain of 23,730, or 12.0 per cent. The total acreage of farm land has increased only 69.0 per cent since 1850, and consequently the average size of farms shows a gradual decrease. The most marked change shown in the table is in the acreage of improved farm land, indicating a steady increase in the percentage of the total area actually cultivated. The comparatively small increase in the last decade is doubtless due to a more strict interpretation of the term "improved land" in 1900, than in previous census years.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[1]
1900	$978,616,471	$841,735,340	$27,330,370	$109,550,761	$204,450,196
1890	869,322,787	754,789,110	21,172,255	93,361,422	94,759,282
1880	726,781,857	635,236,111	20,476,988	71,068,758	114,707,082
1870[2]	736,257,562	634,804,189	17,676,591	83,776,782	[3]122,914,302
1860	409,025,611	356,712,175	10,457,897	41,855,539	
1850	165,568,172	136,385,173	6,704,444	22,478,555	

[1] For year preceding that designated.
[2] Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years, they must be diminished one-fifth.
[3] Includes betterments and additions to live stock.

Since 1850 the total value of farm property has increased $813,048,299, and in the last ten years, $109,293,684. The increase in the value of land, improvements, and buildings was $86,946,230, or 11.5 per cent; in that of implements and machinery, $6,158,115, or 29.1 per cent; and in that of live stock, $16,189,339, or 17.3 per cent.

The value of farm products for 1899 exceeds that reported for 1889 by $109,690,934, or 115.8 per cent. Part of this increase, and of that in implements and machinery and in live stock, is doubtless the result of a more detailed enumeration in 1900 than in 1890. The values of animals sold and animals slaughtered on farms, which were not reported in 1890, amounted in 1900 to $48,882,256, or nearly forty-five per cent of the gain in value of farm products over the value reported ten years before.

COUNTY STATISTICS.

Table 3 gives an exhibit of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State	221,897	214,721	21,619,623	16,680,358	$687,633,460	$154,101,880	$27,380,370	$109,550,761	$155,980,796	$9,685,540	$1,553,710
Adams	2,462	2,425	209,576	170,694	7,384,560	1,986,070	449,030	1,346,384	1,861,748	80,560	4,000
Allen	4,362	4,249	397,235	294,859	14,565,350	4,707,320	738,620	2,292,915	3,187,199	252,770	5,580
Bartholomew	2,431	2,329	254,051	202,272	9,199,790	1,765,550	313,830	1,068,312	1,885,835	159,000	28,310
Benton	1,351	1,313	249,904	237,050	14,228,890	1,533,280	318,560	1,836,819	2,790,272	227,100	3,970
Blackford	1,395	1,296	103,823	83,555	3,746,880	723,140	144,050	627,682	797,078	29,760	260
Boone	3,531	3,450	264,150	223,691	11,515,900	2,339,900	419,500	2,187,401	2,669,300	82,100	5,530
Brown	1,825	1,765	178,971	104,504	1,446,560	431,130	102,700	435,569	531,386	10,110	12,720
Carroll	2,429	2,350	231,616	188,340	9,564,940	1,952,510	346,110	1,463,009	2,153,435	88,850	3,090
Cass	2,656	2,581	251,591	200,115	9,913,850	2,251,140	396,530	1,537,462	2,281,155	160,220	2,860
Clark	2,067	2,014	216,526	152,648	4,604,390	1,329,000	228,550	703,329	1,024,973	93,980	48,030
Clay	2,489	2,339	212,036	165,553	6,400,540	1,441,540	271,120	981,415	1,294,500	62,660	15,050
Clinton	2,974	2,889	251,246	218,544	11,770,780	2,343,140	451,440	1,884,653	2,692,926	130,970	6,300
Crawford	1,905	1,859	177,552	103,112	1,267,360	488,030	113,390	394,016	562,225	23,930	24,570
Daviess	3,003	2,880	259,644	223,610	6,589,430	1,197,660	271,750	1,126,369	1,480,599	79,300	5,930
Dearborn	2,114	2,063	182,681	138,129	3,845,130	1,762,430	265,750	680,166	1,087,088	81,060	25,840
Decatur	1,944	1,870	229,899	184,309	7,328,110	1,598,360	284,880	1,310,930	1,833,965	123,040	42,580
Dekalb	2,578	2,517	222,181	173,756	7,202,220	2,334,010	387,940	1,226,494	1,793,171	105,560	4,560
Delaware	2,871	2,793	246,696	205,970	10,636,750	2,188,970	383,940	1,805,781	2,780,665	128,880	8,280
Dubois	2,288	2,181	266,195	178,818	4,368,820	1,355,400	282,270	778,398	1,219,299	70,190	72,710
Elkhart	3,364	3,241	279,019	230,530	11,604,020	3,451,290	523,070	1,537,105	2,332,060	145,710	5,320
Fayette	1,068	1,043	132,695	105,225	4,391,760	965,720	169,090	711,465	1,134,741	64,830	22,630
Floyd	1,213	1,194	81,594	53,901	2,026,510	776,300	127,610	271,073	602,443	59,870	29,460
Fountain	2,225	2,099	245,151	196,238	9,581,930	1,676,040	312,390	1,414,361	1,896,847	126,510	2,450
Franklin	2,136	2,100	240,175	162,983	4,467,480	1,516,260	260,520	870,425	1,355,498	79,660	29,190
Fulton	2,464	2,426	222,812	173,538	7,320,900	1,474,660	278,210	1,208,383	1,425,365	62,670	4,510
Gibson	2,978	2,850	278,830	242,145	9,090,930	1,708,980	338,100	1,222,651	2,146,732	185,720	21,810
Grant	2,935	2,864	248,194	207,474	10,586,710	2,188,860	400,030	1,704,555	2,272,178	104,250	7,580
Greene	3,549	3,365	332,759	269,545	6,767,150	1,352,080	268,220	1,452,370	1,713,102	85,200	21,710
Hamilton	3,096	3,023	243,105	202,912	10,850,210	2,256,540	404,040	1,789,251	2,403,415	98,300	4,890
Hancock	2,215	2,151	186,830	157,114	8,463,460	1,749,910	281,930	1,188,422	1,933,984	95,570	16,750
Harrison	3,237	3,122	291,587	190,768	3,684,730	1,283,370	299,650	707,426	1,289,050	73,790	97,090
Hendricks	2,867	2,750	259,875	194,194	10,324,880	2,130,490	387,250	1,984,041	2,589,154	122,470	14,710
Henry	2,601	2,553	245,090	206,739	9,913,390	2,376,780	370,630	1,657,670	2,416,423	140,180	16,970
Howard	2,680	2,606	185,082	158,402	8,426,320	1,905,880	337,710	1,369,191	1,731,267	96,550	5,170
Huntington	2,579	2,527	233,709	188,330	7,502,670	2,180,650	352,600	1,275,250	1,960,904	83,070	4,020
Jackson	2,813	2,695	303,710	209,153	6,472,670	1,456,450	290,540	1,010,653	1,608,186	110,360	24,710
Jasper	1,870	1,811	238,857	235,347	9,544,310	1,194,130	252,890	1,564,304	1,750,910	143,550	820
Jay	2,848	2,722	231,150	186,842	7,270,180	1,712,750	333,630	1,330,672	1,950,154	65,400	3,320
Jefferson	2,529	2,486	218,166	146,037	3,237,220	1,185,380	219,910	754,556	1,118,079	59,630	58,940
Jennings	2,135	2,076	226,014	161,751	3,249,570	1,027,190	204,090	713,195	916,772	58,460	44,310
Johnson	2,053	1,994	194,624	159,269	8,813,100	1,586,930	289,080	1,238,780	1,960,935	115,270	22,670
Knox	2,683	2,605	305,966	249,603	9,972,470	1,695,930	375,480	1,421,483	2,441,242	211,180	4,580
Kosciusko	3,532	3,429	322,179	240,069	10,396,170	2,582,670	397,500	1,854,350	2,204,419	112,310	5,200
Lagrange	2,145	2,095	233,201	176,709	7,925,510	2,021,420	323,510	1,197,162	1,514,726	113,770	3,940
Lake	1,702	1,650	238,568	173,841	9,559,840	1,595,080	287,710	1,286,222	1,556,745	135,590	9,380
Laporte	2,613	2,518	343,450	261,294	11,225,020	2,476,200	347,330	1,284,711	1,640,650	169,140	6,080
Lawrence	2,251	2,154	266,945	168,575	3,163,640	898,520	153,340	866,159	1,058,423	51,700	23,380
Madison	3,346	3,240	278,956	232,512	12,572,970	2,303,470	418,310	1,977,052	2,809,408	128,390	5,730
Marion	3,437	3,317	242,644	199,235	18,254,090	3,997,750	500,700	1,520,712	3,467,591	341,390	36,020
Marshall	2,869	2,828	262,759	198,378	8,744,490	2,405,670	356,890	1,861,629	1,638,329	85,180	1,770
Martin	1,985	1,895	201,006	139,659	2,220,370	610,950	133,330	646,285	742,898	12,620	12,620
Miami	2,897	2,337	232,465	185,621	9,199,230	2,182,310	362,040	1,608,267	2,202,703	137,480	4,650
Monroe	2,242	2,145	237,552	149,722	3,175,490	1,049,040	223,820	733,927	923,648	49,240	22,590
Montgomery	2,895	2,829	311,670	238,954	12,875,610	2,881,910	379,420	2,150,260	2,544,561	147,270	3,180
Morgan	2,544	2,455	244,694	168,402	6,135,440	1,229,260	214,030	1,147,619	1,705,795	95,460	14,880
Newton	1,113	1,056	245,557	195,190	10,020,130	993,860	207,700	1,183,648	1,613,580	132,190	450
Noble	2,459	2,399	249,812	186,040	8,543,100	2,257,160	293,800	1,612,057	1,566,879	123,540	2,320
Ohio	551	536	52,436	42,048	1,203,110	378,270	50,790	196,588	334,952	19,530	7,700
Orange	2,392	2,382	247,668	160,648	2,443,500	905,350	151,380	652,178	807,427	34,770	80,250
Owen	2,186	2,047	246,748	164,439	3,476,210	1,028,810	220,080	823,475	882,341	37,190	16,800
Parke	2,303	2,199	256,647	163,680	6,851,750	1,363,910	262,430	1,266,956	1,378,495	95,110	2,140
Perry	2,054	2,017	217,316	108,359	1,643,360	567,390	135,990	470,005	679,121	39,140	84,490
Pike	2,685	2,610	200,724	172,689	8,861,750	963,220	236,900	871,313	1,266,045	71,000	22,220
Porter	1,922	1,800	238,783	180,724	7,616,440	1,711,140	295,770	1,204,990	1,394,862	95,500	2,580
Posey	2,167	2,101	233,797	204,277	8,660,240	1,769,770	379,730	903,600	1,935,103	203,640	5,440
Pulaski	1,945	1,871	241,475	168,358	5,886,830	930,810	225,430	995,584	1,054,757	49,020	1,890
Putnam	2,883	2,781	301,089	206,070	8,076,430	1,813,480	271,300	1,726,252	1,865,551	72,620	8,910
Randolph	3,448	3,318	283,017	227,290	10,085,030	2,213,470	457,650	1,426,352	2,562,383	77,540	11,060
Ripley	2,935	2,876	270,974	199,212	4,255,640	1,663,490	314,460	979,824	1,349,377	80,980	70,210
Rush	2,267	2,218	254,870	211,724	12,054,150	2,083,780	362,160	1,759,917	2,857,326	186,500	36,870
St. Joseph	2,598	2,519	266,707	210,597	12,691,270	2,603,030	389,220	1,154,047	1,845,667	150,560	4,080
Scott	1,279	1,233	113,578	82,002	1,458,860	461,210	115,500	328,180	531,644	30,480	87,560
Shelby	2,807	2,720	250,963	218,744	12,378,700	2,107,360	438,480	1,463,692	2,655,295	132,270	15,810
Spencer	3,004	2,828	246,978	202,799	3,998,690	1,384,980	288,180	765,975	1,411,203	112,540	49,590
Starke	1,384	1,294	162,224	106,891	3,871,230	748,280	146,650	687,329	702,685	48,070	1,100
Steuben	1,956	1,910	185,839	139,657	5,345,790	1,471,170	230,690	965,972	1,888,668	93,110	710
Sullivan	3,239	3,110	272,012	227,785	7,618,170	1,589,750	269,920	1,555,940	1,771,417	98,470	4,840
Switzerland	1,802	1,750	136,047	110,565	2,434,130	845,960	152,960	501,766	870,590	44,600	15,020
Tippecanoe	2,517	2,420	298,842	259,796	13,727,180	2,296,750	382,330	1,599,188	2,852,021	270,500	11,120
Tipton	2,290	2,214	162,597	139,370	7,762,400	1,385,680	336,480	1,429,008	1,881,051	74,230	2,990

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
Union	832	819	101,710	79,951	$4,004,740	$956,190	$160,770	$618,350	$1,030,469	$69,750	$29,840
Vanderburg	1,970	1,900	142,287	120,619	5,766,290	1,755,970	272,730	616,884	1,312,734	158,900	17,650
Vermillion	1,353	1,290	140,984	112,199	5,570,900	902,840	163,270	722,381	1,009,561	61,220	660
Vigo	2,816	2,729	238,996	192,043	8,480,440	1,885,020	259,680	1,086,112	1,642,242	165,630	2,660
Wabash	2,663	2,612	253,392	205,686	8,797,870	2,473,990	391,590	1,667,394	2,186,103	99,360	8,170
Warren	1,506	1,441	218,282	185,085	9,981,030	1,352,210	242,080	1,275,208	1,994,545	162,500	1,870
Warrick	2,982	2,891	236,357	202,705	4,652,220	1,188,380	295,760	778,310	1,260,475	80,410	42,010
Washington	2,948	2,870	316,515	218,116	4,110,760	1,042,840	260,460	984,378	1,305,317	71,050	63,080
Wayne	2,583	2,502	250,407	200,713	9,755,260	2,476,930	414,960	1,493,008	2,414,514	166,140	45,820
Wells	2,884	2,791	232,433	190,475	8,060,460	2,227,200	424,170	1,412,180	2,028,776	105,190	9,510
White	2,895	2,297	313,194	258,605	12,048,690	1,830,150	309,270	1,546,826	2,168,650	143,440	8,670
Whitley	2,113	2,062	206,810	154,573	5,850,470	1,853,780	305,140	1,202,208	1,484,210	81,060	1,020

During the last decade the number of farms increased at about the same rate in nearly all the counties of the state. Fayette, Franklin, Hamilton, Noble, Tippecanoe, and Whitley show slight decreases. Increases in total and in improved farm acreage are shown for most counties, losses occurring in but three instances.

The average size of farms is largest in the northwestern counties, and smallest in the central and southern counties where dairying and truck farming are the principal branches of agriculture. The average for the state is 97.4 acres. The average value of farms is $3,793. Nearly three-fourths of the counties show gains over the values reported in 1890, those showing decreased values being, for the most part, hay and grain and live-stock farms in the eastern half of the state. The average value per farm of implements and machinery is $123, being lowest generally in the counties where hay and grain and live-stock farms predominate. The total and average values of live stock for the state, as reported in 1900, are greater than in 1890, only a few counties showing decreases.

The average expenditure per farm for labor in 1899 varied greatly in the different counties. For the state it was $44, ranging from less than $6 in some counties to nearly $170 in others. The total expenditure for fertilizers in 1899 was nearly twice as great as in 1889, increases being general throughout the state.

FARM TENURE.

Table 4 gives a comparative statement of farm tenure for 1880, 1890, and 1900. The farms operated by tenants are divided into two groups designated as farms operated by "cash tenants" and farms operated by "share tenants." These groups comprise, respectively: (1) Farms operated by individuals who pay a cash rental or a stated amount of labor or farm produce, and (2) farms operated by individuals who pay as rental a stated share of the products. In Table 5 farms of specified tenures are classified for 1900 according to race of farmer, and the farms operated by owners are subdivided into four groups designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	221,897	158,449	12,961	50,487	71.4	5.8	22.8
1890	198,167	147,885	10,936	39,346	74.6	5.5	19.9
1880	194,013	147,963	8,582	37,468	76.3	4.4	19.3

[1] Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	221,897	120,948	31,599	3,680	2,222	12,961	50,487
White	220,835	120,559	31,415	3,651	2,213	12,841	50,156
Colored[1]	1,062	389	184	29	9	120	331

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	54.5	14.2	1.7	1.0	5.8	22.8
White	100.0	54.6	14.2	1.7	1.0	5.8	22.7
Colored[1]	100.0	36.6	17.3	2.7	0.9	11.3	31.2

[1] Including 19 Indians.

In the last two decades the total number of farms has increased 27,884, or 14.4 per cent. In the same period the number of farms operated by owners increased 10,486, or 7.1 per cent; by cash tenants, 4,379, or 51.0 per cent; and by share tenants, 13,019, or 34.7 per cent. Between 1880 and 1890 the number of farms operated by owners decreased slightly, but the number operated by tenants increased during both decades, particularly between 1890 and 1900. For each period the relative number of farms operated by owners decreased, while those of cash and of share tenants increased. Of the white farmers, 70.5 per cent owned all or a part of the farms they operated and 29.5 per cent operated farms owned by others. The corresponding percentages for colored farmers are 56.6 and 43.4.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	221,897	97.4	21,619,623	100.0	$978,616,471	100.0
White farmers	220,835	97.7	21,566,143	99.8	976,225,182	99.8
Colored farmers[1]	1,062	50.4	53,480	0.2	2,391,289	0.2
Owners	120,948	93.1	11,260,247	52.1	498,588,910	50.9
Part owners	31,599	106.3	3,359,568	15.5	150,674,700	15.4
Owners and tenants	3,680	130.1	478,748	2.2	21,801,355	2.2
Managers	2,222	223.3	496,216	2.3	25,394,399	2.6
Cash tenants	12,961	82.1	1,063,987	4.9	54,754,274	5.6
Share tenants	50,487	98.3	4,960,857	23.0	227,902,833	23.3

[1] Including 19 Indians.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,099	$694	$128	$494	$703	15.9
White farmers	3,103	697	123	495	705	15.9
Colored farmers[1]	1,679	276	58	239	376	16.7
Owners	2,765	741	122	494	677	16.2
Part owners	3,403	689	137	539	787	16.5
Owners and tenants	4,038	910	162	678	885	15.3
Managers	8,277	1,779	180	1,193	1,890	12.2
Cash tenants	3,103	674	110	438	682	16.2
Share tenants	3,409	555	116	434	699	15.5

[1] Including 19 Indians.

Of the farms of the state 99.5 per cent are operated by white farmers and 0.5 per cent, by colored farmers. The average size of the farms of colored farmers is a little more than half that of farms operated by white farmers, and the average values of all forms of their farm property, except buildings, are approximately one-half as great as the corresponding averages for farms of white farmers. Their buildings are worth somewhat more than one-third as much per farm as those of white farmers. The slightly higher percentage of gross income shown for colored farmers is in keeping with the small average size of their holdings, a factor which naturally involves more intensive cultivation than is practiced by the operators of the larger farms. This is substantiated by reference to Table 9, which shows that the percentage of gross income for the fifth group of farms, the average size of which is 73.9 acres, is higher than the percentage shown for farms of colored farmers, although their average size is but 50.4 acres. From this it may be inferred that when the farms are of nearly equal size the white farmer cultivates the soil more intensively than the colored.

The farms operated by their owners comprise more than half the agricultural land of the state and more than half of the total value of farm property. Farms operated by managers have the highest average acreage and the highest average values for all forms of farm property. The percentage of gross income, however, is lower than for any other group, owing to the fact that many of these farms are adjuncts of public institutions and are not operated primarily for profit.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	221,897	97.4	21,619,628	100.0	$978,616,471	100.0
Under 3 acres	1,796	2.1	3,713	(1)	1,943,044	0.2
3 to 9 acres	8,640	6.2	53,299	0.2	9,548,462	1.0
10 to 19 acres	11,540	14.0	161,446	0.8	14,272,021	1.5
20 to 49 acres	47,009	35.1	1,650,252	7.6	82,456,649	8.4
50 to 99 acres	71,055	73.9	5,251,514	24.3	241,745,969	24.7
100 to 174 acres	55,080	130.8	7,200,079	33.3	319,204,603	32.6
175 to 259 acres	17,398	207.7	3,613,295	16.7	156,693,113	16.0
260 to 499 acres	8,681	328.5	2,654,479	12.3	113,076,059	11.6
500 to 999 acres	1,094	632.0	691,425	3.2	28,780,325	2.9
1,000 acres and over	224	1,518.4	340,121	1.6	10,896,226	1.1

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,099	$694	$123	$494	$703	15.9
Under 3 acres	400	548	36	98	256	23.7
3 to 9 acres	519	435	40	111	191	17.3
10 to 19 acres	579	369	46	143	229	18.5
20 to 49 acres	1,098	363	67	226	341	19.4
50 to 99 acres	2,303	588	112	399	581	17.1
100 to 174 acres	4,141	869	162	625	910	15.7
175 to 259 acres	6,667	1,185	209	945	1,322	14.7
260 to 499 acres	10,589	1,659	277	1,468	1,955	14.0
500 to 999 acres	19,505	3,193	372	3,237	3,486	13.3
1,000 acres and over	37,678	3,852	450	6,664	5,418	11.1

The group of farms of from 50 to 99 acres contains a larger number of farms than any other, but the group of from 100 to 174 acres comprises the largest acreage and the highest total value of farm property.

With few exceptions the average values of the several forms of farm property and of products increase with the size of the farms. The comparatively high valuation of buildings and the large gross income shown for farms of less than 3 acres each, are due to the fact that many farms of this group are city dairies, poultry farms, market gardens, and florists' establishments. The incomes from these industries are determined, not so much by the acreage of land used, as by the capital invested in buildings, implements, and live stock, and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, $128.91; 3 to 9 acres, $31.01; 10 to 19 acres, $16.35; 20 to 49 acres, $9.70; 50 to 99 acres, $7.86; 100 to 174 acres, $6.96; 175 to 259 acres, $6.36; 260 to 499 acres, $5.95; 500 to 999 acres, $5.52; 1,000 acres and over, $3.57.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income.

If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm. Similarly if vegetables are the leading crop, constituting 40 per cent of the net farm products, it is a "vegetable" farm. The farms of the other groups are classified in the same manner. A "miscellaneous" farm is one whose operator does not derive his principal income from any single class of farm products. Farms which yielded no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	221,897	97.4	21,619,623	100.0	$978,616,471	100.0
Hay and grain	72,091	110.8	7,989,698	37.0	371,928,338	38.0
Vegetables	4,008	39.8	159,566	0.8	11,424,810	1.2
Fruit	1,752	41.3	72,307	0.3	4,631,292	0.5
Live stock	107,887	98.6	10,638,358	49.2	477,104,236	48.8
Dairy produce	6,338	73.7	498,945	2.3	28,181,602	2.9
Tobacco	826	54.5	45,030	0.2	1,396,168	0.1
Sugar	33	57.8	1,907	(1)	80,711	(1)
Flowers and plants	166	3.7	613	(1)	865,447	0.1
Nursery products	84	74.8	6,285	(1)	472,541	(1)
Miscellaneous	28,712	76.9	2,206,914	10.2	82,536,326	8.4

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,099	$694	$123	$494	$703	15.9
Hay and grain	3,898	684	184	443	788	15.3
Vegetables	2,023	568	78	182	558	19.6
Fruit	1,714	668	72	189	512	19.4
Live stock	2,969	732	127	594	717	16.2
Dairy produce	3,002	797	117	530	724	16.9
Tobacco	1,008	381	59	202	509	30.1
Sugar	1,651	368	148	284	682	27.9
Flowers and plants	2,595	2,463	126	80	2,481	46.6
Nursery products	3,788	1,530	146	211	3,136	56.6
Miscellaneous	1,897	575	93	310	452	15.7

For the several classes of farms the average values per acre of products not fed to live stock, are as follows: Farms whose operators derive their principal income from flowers and plants, $658.34; nursery products, $42.58; vegetables,

$14.03; fruits, $12.42; sugar, $11.80; tobacco, $9.34; dairy produce, $9.19; live stock, $7.27; hay and grain, $7.11; and miscellaneous products, $5.88.

In computing these averages the total area of the farms in each group is used, and not the acreage devoted to the crop from which the principal income is derived. The wide variations in the averages and percentages of gross income are largely due to the fact that in computing gross income no deduction is made for expenses involved in operation. For florists' establishments and nurseries the average expenditure for such items as labor and fertilizers represents a much larger percentage of the gross income than in the case of "live-stock" or "miscellaneous" farms. If it were possible to present the average net income, the variations shown would be much smaller.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	221,897	97.4	21,619,623	100.0	$978,616,471	100.0
$0	789	56.1	44,266	0.2	1,631,200	0.2
$1 to $49	3,687	28.0	103,087	0.5	8,039,650	0.8
$50 to $99	8,497	31.7	269,111	1.2	8,013,660	0.8
$100 to $249	37,672	44.1	1,661,363	7.7	53,509,190	5.5
$250 to $499	56,936	69.8	3,973,160	18.4	146,030,830	14.9
$500 to $999	67,832	104.0	7,057,143	32.6	312,088,830	31.9
$1,000 to $2,499	41,126	163.6	6,728,361	31.1	350,932,971	35.8
$2,500 and over	5,358	332.8	1,783,132	8.3	103,370,140	10.6

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$8,099	$694	$123	$494	$703	15.9
$0	1,512	275	24	256		
$1 to $49	537	186	23	78	35	4.3
$50 to $99	593	227	27	96	75	7.9
$100 to $249	897	306	47	170	174	12.3
$250 to $499	1,696	474	86	309	367	14.3
$500 to $999	3,195	758	140	508	710	15.4
$1,000 to $2,499	6,216	1,188	216	913	1,488	16.9
$2,500 and over	14,311	2,340	367	2,275	3,819	19.8

Some of the farms reporting no income for 1899 were summer homes kept for pleasure rather than for profit, some were idle that year, and there were others from which no reports of the products of 1899 could be secured, as the persons in charge, June 1, 1900, did not operate the farms in 1899 and could give no information concerning the products of that year. To this extent the reports fall short of giving a complete statement of the farm income of 1899.

Of the total number of farms but 5.8 per cent yielded incomes of less than $100; 42.6 per cent yielded between $100 and $500; 30.6 per cent, between $500 and $1,000; and 21.0 per cent, over $1,000.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle was determined by their present and prospective relation to the dairy industry, and to the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	428,109	$4,197,697	$9.81	5,749
Steers	1 and under 2	205,515	4,394,549	21.38	1,115
Steers	2 and under 3	140,348	4,826,868	34.39	4,708
Steers	3 and over	35,690	1,704,357	47.75	669
Bulls	1 and over	28,728	1,118,307	38.93	106
Heifers	1 and under 2	183,193	3,660,138	19.98	1,953
Cows kept for milk	2 and over	574,276	18,285,504	31.84	87,496
Cows and heifers not kept for milk.	2 and over	88,619	2,777,104	31.34	823
Colts	Under 1	52,426	1,308,117	24.95	1,761
Horses	1 and under 2	54,820	2,365,668	43.15	1,482
Horses	2 and over	644,469	36,968,203	57.36	124,986
Mule colts	Under 1	7,165	216,355	30.20	85
Mules	1 and under 2	7,320	324,353	44.31	94
Mules	2 and over	52,232	3,176,375	60.81	4,244
Asses and burros	All ages	1,008	116,144	115.22	226
Lambs	Under 1	731,354	1,681,201	2.30	2,169
Sheep (ewes)	1 and over	940,887	3,776,066	4.02	3,690
Sheep (rams and wethers).	1 and over	70,261	337,709	4.81	450
Swine	All ages	3,763,389	13,804,893	3.67	77,395
Goats	All ages	4,484	8,920	1.99	797
Fowls:[1]					
Chickens[2]		11,103,006			
Turkeys		345,879	4,222,409		
Geese		271,004			
Ducks		230,432			
Bees (swarms of)		117,148	278,864	2.38	
Unclassified			960		
Value of all live stock			109,550,761		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was $109,550,761. Of this amount 37.1 per cent represents the value of horses; 20.7 per cent, that of neat cattle, other than dairy cows; 16.7 per cent, that of dairy cows; 12.6 per cent, that of swine; 5.3 per cent, that of sheep; 3.8 per cent, that of poultry; 3.4 per cent, that of mules and asses; and 0.4 per cent, that of all other live stock.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. If, however, the same averages are allowed, the total value of the domestic animals not on farms would be $9,412,447. Exclusive of poultry and bees not on farms, the value of all live stock in the state is approximately $118,963,200.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	574,276	1,110,202	751,715	67,725	1,010,648	3,763,389
1890	579,287	932,621	720,035	59,644	1,081,133	3,320,817
1880	491,944	868,810	581,444	51,780	1,100,511	3,186,413
1870	393,736	632,448	497,883	43,259	1,612,680	1,872,280
1860	363,553	705,837	520,677	28,893	991,175	3,099,110
1850	284,554	480,112	314,299	6,599	1,122,493	2,263,776

[1] Lambs not included.

There have been no marked changes in the numbers of domestic animals since 1890, but nearly every class shows a slight increase. Twice as many dairy cows were reported in 1900 as in 1850. The slight decrease of 0.9 per cent shown for the last decade in the item "dairy cows" is probably due to the fact that in 1900 the term was restricted to cows kept for milk at the time of the enumeration. As a result of this restriction many cows which were milked at some time during the year were doubtless classed with "cows and heifers not kept for milk." The increase in milk produced indicates that there were actually more dairy cows in the state in 1900 than in 1890.

More than twice as many "other neat cattle" were reported in 1900 as in 1850, the increase in the last decade being 19.0 per cent. The number of horses reported in 1900 was more than double that reported in 1850, the gain since 1890 being 4.4 per cent. The present census shows ten times as many mules and asses as were reported in 1850, and a gain of 13.5 per cent in the last decade. During the last half century the number of sheep has fluctuated from decade to decade, the number reported in 1900 being 9.9 per cent less than in 1850, and 6.5 per cent less than in 1890. Since 1850 the number of swine has increased 66.2 per cent, and in the last ten years 13.3 per cent.

In comparing the poultry report of 1900 with that given in the Eleventh Census (see Table 14), it should be borne in mind that in 1900 the enumerators were instructed not to report fowls under 3 months old, while in 1890 no such limitation was made. This fact doubtless explains the apparent decrease in the number of all fowls. Compared with the figures for 1890, those of the present census show decreases as follows: Geese, 37.7 per cent; ducks, 33.8 per cent; turkeys, 31.6 per cent; and chickens, 9.8 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized statement of the products of the animal industry.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	6,891,601	$1,491,743
Mohair and goat hair	Pounds	867	232
Milk	Gallons	[1]263,467,239	[2]15,739,594
Butter	Pounds	51,042,396	
Cheese	Pounds	178,733	
Eggs	Dozens	70,782,200	7,441,941
Poultry			8,172,993
Honey	Pounds	1,681,554	219,110
Wax	Pounds	27,780	
Animals sold			40,885,665
Animals slaughtered			8,016,695
Total			81,947,922

[1] Includes all milk produced, whether sold, consumed, or made into butter or cheese.
[2] Includes the value of milk sold or consumed, and of butter and cheese made.

The value of animal products in 1899 was $81,947,922, of which 59.6 per cent represents the value of animals sold and animals slaughtered on farms; 19.2 per cent, that of dairy products; 19.1 per cent, that of poultry and eggs; 1.8 per cent, that of wool, mohair, and goat hair; and 0.3 per cent, that of honey and wax.

ANIMALS SOLD AND ANIMALS SLAUGHTERED ON FARMS.

The total value of animals sold and animals slaughtered on farms in 1899 was $48,882,256, or 31.3 per cent of the gross farm income. Of all farmers reporting live stock, 185,708, or 86.6 per cent, reported animals slaughtered on farms, the average value per farm being $43.12, and there were 164,846, or 76.9 per cent, who reported sales of live animals, with an average receipt per farm of $247.90.

In obtaining reports of receipts from the sale of live animals, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

DAIRY PRODUCE.

The quantity of milk produced in 1899 exceeded the production of 1889 by 62,946,442 gallons, or 31.4 per cent. During the same time, the quantity of butter made on farms increased 5.3 per cent, while that of cheese decreased 50.5 per cent. A large part of the cheese and butter making has been transferred from the farm to the cheese factory and the creamery in the last ten years.

Of the $15,739,594 given in Table 16 as the value of all dairy products, $8,027,370, or 51.0 per cent, represents the receipts from sales of dairy products, and $7,712,224, or 49.0 per cent, the value of such products consumed on the farms of the producers. Of the former amount, $4,008,848 was received from the sale of 27,600,771 pounds of butter; $3,852,920, from 36,562,105 gallons of milk; $153,921, from 341,510 gallons of cream; and $11,681, from 132,623 pounds of cheese.

POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was $15,614,937; of this amount 52.3 per cent represents the value of poultry raised, and 47.7 per cent, the value of eggs produced. The number of dozens of eggs reported in 1900 exceeds the number reported in 1890 by 22,000,000, or 45.6 per cent.

WOOL.

In the last half century the quantity of wool produced has fluctuated from decade to decade; but for the ten years following 1890, notwithstanding a decrease of 9.9 per cent in the number of sheep, an increase of 41.7 per cent is shown. This increase is more apparent than real, owing to the fact that the fleeces of at least 301,378 sheep were omitted from the table in 1890 but were included in a general estimate of wool shorn after the census enumeration. The average weight of fleeces increased from 6.2 pounds in 1890 to 6.5 pounds in 1900. Nearly all of the counties in which wool is produced extensively are in the northeastern part of the state.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms are included which report the kind of stock under consideration.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total	202,815	751,715	3.7	193,417	574,276	3.0
White farmers	201,950	749,076	3.7	192,785	573,085	3.0
Colored farmers	865	2,639	3.1	632	1,191	1.9
Owners[1]	143,347	529,808	3.7	189,693	427,365	3.1
Managers	1,899	10,622	5.6	1,783	7,669	4.3
Cash tenants	11,458	40,834	3.6	10,328	33,235	3.2
Share tenants	46,111	170,451	3.7	41,613	106,007	2.5
Under 20 acres	16,020	28,068	1.8	13,226	20,450	1.5
20 to 99 acres	107,519	317,993	3.0	102,126	237,378	2.3
100 to 174 acres	53,163	232,586	4.4	52,375	186,915	3.6
175 to 259 acres	16,966	98,132	5.8	16,698	76,152	4.6
260 acres and over	9,147	74,936	8.2	8,993	53,381	5.9
Hay and grain	64,372	253,125	3.9	58,595	157,205	2.7
Vegetable	3,304	7,799	2.4	2,261	3,994	1.8
Fruit	1,350	3,017	2.2	1,049	2,006	1.9
Live stock	102,452	393,556	3.8	100,472	305,833	3.0
Dairy	5,569	19,566	3.5	6,338	43,887	6.9
Tobacco	640	1,607	2.5	590	1,037	1.8
Sugar	20	69	3.4	25	60	2.4
Miscellaneous[2]	25,108	72,976	2.9	24,087	60,284	2.5

[1] Including "part owners" and "owners and tenants."
[2] Including florists' establishments and nurseries.

CROPS.

The following table gives the statistics of the principal crops grown in 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	4,499,249	Bushels	178,967,070	$51,752,946
Wheat	2,893,293	Bushels	34,986,280	22,223,916
Oats	1,017,385	Bushels	34,565,070	7,458,682
Barley	9,533	Bushels	260,550	100,480
Rye	43,562	Bushels	564,300	266,487
Buckwheat	8,684	Bushels	102,340	51,300
Flaxseed	171	Bushels	1,394	1,412
Kafir corn	3	Bushels	37	14
Clover seed		Bushels	472,282	1,761,903
Grass seed		Bushels	52,863	66,146
Hay and forage	2,442,414	Tons	3,470,378	20,227,197
Tobacco	8,219	Pounds	6,882,470	445,658
Hops		Pounds	640	52
Broom corn	815	Bushels	384,170	18,285
Peanuts	11	Bushels	199	228
Dry beans	2,999	Bushels	30,171	46,281
Dry peas	533	Bushels	7,357	7,348
Potatoes	84,245	Bushels	6,209,080	2,463,074
Sweet potatoes	3,989	Bushels	239,487	155,585
Onions	2,105	Bushels	505,010	269,687
Miscellaneous vegetables	93,329			4,254,748
Maple sirup		Gallons	179,576	161,935
Maple sugar		Pounds	51,900	4,372
Sorghum cane	7,955	Tons	[1]2,569	6,750
Sorghum sirup		Gallons	579,061	186,306
Small fruits	[1]3,115			1,113,527
Grapes	[2]5,011	Centals	186,514	[3]350,304
Orchard fruits	[2]267,953	Bushels	9,304,482	[4]3,166,338
Nuts		Bushels	12,031	6,254
Peppermint	879	Pounds	22,380	19,557
Forest products				5,235,459
Willows	22	Tons	111	2,224
Flowers and foliage plants	174			400,730
Vegetable and other seeds	79			8,502
Nursery products	1,646			254,893
Miscellaneous	395			[5]16,599
Total	11,407,798			122,502,274

[1] Sold as cane.
[2] Estimated from number of trees or vines.
[3] Including value of raisins, wine, etc.
[4] Including value of cider, vinegar, etc.
[5] The greater part of this value was derived from products for which no acreage was reported.

To the total value of crops, corn contributed 42.3 per cent; wheat, 18.1 per cent; other cereals, 6.4 per cent; hay and forage, 16.5 per cent; vegetables, including potatoes, sweet potatoes, and onions, 5.8 per cent; forest products, 4.3 per cent; fruits, 3.8 per cent; and all other crops, 2.8 per cent.

The average values per acre of the various crops are as follows: Flowers and plants, $2,303; nursery products, $155; onions, $128; vegetable and other seeds, $108; willows, $101; small fruits, $85; grapes, $69; tobacco, $54; miscellaneous vegetables, $46; sweet potatoes, $39; Irish potatoes, $29; peppermint, $22; dry beans and dry peas, $15; orchard fruits, $12; cereals, $10; and hay and forage, $8. The crops yielding the highest average returns per acre were grown upon highly improved land. Their production involved the use of expensive machinery and, in addition, required a relatively great amount of labor and large expenditures for fertilizers.

CEREALS.

Table 19 is a statement of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	9,533	8,684	4,499,249	1,017,385	43,552	2,893,293
1889	10,280	9,548	3,586,190	1,102,479	62,890	2,670,017
1879	16,399	8,846	3,578,420	623,531	25,400	2,619,695

[1] No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899	260,550	102,340	178,967,070	34,565,070	564,300	84,986,280
1889	250,200	99,959	108,843,094	31,491,661	877,552	37,818,798
1879	382,835	89,707	115,482,300	15,599,518	303,105	47,284,853
1869	356,262	80,231	51,094,538	8,590,409	457,468	27,747,222
1859	332,245	396,989	71,558,919	5,317,831	463,495	16,848,267
1849	45,483	149,740	52,964,363	5,055,014	78,792	6,214,458

The total area devoted to cereals in 1879 was 6,972,291 acres; in 1889, 7,341,404 acres; and in 1899, 8,471,706 acres. The increases in the acreages devoted to cereals in the last decade were: Corn, 25.5 per cent; and wheat, 12.6 per cent. The decreases were: Oats, 7.7 per cent; rye, 31.7 per cent; barley, 7.3 per cent; and buckwheat, 9.0 per cent. The total number of bushels of cereals grown in 1849 was 65,107,850, and in 1899, 249,445,610.

Of the total acreage for cereals in 1899, 53.1 per cent was devoted to corn; 34.2 per cent, to wheat; 12.0 per cent, to oats; 0.5 per cent, to rye; and 0.2 per cent, to barley and buckwheat.

In 1899 the yields per acre in bushels were as follows: Barley, 27.3; buckwheat, 11.8; corn, 39.8; oats, 33.9; rye, 13.0; and wheat, 12.1. The average production of barley in 1889 was 24.3 bushels per acre; buckwheat, 10.5; corn, 30.4; oats, 28.6; rye, 14.0; and wheat, 14.5. The decreased yields per acre of rye and wheat were due to the effects of the severe winter of 1898–99. Increased yields are shown for all spring-sown crops.

HAY AND FORAGE.

In 1900, 167,672 farmers, or 75.6 per cent of the total number, reported hay and forage crops, of which they obtained an average yield, excluding cornstalks, of 1.2 tons per acre. The total area devoted to hay and forage in 1899 was 2,442,414 acres, an increase of 4.8 per cent over the area reported ten years before. Of the various kinds of hay and forage, the acreages and yields were as follows: Wild, salt, and prairie grasses, 137,721 acres and 156,329 tons; millet and Hungarian grasses, 21,273 acres and 30,203 tons; alfalfa or lucern, 844 acres and 1,266 tons; clover, 776,810 acres and 955,811 tons; other tame and cultivated grasses, 1,365,815 acres and 1,555,764 tons; grains cut green for hay, 67,757 acres and 87,215 tons; crops grown for forage, 72,194 acres and 119,020 tons; and cornstalks, 446,422 acres and 564,770 tons.

In Table 18 the production of cornstalks is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	8,624,593	6,089,106	8,020,278	8,784,038
Apricots	9,686	9,049	757	850
Cherries	896,641	617,108	228,485	199,939
Peaches	2,925,526	953,980	63,333	307,084
Pears	868,184	204,579	231,713	157,707
Plums and prunes	723,815	146,378	131,529	80,852

Of the farmers of the state 122,838, or 55.4 per cent, reported orchard fruits in 1899. The value of orchard products was not reported by the census of 1890, but in 1880 the reported value of such products was $2,757,359, and for 1899 the corresponding value was $3,166,338, a gain in twenty years of 14.8 per cent. The number of orchard trees increased from 8,020,260 in 1890 to 14,123,479 in 1900, the gains in the numbers of the most important fruit trees being as follows: Apple trees, 41.6 per cent; peach trees, 206.7 per cent; cherry trees, 45.3 per cent; and pear trees, 324.4 per cent.

Of the total number of trees in 1900, apple trees constituted 61.1 per cent; peach trees, 20.7 per cent; cherry trees, 6.4 per cent; pear trees, 6.1 per cent; and other fruit trees, 5.7 per cent. The corresponding percentages in 1890 were: 75.9, 11.9, 7.7, 2.6, and 1.9. Apple trees were reported in 1900 by 156,514 farmers, and in greatest numbers in Harrison, Allen, and Greene counties. The southeastern counties of Clark, Harrison, Washington, and Jefferson reported the largest numbers of peach trees, while other varieties of fruit trees were quite evenly distributed throughout the state.

In addition to the trees shown in Table 20, there were 75,134 unclassified orchard trees, with a yield of 22,987 bushels of fruit. The value of orchard products given in Table 18 includes the value of 150,727 barrels of cider, 37,976 barrels of vinegar, and 494,860 pounds of dried and evaporated fruits.

As the quantity of fruit produced in any year is determined largely by the nature of the season, comparisons between the crop of 1899 and that of 1889 can not properly be used as indications of the progress or decline of the industry.

VEGETABLES.

The value of the vegetables grown in 1899, including potatoes, sweet potatoes, and onions, was $7,148,094, and of this amount the value of potatoes constituted about one-third. In addition to the land devoted to potatoes, sweet potatoes, and onions, 93,329 acres were used in the growing of miscellaneous vegetables. Of this area the products of 51,535 acres were not reported in detail. Of the 41,794 acres, concerning which detailed reports were received,

14,845 acres were devoted to tomatoes; 8,418, to watermelons; 6,072, to sweet corn; 4,640, to cabbages; 3,517, to muskmelons; 2,300, to cucumbers; 1,133, to green pease; and 869, to other vegetables.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 13,115 acres, distributed among 55,913 farms. The value of the fruits grown was $1,113,527, an average of $19.92 per farm. The acreage and production of the various berries were as follows: Strawberries, 4,714 acres and 9,669,710 quarts; raspberries and Logan berries, 3,277 acres and 4,210,900 quarts; blackberries and dewberries, 3,192 acres and 5,255,840 quarts; gooseberries, 617 acres and 1,077,840 quarts; currants, 577 acres and 1,044,025 quarts; and other berries, 738 acres and 829,890 quarts.

TOBACCO.

According to the census of 1850 Indiana produced 1,044,320 pounds of tobacco in 1849. The census of 1860 showed a gain of 6,948,758 pounds, or 665.2 per cent, and the census of 1870, a gain over the crop of 1859 of 1,332,014 pounds, or 16.7 per cent. In each of the three decades since 1870, however, there has been a falling off in the crop of the state. Between 1870 and 1880 there was a decrease of 452,550 pounds, or 4.9 per cent; and in the following decade, a loss of 1,162,545 pounds, or 13.1 per cent.

The present census shows that in 1899 tobacco was cultivated in Indiana by 3,990 farmers, who obtained from 8,219 acres a yield of 6,882,470 pounds, valued at $445,658. These figures show a decrease since 1889 of 1,154 acres, or 12.3 per cent in area, and of 827,827 pounds, or 10.7 per cent in production. The average area devoted to tobacco in 1899 was 2.1 acres per farm reporting. The average yield per acre was 837 pounds in 1899, 823 pounds in 1889, and 742 pounds in 1879. The average value per pound in 1899 was 6.5 cents.

Tobacco was grown in 1899 in 80 counties of the state, the leading county being Switzerland, which contained 32.8 per cent of the acreage and yielded 35.0 per cent of the total production. The counties next in rank were Spencer and Warrick, which, with Switzerland county, contributed 67.2 per cent of the acreage, and 67.6 per cent of the production of the state.

SORGHUM CANE.

The present census shows that, in 1899, 19,232 farmers cultivated 7,955 acres of sorghum cane, which was 35.6 per cent less than was cultivated in 1889. Of the total quantity of cane 2,569 tons were sold for $6,750 and the remainder was manufactured into 579,061 gallons of sirup, valued at $186,306. The crop reached the highest point in 1869, when 2,026,212 gallons of sirup were produced.

The crop was grown in 91 counties of the state, the area ranging from 1 acre in Ohio county to 477 acres in Gibson county. The average area for each farm reporting was 0.4 acre. The total value of sorghum-cane products in 1899 was $193,056, an average of $10 for each farm reporting. The average value per gallon of sirup was 32.2 cents.

FLORICULTURE.

In 1899 the operators of 244 farms, including 166 commercial florists' establishments, raised flowers and foliage plants valued at $400,730. The 166 commercial florists derived a gross income of $403,563, of which $391,708 was obtained from the sale of flowers and plants and $11,855 from other products. The capital invested was $430,678 in land, $408,907 in buildings and other improvements, $20,825 in implements, and $5,037 in live stock. The expenditure for labor was $86,395, and for fertilizers, $3,752.

Of 3,212,380 square feet of land under glass the 166 florists reported 1,237,218 square feet, and 930 truck farmers, 1,975,162 square feet.

NURSERIES.

The 84 commercial nurserymen in the state reported sales of nursery stock in 1899 amounting to $236,391, and other products valued at $31,227. The total area of their farms was 6,285 acres and the gross income per acre, $42.58. The investments were, $313,971 in land, $128,565 in buildings and other improvements, $17,767 in live stock, and $12,238 in implements. Labor cost $54,137, and fertilizers, $2,690.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was $9,685,540, an average of $44 per farm. The average was highest on the most intensively cultivated farms, being $644 for nurseries, $520 for florists' establishments, $67 for dairy farms, $59 for vegetable farms, $55 for fruit farms, $51 for hay and grain farms, $41 for live-stock farms, $22 for sugar farms, and $16 for tobacco farms. "Managers" expended on an average $230; "cash tenants," $42; "owners," $41; and "share tenants," $36. White farmers expended $44 per farm, and colored farmers, $20.

Fertilizers purchased in 1899 cost $1,553,710, an average of $7 per farm and an increase since 1890 of 99.8 per cent. The average expenditure was $32 for nurseries, $23 for florists' establishments, $8 for hay and grain farms, $7 for fruit farms, $6 for live-stock farms, and $5 for vegetable, dairy, tobacco, and sugar farms.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 183. WASHINGTON, D. C. June 6, 1902.

AGRICULTURE.

MICHIGAN.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture for the state of Michigan, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of Michigan, June 1, 1900, numbered 203,261, and were valued at $582,517,710, of which amount, $158,947,760, or 27.3 per cent, represents the value of buildings, and $423,569,950, or 72.7 per cent, the value of the land and improvements other than buildings. On the same date the value of farm implements and machinery was $28,795,380, and of live stock, $79,042,644. These values, added to that of farms, give $690,355,734, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold or slaughtered on farms, are referred to in this bulletin as "animal products." The total value of such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $146,547,681, of which amount $53,921,966, or 36.8 per cent, represents the value of animal products, and $92,625,715, or 63.2 per cent, the value of crops, including forest products. The total value of farm products for 1899 exceeds that reported for 1889 by $62,896,291, or 75.2 per cent. A portion of this increase is doubtless the result of a more detailed enumeration in 1900 than heretofore.

The value of "net farm products," or the "gross farm income," is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was $36,761,400, leaving $109,786,281 as the gross farm income. The ratio which this latter amount bears to the "total value of farm property" is referred to in this bulletin as the "percentage of gross income upon investment." For Michigan in 1899 it was 15.9 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the report on agriculture in the United States. The present publication is designed to present a summarized advance statement for Michigan.

Very respectfully,

L. G. Powers.

Chief Statistician for Agriculture.

AGRICULTURE IN MICHIGAN.

GENERAL STATISTICS.

The total land surface of Michigan comprises 57,430 square miles, or 36,755,200 acres, of which 17,561,698 acres, or 47.8 per cent, are included in farms.

Michigan is divided by the Great Lakes into two peninsulas, the upper and the lower. The upper peninsula, famed for its mineral wealth, is rugged and picturesque in the west, while the eastern portion is an undulating plateau nearly covered by extensive pine forests. Agriculture is a minor industry.

The surface of the lower peninsula is almost uniformly level and the entire central part, from Lake Michigan to Lake Huron, is a broad tract of fine agricultural land, seldom attaining an elevation of 75 feet above the surface of the lakes. This region is dotted with hundreds of small lakes and shallow swamps, filled with marl and peat. These swamps, when properly drained, are exceedingly fertile and productive, and yield immense quantities of celery and garden vegetables. The soil is a glacial drift of varying depth and fertility.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	203,261	17,561,698	11,799,250	5,762,448	86.4	67.2
1890	172,344	14,785,636	9,865,350	4,920,286	85.8	66.7
1880	154,008	13,807,240	8,296,862	5,510,378	89.7	60.1
1870	98,786	10,019,142	5,096,939	4,922,203	101.4	50.9
1860	62,422	7,080,884	3,476,296	3,554,588	112.6	49.4
1850	84,089	4,383,890	1,929,110	2,454,780	128.6	44.0

The number of farms reported, June 1, 1900, was nearly six times as great as the number reported in 1850, and 17.9 per cent greater than in 1890, but during the half century the total area in farms increased only a little over four times. In consequence of the disparity in these rates of increase, the average size of farms decreased in each decade except the last. The percentage of improved farm land has increased in each decade, but owing to a more strict interpretation of the term "improved land" by the Twelfth Census than by preceding censuses, the gain for the last decade is comparatively slight.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[1]
1900	$690,355,784	$582,517,710	$28,795,880	$79,042,644	$146,547,681
1890	647,938,255	556,190,670	22,182,609	69,564,985	83,651,390
1880	574,242,054	499,103,181	19,419,369	55,720,118	91,159,558
1870[2]	401,762,426	395,240,578	13,711,979	49,809,869	[3]81,508,923
1860	190,371,098	163,836,495	5,810,832	23,714,771	----------
1850	62,772,551	51,872,440	2,891,371	8,008,734	----------

[1] For year preceding that designated.
[2] Values for 1870 were reported in depreciated currency. To reduce to specie basis of the other years they must be diminished one-fifth.
[3] Includes betterments and additions to live stock.

The gain in the last decade in the total value of farm property was $42,417,479, or 6.5 per cent. The increase in the value of land, improvements, and buildings was $26,327,040, or 4.7 per cent; that of implements and machinery, $6,612,780, or 29.8 per cent; and in that of live stock, $9,477,659, or 13.6 per cent. The value of farm products for 1899 exceeds that for 1889 by $62,896,291, or 75.2 per cent. A portion of this increase, and of that shown for implements and machinery, is doubtless the result of a more detailed enumeration in 1900 than heretofore.

COUNTY STATISTICS.

Table 3 gives a statement of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State	203,261	198,063	17,561,698	11,799,250	$423,569,950	$158,947,760	$28,795,880	$79,042,644	$109,786,281	$10,717,220	$492,360
Alcona	743	728	60,793	23,391	501,910	194,120	71,840	281,816	248,995	19,090	90
Alger	124	120	14,536	2,290	85,290	27,080	10,740	80,328	46,791	5,240	350
Allegan	6,089	5,949	461,066	388,514	12,223,260	4,856,110	825,260	1,945,598	2,825,954	280,740	13,150
Alpena	1,187	1,157	120,285	88,238	988,470	361,630	122,330	357,008	471,709	92,630	1,900
Antrim	1,283	1,248	106,827	55,524	1,278,210	536,250	150,930	446,100	573,252	55,920	800

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.					EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.	Value of products not fed to live stock.	Labor.	Fertilizers.
Arenac	1,186	1,151	79,788	35,526	$799,620	$314,580	$110,060	$300,281	$280,241	$20,850	$430
Baraga	241	237	29,058	5,809	186,940	90,470	25,240	57,748	98,111	17,080	640
Barry	3,570	3,446	342,157	251,826	7,732,010	2,814,100	558,050	1,467,409	2,048,212	196,770	4,290
Bay	3,193	3,115	196,343	120,605	5,610,130	1,934,320	465,550	1,006,945	1,496,587	210,700	7,470
Benzie	949	930	67,814	30,951	830,750	356,580	81,230	192,256	263,239	18,870	960
Berrien	5,091	4,957	340,930	263,564	15,256,280	5,077,270	748,580	1,583,205	3,206,441	446,730	17,990
Branch	3,475	3,429	309,246	227,385	8,794,170	3,541,080	521,740	1,628,843	2,247,743	182,640	2,950
Calhoun	4,100	4,002	426,590	321,221	11,263,550	4,805,800	698,720	1,961,279	2,996,369	331,350	10,740
Cass	2,609	2,566	307,951	232,601	8,619,580	2,593,580	417,700	1,177,451	1,623,430	163,750	3,330
Charlevoix	1,295	1,264	104,930	45,076	1,200,540	545,490	149,930	413,873	555,099	24,370	980
Cheboygan	1,161	1,119	95,689	35,379	1,059,470	428,060	125,830	316,047	469,191	38,070	1,810
Chippewa	1,036	1,008	121,297	48,574	1,206,390	382,780	146,760	420,639	515,003	56,530	510
Clare	852	833	82,236	28,420	657,700	227,390	55,990	257,368	260,812	19,350	300
Clinton	3,777	3,722	356,827	277,681	10,475,460	3,833,580	630,990	1,945,461	2,616,427	229,750	1,250
Crawford	228	222	29,248	7,823	123,050	48,300	22,010	58,308	105,487	13,480	120
Delta	868	849	93,710	33,088	881,530	390,930	136,730	327,962	535,444	60,790	750
Dickinson	118	102	12,395	5,070	133,210	68,950	17,760	57,656	70,641	25,600	1,070
Eaton	4,193	4,105	351,743	264,528	9,640,330	3,946,480	661,900	1,816,683	2,894,155	180,890	7,570
Emmet	1,134	1,103	101,701	38,188	1,369,060	497,610	136,490	369,204	491,735	29,150	210
Genesee	4,501	4,411	400,681	312,826	11,105,480	4,879,160	702,670	2,192,207	3,170,858	310,340	15,830
Gladwin	769	750	60,878	25,060	599,130	206,360	78,940	218,506	207,030	12,030	40
Gogebic	80	76	3,701	1,044	33,820	24,780	5,440	18,014	15,788	6,250	630
Grand Traverse	1,722	1,682	148,649	88,423	2,502,220	1,049,820	226,480	567,877	863,484	82,060	1,400
Gratiot	4,587	4,523	322,652	221,038	7,311,480	2,591,850	635,790	1,821,789	2,264,195	159,170	3,710
Hillsdale	4,391	4,322	390,614	297,181	10,045,720	4,520,450	666,870	2,052,270	2,885,287	230,100	7,390
Houghton	362	340	48,452	18,193	503,350	227,510	60,680	125,641	254,031	42,820	850
Huron	4,871	4,758	486,096	307,044	7,462,440	2,911,960	774,530	2,192,966	2,948,979	179,580	16,110
Ingham	3,815	3,673	346,444	256,088	9,543,900	3,485,310	563,230	1,700,075	2,697,711	245,280	8,720
Ionia	4,052	3,944	355,466	279,503	9,489,960	3,883,850	626,880	1,857,550	2,367,122	248,590	10,060
Iosco	743	714	63,353	25,156	576,920	237,400	78,100	242,905	243,241	23,180	480
Iron	231	221	22,979	5,250	133,460	65,780	18,290	65,999	67,171	7,660	20
Isabella	3,436	3,376	254,062	158,462	4,271,310	1,507,170	360,520	1,190,876	1,338,132	94,390	1,630
Jackson	3,860	3,777	426,215	315,643	10,991,990	4,460,020	691,620	1,958,502	2,874,495	321,860	11,570
Kalamazoo	3,308	3,212	336,537	267,949	10,481,820	3,671,380	619,680	1,464,587	2,298,485	287,070	11,330
Kalkaska	679	667	56,892	27,388	674,070	295,390	86,660	200,665	328,020	21,570	350
Kent	6,554	6,410	490,090	362,902	15,030,270	5,714,890	981,530	2,231,759	3,425,825	370,140	24,590
Keweenaw	22	18	3,708	1,541	28,580	8,870	4,260	8,700	22,808	2,370	20
Lake	625	597	60,421	24,831	545,590	208,140	64,200	184,038	190,904	6,960	180
Lapeer	4,551	3,980	393,611	283,783	8,017,410	3,431,170	593,700	1,807,783	2,383,382	248,490	12,980
Leelanaw	1,305	1,316	142,858	65,528	1,308,760	917,770	193,380	459,193	609,419	63,160	1,090
Lenawee	5,562	5,500	409,848	374,770	15,495,740	6,339,160	966,490	2,791,376	4,005,543	412,970	19,140
Livingston	3,082	3,027	351,687	250,965	8,595,360	3,375,550	499,010	1,519,951	2,071,804	209,830	890
Luce	144	135	13,730	4,380	137,560	50,970	16,330	44,534	78,068	11,940	680
Mackinac	394	387	47,490	15,147	385,580	126,980	47,500	121,201	152,485	21,970	120
Macomb	3,862	3,807	286,366	222,753	11,525,700	3,993,480	705,410	1,633,112	2,244,447	260,920	84,080
Manistee	1,311	1,258	114,636	58,908	1,634,630	712,510	158,860	441,126	517,898	49,690	1,090
Marquette	513	491	58,093	17,818	523,350	244,410	61,150	172,168	217,511	30,960	5,940
Mason	1,885	1,842	131,162	71,974	2,493,710	937,260	224,490	509,847	553,634	57,260	380
Mecosta	2,970	2,849	250,077	131,390	2,765,820	1,079,220	277,340	766,283	886,621	56,260	1,180
Menominee	1,430	1,398	132,710	46,029	1,485,950	622,880	197,540	547,120	579,865	81,440	1,700
Midland	2,153	2,092	148,817	72,214	1,990,540	800,970	208,130	603,178	707,087	28,690	1,090
Missaukee	1,036	987	101,414	33,498	761,420	281,000	83,330	305,853	375,100	19,510	200
Monroe	4,458	4,338	328,490	265,138	11,210,760	4,052,650	710,330	1,720,484	2,775,428	294,470	20,850
Montcalm	4,714	4,613	371,511	248,376	5,701,450	2,476,770	490,420	1,402,929	1,746,545	145,410	2,990
Montmorency	336	320	35,322	11,029	295,020	92,520	34,560	103,638	151,248	17,330	300
Muskegon	2,331	2,262	175,057	98,655	3,056,360	1,254,560	251,400	638,586	983,696	84,220	6,080
Newaygo	2,846	2,748	281,464	136,997	3,153,960	1,366,020	301,210	848,085	873,572	60,870	190
Oakland	4,977	4,841	548,399	405,014	15,864,060	6,817,230	817,980	2,435,705	3,399,838	462,690	19,650
Oceana	2,550	2,578	213,610	120,001	3,598,400	1,465,620	293,030	729,784	1,051,925	83,180	1,310
Ogemaw	811	780	72,846	29,229	695,460	220,880	66,750	264,620	241,267	9,380	3,340
Ontonagon	187	183	26,013	5,570	228,500	77,850	23,470	47,804	69,684	11,490	----------
Osceola	2,287	2,230	187,664	96,232	2,140,360	819,340	231,230	678,029	824,100	52,740	4,210
Oscoda	210	207	30,587	7,976	147,000	44,550	16,870	71,638	71,480	5,630	----------
Otsego	570	556	47,605	21,801	535,610	191,180	96,640	162,819	255,978	24,030	90
Ottawa	4,522	4,401	319,440	230,264	8,396,730	3,183,460	605,100	1,481,138	2,200,192	142,930	10,680
Presque Isle	846	834	88,604	26,034	845,560	257,160	118,260	252,151	372,488	29,560	----------
Roscommon	136	134	23,201	4,219	100,280	22,060	9,350	44,287	80,893	5,380	1,910
Saginaw	5,818	5,652	434,990	288,021	11,074,520	4,144,200	882,610	2,816,470	2,896,988	305,560	2,420
St. Clair	4,980	4,819	422,017	310,021	10,140,790	3,301,940	628,820	1,747,679	2,383,156	195,420	33,170
St. Joseph	2,697	2,620	303,516	253,827	8,144,950	2,776,420	391,660	1,066,507	1,589,299	168,200	4,790
Sanilac	5,820	5,641	587,273	398,039	8,269,680	3,166,730	705,640	2,424,463	2,784,242	180,810	11,810
Schoolcraft	352	327	38,664	10,613	314,900	124,140	37,170	94,042	187,851	13,390	730
Shiawassee	3,768	3,668	334,895	260,650	8,941,480	3,655,550	616,700	1,815,028	2,506,845	220,400	2,160
Tuscola	5,492	5,307	443,875	301,147	9,183,020	3,303,280	745,580	2,176,377	2,719,722	270,770	5,880
Van Buren	4,842	4,679	363,141	277,786	10,726,540	3,627,660	580,150	1,500,297	2,437,110	288,770	12,700
Washtenaw	4,151	4,042	422,902	332,344	12,430,660	5,990,720	816,690	2,215,695	3,246,504	488,520	9,830
Wayne	5,131	5,042	325,891	255,885	26,437,410	5,885,170	911,350	1,937,758	3,356,848	851,410	57,760
Wexford	1,340	1,310	106,554	51,241	1,146,420	441,390	120,650	402,951	548,480	82,490	120

In most counties the number of farms increased rapidly in the last decade and in nearly one-fifth of them more than twice as many farms were reported in 1900 as in 1890. Barry, Eaton, Hillsdale, and Oscoda counties show slight decreases.

Increases in the total farm acreage occurred in all counties except Keweenaw, Oscoda, and Washtenaw. These three counties, together with Livingston and Oakland, also showed decreases in improved acreage. In 1900 nearly one-sixth of the counties reported double the acreage reported ten years before. The average size of the farms of the state is 86.4 acres, ranging from 46.3 acres in Gogebic county to 170.6 acres in Roscommon county. As a rule, it is largest in the counties of the northern peninsula.

For the state, the average value of farms is $2,866. Nearly three-fourths of the counties show an increase in the value of land and improvements since 1890. With three exceptions, the counties showing decreased values are in the extreme southern part of the state, where the average value per farm is much higher than elsewhere, being in some counties more than $4,000. For the state, the average value of implements and machinery, June 1, 1900, was $141.67. Oakland county alone shows a decrease since 1890.

Keweenaw, in the northern peninsula, and twelve counties in the lower part of the southern peninsula, report lower values of live stock than they reported ten years before. In almost every county in the northern peninsula the value reported in 1900 was more than twice as great as in 1890.

The average expenditure per farm for labor in 1899 was greatest in the northern and southern counties, the central counties, as a rule, expending only about one-fourth as much. For fertilizers, the average expenditure per farm in 1899 was more than twice as great as in 1889. It varied greatly in the different counties but was generally largest in the southern counties.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900.

The farms operated by tenants are divided into groups designated as farms operated by "cash tenants," and farms operated by "share tenants." These groups comprise, respectively: (1) Farms operated by individuals who pay a cash rental or a stated amount of labor or farm produce; (2) farms operated by individuals who pay as rental a stated share of the products.

In Table 5 farms of specified tenures are classified for 1900 according to race of farmer, and "farms operated by owners" are subdivided into groups, designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	203,261	171,048	9,731	22,482	84.1	4.8	11.1
1890	172,344	148,208	8,212	15,924	86.0	4.8	9.2
1880	154,008	138,597	5,015	10,396	90.0	3.3	6.7

[1] Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	203,261	150,871	15,618	2,825	2,284	9,781	22,482
White	202,288	150,167	15,532	2,819	2,231	9,693	22,346
Colored	973	704	86	6	3	38	136
Indian	347	313	7	4		10	13
Negro	626	391	79	2	3	28	123

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	74.2	7.7	1.1	1.1	4.8	11.1
White	100.0	74.2	7.7	1.1	1.1	4.8	11.1
Colored	100.0	72.4	8.8	0.6	0.3	3.9	14.0

Since 1880 the total number of farms has increased 49,253, or 32.0 per cent. In the same period owners increased in number 32,451, or 23.4 per cent; cash tenants, 4,716, or 94.0 per cent; and share tenants, 12,086, or 116.3 per cent. As shown in Table 4, the increase in the number of farms operated by tenants was greatest between 1880 and 1890, while the most rapid increase in the number of farms operated by owners was in the last decade.

Although the tenant-operated farms comprise but 15.9 per cent of the total, their number is rapidly increasing. Since 1890 the number of farms operated by cash tenants has increased but 18.5 per cent, while those of share tenants show a gain of 41.2 per cent. One-half of the tenant farms are hay and grain and live-stock farms.

Of the farms of the state 99.5 per cent are operated by white farmers and 0.5 per cent by colored farmers. Of the white farmers 83.0 per cent own all or a part of the farms they operate and 17.0 per cent operate farms owned by others. For the colored farmers, the corresponding percentages are 81.8 and 18.2. Three-fourths of the negro farmers are owners or part owners, and most of the remainder are share tenants. The Indian farmers are nearly all owners.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number of farms conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER, AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	203,261	86.4	17,561,698	100.0	$690,355,734	100.0
White farmers	202,288	86.6	17,508,295	99.7	688,605,612	99.7
Negro farmers	626	61.1	38,259	0.2	1,441,866	0.2
Indian farmers	347	43.6	15,144	0.1	308,256	0.1
Owners	159,871	79.7	12,023,620	68.5	460,800,467	66.7
Part owners	15,618	114.9	1,793,841	10.2	68,793,974	10.0
Owners and tenants	2,325	112.2	260,816	1.5	10,955,379	1.6
Managers	2,234	189.9	424,311	2.4	19,342,574	2.8
Cash tenants	9,731	74.0	719,713	4.1	36,920,662	5.3
Share tenants	22,482	104.1	2,339,397	13.3	93,542,678	13.6

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER, AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,084	$782	$141	$389	$543	15.9
White farmers	2,088	784	142	390	542	15.9
Negro farmers	1,540	404	89	270	364	15.8
Indian farmers	563	157	45	123	133	15.0
Owners	1,821	730	136	367	505	16.5
Part owners	2,817	939	175	474	698	15.9
Owners and tenants	2,845	1,147	189	581	731	15.5
Managers	5,802	1,801	260	792	1,089	12.6
Cash tenants	2,549	760	130	355	525	13.8
Share tenants	2,691	892	144	434	596	14.3

The average area, value, and gross income of farms, and the percentage of gross income, are higher for white than for colored farmers, and higher for negro than for Indian farmers. The aggregate value of the farm property of negroes and Indians constitutes but three-tenths of 1 per cent of the total for the state.

The large size, and the relatively high average values of the several classes of farm property, shown for farms operated by managers are due in part to the fact that a number of these farms are adjuncts of public institutions, while others belong to wealthy individuals and are operated in connection with their summer homes. Such farms are not, as a rule, operated primarily for profit, which fact explains the comparatively low percentage of gross income shown for this group.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	203,261	86.4	17,561,698	100.0	$690,355,734	100.0
Under 3 acres	1,058	2.0	2,161	(1)	1,457,641	0.2
3 to 9 acres	5,077	5.8	29,693	0.2	6,493,843	0.9
10 to 19 acres	7,335	13.4	98,517	0.6	11,540,213	1.7
20 to 49 acres	59,197	36.9	2,183,382	12.4	98,263,277	14.2
50 to 99 acres	71,021	74.7	5,305,994	30.2	213,183,341	30.9
100 to 174 acres	43,741	130.1	5,692,182	32.4	215,608,248	31.2
175 to 259 acres	10,815	209.0	2,259,851	12.9	83,035,256	12.0
260 to 499 acres	4,364	324.5	1,415,908	8.1	48,005,059	7.0
500 to 999 acres	517	628.3	324,843	1.8	9,451,985	1.4
1,000 acres and over	136	1,832.6	249,237	1.4	3,316,871	0.5

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,084	$782	$141	$389	$543	15.9
Under 3 acres	42	1,177	51	108	465	53.8
3 to 9 acres	628	506	58	94	211	16.5
10 to 19 acres	901	486	60	126	237	15.1
20 to 49 acres	951	415	83	211	283	17.0
50 to 99 acres	1,802	598	139	363	488	16.3
100 to 174 acres	3,070	1,108	197	554	772	15.7
175 to 259 acres	4,991	1,609	263	815	1,140	14.9
260 to 499 acres	7,351	2,187	335	1,127	1,605	14.6
500 to 999 acres	13,080	2,878	485	1,839	2,707	14.8
1,000 acres and over	17,496	3,445	692	2,756	4,159	17.0

The group of farms containing from 50 to 99 acres each comprises a larger number of farms than any other, and the combined areas and farm property of this and the next higher group comprise about two-thirds of the total area of farms and 62.1 per cent of the total value of farm property.

With few exceptions the average values of all classes of farm property increase with the size of the farms. For the group of farms of less than 3 acres each, the values are relatively high, as it includes a large number of market gardens, city dairies, poultry farms, and florists' establishments. The income from these industries is determined, not so much by the acreage of land used, as by the amount of capital invested in buildings, live stock, and implements, and the amount expended for labor and fertilizers.

The average gross incomes per acre for the various

groups classified by area are as follows: Farms under 3 acres, $227.78; 3 to 9 acres, $36.05; 10 to 19 acres, $17.67; 20 to 49 acres, $7.66; 50 to 99 acres, $6.53; 100 to 174 acres, $5.98; 175 to 259 acres, $5.48; 260 to 499 acres, $4.95; 500 to 999 acres, $4.31; 1,000 acres and over, $2.26.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

In Tables 10 and 11 farms are classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm; similarly, if vegetables are the leading crop, constituting 40 per cent of the value of the net farm products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of farm products. Farms which yielded no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	203,261	86.4	17,561,698	100.0	$690,355,784	100.0
Hay and grain	88,582	96.5	3,724,329	21.2	147,773,047	21.4
Vegetables	9,343	55.2	515,950	3.0	24,837,922	3.6
Fruits	5,354	46.7	250,077	1.4	19,221,490	2.8
Live stock	68,998	91.6	6,322,083	36.0	252,270,018	36.5
Dairy produce	14,116	76.2	1,076,061	6.1	46,880,703	6.8
Sugar	694	54.5	37,792	0.2	2,189,470	0.3
Flowers and plants	215	6.0	1,290	(1)	1,496,930	0.2
Nursery products	54	111.6	6,029	(1)	528,530	0.1
Miscellaneous	65,905	85.4	5,628,087	32.1	195,157,684	28.3

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,804	$782	$141	$389	$540	15.9
Hay and grain	2,549	799	136	346	546	14.3
Vegetables	1,752	580	109	227	452	17.0
Fruits	2,292	965	122	211	636	17.7
Live stock	2,141	876	159	480	586	16.0
Dairy produce	2,018	742	133	428	509	15.3
Sugar	2,125	625	135	270	561	17.8
Flowers and plants	3,766	2,957	189	50	2,468	35.4
Nursery products	7,007	1,867	533	381	6,288	64.2
Miscellaneous	1,785	690	135	351	489	16.5

For the several classes of farms the average values per acre of products not fed to live stock are as follows: Farms whose operators derive their principal income from flowers and plants, $411.31; nursery stock, $56.32; fruit, $13.01; sugar, $10.29; vegetables, $8.18; dairy produce, $6.68; live stock, $6.39; miscellaneous, $5.78; hay and grain, $5.66.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that in computing gross income no deduction is made for expenditures in operation. For florists' establishments, nurseries, and fruit farms, the average expenditure for such items as labor and fertilizers represents a far greater percentage of the gross income than in the case of "hay and grain," "live stock," or "miscellaneous" farms. If it were possible to present the average net income, the variations shown in the percentages of income on investment would be much smaller.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	203,261	86.4	17,561,698	100.0	$690,355,784	100.0
$0	906	56.9	51,511	0.3	1,001,420	0.1
$1 to $19	4,252	43.1	183,294	1.0	3,670,240	0.5
$20 to $99	9,209	41.9	386,247	2.2	9,897,430	1.4
$100 to $249	42,390	49.7	2,106,028	12.0	61,871,349	9.0
$250 to $499	64,482	68.7	4,427,379	25.2	161,612,475	23.4
$500 to $999	57,724	104.0	6,001,466	34.2	250,929,264	36.4
$1,000 to $2,499	22,499	168.4	3,788,279	21.6	173,500,396	25.1
$2,500 and over	1,799	343.2	617,499	3.5	28,473,170	4.1

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$2,084	$782	$141	$389	$540	15.9
$0	763	201	30	111	----------	(1)
$1 to $49	539	190	33	78	29	3.5
$50 to $99	628	244	42	106	72	7.1
$100 to $249	859	351	67	183	177	12.2
$250 to $499	1,490	595	117	304	364	14.6
$500 to $999	2,663	1,007	188	494	698	15.9
$1,000 to $2,499	4,883	1,712	282	884	1,378	17.9
$2,500 and over	10,408	3,259	515	1,645	3,899	24.6

[1] Less than one-tenth of 1 per cent.

The greater number of the 906 farms reporting no income were operated by white owners, and range in size from 20 to 100 acres. This class of farms includes all farms opened for cultivation too late to produce a crop in 1899; all farms idle in that year; the numerous summer homes or country estates along the lakes which are not held for the profit to be derived from operation; and farms recently rented, the tenants in charge of which, June 1, 1900, were unable to give any definite information concerning the products of the preceding year. To this extent the reports fall short of giving the total value of farm products.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle was determined in accordance with their present and prospective relations to the dairy industry and the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	375,482	$2,490,467	$6.63	6,439
Steers	1 and under 2	155,933	2,510,554	16.10	1,448
Steers	2 and under 3	49,748	1,292,829	25.99	392
Steers	3 and over	4,555	158,641	34.83	182
Bulls	1 and over	19,406	547,254	28.20	171
Heifers	1 and under 2	161,174	2,685,818	16.66	2,328
Cows kept for milk	2 and over	563,905	17,281,835	30.65	37,939
Cows and heifers not kept for milk.	2 and over	46,205	1,197,893	25.93	398
Colts	Under 1	31,018	746,534	24.07	883
Horses	1 and under 2	38,406	1,711,511	44.56	852
Horses	2 and over	517,135	33,450,482	64.68	100,804
Mule colts	Under 1	349	9,030	25.79	1
Mules	1 and under 2	188	7,856	41.79	5
Mules	2 and over	2,379	141,619	59.53	374
Asses and burros	All ages	95	3,133	33.01	89
Lambs	Under 1	1,121,679	1,935,321	1.73	1,762
Sheep (ewes)	1 and over	1,508,503	4,737,021	3.14	3,209
Sheep (rams and wethers).	1 and over	117,427	490,322	4.18	503
Swine	All ages	1,165,200	4,588,898	3.94	22,908
Goats	All ages	2,861	10,008	3.50	603
Fowls:[1]					
Chickens[2]		8,033,531			
Turkeys		191,863			
Geese		73,267	2,085,829		
Ducks		106,393			
Bees (swarms of)		100,397	352,469	3.51	
Unclassified			7,295		
Value of all live stock			79,042,644		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was $79,042,644. Of this amount, 45.4 per cent represents the value of horses; 21.9 per cent, that of dairy cows; 13.8 per cent, that of other neat cattle; 9.0 per cent, that of sheep; and 9.9 per cent, that of all other live stock.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, however, the total value of domestic animals not on farms is $8,011,511. Nearly one-fifth as many horses, 2 years old and over, are used in cities and villages as in agricultural operations. Exclusive of poultry and bees not on farms, the total value of live stock in the state is approximately $87,054,155.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the number of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	563,905	812,503	586,559	3,011	1,625,980	1,165,200
1890	497,611	549,160	516,117	3,822	2,403,318	1,125,141
1880	384,578	507,053	378,778	5,083	2,189,389	964,071
1870	250,859	296,670	228,302	2,353	1,985,906	417,811
1860	179,548	300,801	186,917	330	1,271,748	372,386
1850	99,676	174,821	58,636	70	740,635	205,847

[1] Not including lambs.

The development of mining and of the fruit and vegetable growing interests in the last decade has tended to draw the attention of Michigan farmers away from the live-stock industry. Sheep and mules and asses have decreased in number, while most other classes of live stock show smaller relative increases than in preceding decades. Dairy cows, however, have increased steadily in number for the past fifty years, the gain since 1890 amounting to 13.3 per cent. Nearly five times as many "other neat cattle" were reported in 1900 as in 1850. The gain in the last decade was 48.0 per cent. The number of "neat cattle" in 1900, however, includes 375,482 calves. As it is uncertain how many calves were reported under this head in 1890, the increase shown for the last decade may be more apparent than real. About ten times as many horses were reported in 1900 as in 1850, and a gain of 13.6 per cent was made in the last ten years. The number of mules increased rapidly from 1850 to 1880, but in the last two decades there has been a marked decrease. The number of sheep increased gradually from 1850 until 1890, but the last decade shows a decrease of 32.3 per cent. More than five times as many swine were reported in 1900 as in 1850, and 3.5 per cent more than in 1890.

In comparing the poultry report of 1900 (see Table 14) with that of the Eleventh Census, it should be borne in mind that in 1900 the enumerators were instructed not to report fowls less than 3 months old, while in 1890 no such limitation was made. Notwithstanding this fact, the several classes of fowls show increases since 1890, as follows: Chickens, 37.3 per cent; ducks, 7.7 per cent; turkeys, 3.2 per cent; geese, 0.5 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized statement of the animal products of 1899.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	12,202,844	$2,454,399
Mohair and goat hair	Pounds	1,833	419
Milk	Gallons	[1]309,617,046	[2]16,903,087
Butter	Pounds	60,051,993	
Cheese	Pounds	331,176	
Eggs	Dozens	54,318,410	6,104,462
Poultry			4,551,945
Honey	Pounds	2,099,460	230,012
Wax	Pounds	38,860	
Animals sold			18,343,856
Animals slaughtered			5,333,786
Total			58,921,966

[1] Comprises all milk produced, whether sold, consumed, or made into butter or cheese.
[2] Comprises the value of all milk sold or consumed and of all butter and cheese made on farms.

The value of animal products in 1899 was $53,921,966, or 36.8 per cent of the value of all farm products, and 49.1 per cent of the gross farm income. Of the total value, 43.9 per cent represents the value of animals sold and animals slaughtered on farms; 31.3 per cent, that of dairy products; 19.8 per cent, that of eggs and poultry; and 5.0 per cent, that of wool, mohair, goat hair, honey, and wax.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

Of the whole number of farmers reporting live stock, 132,850, or 68.7 per cent, reported sales of live animals, and 147,656, or 76.3 per cent, reported animals slaughtered on farms. The average amount received in 1899 from the sale of live animals was $138.08 per farm reporting, and the average value of animals slaughtered on farms was $36.12. In obtaining reports of the receipts from sales of live animals, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased in the same year.

DAIRY PRODUCE.

The quantity of milk produced in 1899 was 85,079,558 gallons greater than in 1889, an increase of 37.9 per cent. The quantity of butter made on farms increased 9,854,517 pounds, or 19.6 per cent, and that of cheese, 2,494 pounds, or 0.8 per cent in the same time. The making of butter and cheese is being rapidly transferred to creameries and cheese factories, as is shown by the fact that the quantity of milk sold in 1899 was seven times as great as the quantity sold in 1879. The sales of milk were not separately reported in 1890.

Of the $16,903,087 given in Table 16 as the value of all dairy products, $7,005,471, or 41.4 per cent, represents the value of products consumed on farms, and $9,897,616, or 58.6 per cent, represents the amount received from sales. Of the latter amount, $5,099,679 was derived from the sale of 34,335,641 pounds of butter; $4,643,577, from 55,635,108 gallons of milk; $124,802, from 231,139 gallons of cream; and $29,558, from 316,207 pounds of cheese.

POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was $10,656,407, of which 57.3 per cent represents the value of eggs produced, and 42.7 per cent, that of poultry raised. The production of eggs in 1900 was more than twenty million dozens in excess of that in 1890, the per cent of gain amounting to 58.3.

WOOL.

Every decade from 1850 to 1890 shows a considerable increase in wool reported, but the quantity reported in 1900 was 1.4 per cent less than that reported ten years before. The average weight of fleeces, however, increased from 6.3 pounds in 1890 to 7.0 pounds in 1900.

HONEY AND WAX.

The quantity of honey produced in 1899 was 2,099,460 pounds, or 15.6 per cent less than the production of 1889. The production of wax in 1899 was 45.2 per cent greater than ten years before.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total	183,914	586,559	3.2	175,920	563,905	3.2
White farmers	183,105	584,398	3.2	175,359	562,760	3.2
Colored farmers	809	2,161	2.7	561	1,145	2.0
Owners[1]	152,844	475,452	3.1	147,226	464,358	3.2
Managers	1,893	10,142	5.4	1,715	9,165	5.3
Cash tenants	8,526	26,095	3.1	7,796	27,317	3.5
Share tenants	20,651	74,870	3.6	19,183	63,065	3.3
Under 20 acres	9,559	14,253	1.5	7,740	12,841	1.7
20 to 99 acres	116,561	314,200	2.7	112,033	295,494	2.6
100 to 174 acres	42,311	162,329	3.8	41,337	170,231	4.1
175 to 259 acres	10,567	58,516	5.5	10,085	52,988	5.3
260 acres and over	4,916	37,261	7.6	4,725	32,351	6.8
Hay and grain	31,242	106,947	3.4	28,389	87,549	3.1
Vegetable	7,916	19,299	2.4	5,990	12,497	2.1
Fruit	4,667	11,012	2.4	3,608	6,670	1.8
Live stock	65,943	229,486	3.5	64,378	212,362	3.3
Dairy	12,948	38,692	3.0	14,116	74,043	5.2
Miscellaneous[2]	61,198	181,123	3.0	59,439	170,784	2.9

[1] Including "part owners" and "owners and tenants."
[2] Including sugar farms, florists' establishments, and nurseries.

CROPS.

The following table gives the statistics of the principal crops grown in 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF THE PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantities.	Value.
Corn	1,501,189	Bushels	44,584,130	$17,798,011
Wheat	1,925,769	Bushels	20,535,140	12,921,925
Oats	1,019,438	Bushels	36,338,145	9,264,385
Barley	44,965	Bushels	1,165,288	494,994
Rye	174,096	Bushels	2,130,870	1,033,416
Buckwheat	55,669	Bushels	605,830	306,311
Flaxseed	883	Bushels	9,309	10,108
Clover seed		Bushels	67,993	290,781
Grass seed		Bushels	20,548	24,219
Hay and forage	2,328,498	Tons	2,926,694	21,792,987
Peppermint	7,648	Pounds	164,177	123,444
Tobacco	97	Pounds	64,580	5,345
Hops	10	Pounds	3,560	299
Broom corn	51	Pounds	23,620	1,080
Dry beans	167,025	Bushels	1,806,413	2,361,020
Dry pease	71,376	Bushels	1,134,431	689,133
Potatoes	311,963	Bushels	23,476,444	6,759,342
Sweet potatoes	71	Bushels	3,242	2,408
Onions	2,611	Bushels	783,948	345,310
Chicory	2,823	Pounds	19,876,970	64,640
Miscellaneous vegetables	54,890			3,048,955
Maple sugar		Pounds	802,715	26,693
Maple sirup		Gallons	82,997	73,903
Sorghum cane	877	Tons	198	604
Sorghum sirup		Gallons	24,059	9,882
Sugar beets	40,247	Tons	215,373	877,481
Small fruits	29,197			1,680,249
Grapes	[1]10,465	Centals	415,304	[2]503,268
Orchard fruits	[1]339,309	Bushels		[3]3,675,845
Nuts				7,436
Forest products				7,530,369
Flowers and plants	220			521,987
Seeds	1,064			28,700
Nursery products	1,840			338,544
Miscellaneous				12,641
Total	8,091,791			92,625,715

[1]Estimated from number of vines or trees.
[2]Including value of wine, raisins, etc.
[3]Including value of cider and vinegar.

Of the total value of crops in 1899, cereals contributed 45.2 per cent; hay and forage, 23.5 per cent; vegetables, including potatoes, sweet potatoes, and onions, 11.0 per cent; fruits and nuts, 6.3 per cent; forest products, 8.1 per cent; dry beans and dry pease, 3.3 per cent; and all other products, 2.6 per cent.

The average values per acre of the various crops are as follows: Flowers and plants, $2,373; nursery products, $184; onions, $132; orchard fruits, $108; small fruits, $58; miscellaneous vegetables, $56; tobacco, $55; grapes, $48; seeds, $27; chicory, $23; sugar beets, $22; potatoes, $22; peppermint, $16; dry beans, $14; flaxseed, $11; and cereals, hay and forage, and dry pease, $9. The crops yielding the highest average returns per acre were grown upon very highly improved land. Their production requires a relatively great amount of labor, and large expenditures for fertilizers.

CEREALS.

In Table 19 the changes in cereal production since 1849 are shown.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	44,965	55,669	1,501,189	1,019,438	174,096	1,925,769
1889	99,305	70,046	994,597	1,085,769	140,754	1,501,225
1879	54,506	33,948	919,656	536,187	22,815	1,822,749

[1]No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899	1,165,288	605,830	44,584,130	36,338,145	2,130,870	20,535,140
1889	2,522,376	811,977	28,785,579	36,961,193	2,101,713	24,771,171
1879	1,204,316	413,062	32,461,452	18,190,793	294,918	35,532,543
1869	834,558	436,755	14,086,238	8,954,466	144,508	16,265,773
1859	307,868	529,916	12,444,676	4,036,980	514,129	8,936,363
1849	75,249	472,917	5,641,420	2,866,056	105,871	4,925,889

The total area devoted to cereals has increased since 1879 from 3,389,861 acres to 4,721,126 acres, a gain of 39.3 per cent. The acreage in rye shows nearly a sevenfold increase within the same time, and the percentages of gain for the other grains are as follows: Oats, 90.1; buckwheat, 64.0; corn, 63.2; and wheat, 5.7. In 1899 the acreage in barley was 54.7 per cent less than in 1889, but only 17.5 per cent less than in 1879. In the last decade there were also slight decreases in the areas devoted to buckwheat and oats, but the acreage under corn increased 50.9 per cent; that under wheat, 28.3 per cent; and that under rye, 23.7 per cent.

The severe winter of 1899–1900 had a disastrous effect upon the wheat crop of that year, the average yield being 6 bushels per acre less than in 1889. The late spring which followed made the sowing of oats and barley impracticable in many counties, and as a result many acres intended for these crops were converted, for that year at least, into fields of corn. The same cause prevented any extensive substitution of oats or barley for winter-killed wheat.

Most of the corn and wheat is grown below the forty-third parallel, more than seven-eighths of the total acreage under cereals being found in the southern half of the lower peninsula.

HAY AND FORAGE.

In 1900, 171,692 farmers, or 84.5 per cent of the total number, reported hay and forage crops. Excluding cornstalks and corn strippings, an average yield of 1.2 tons per acre was obtained. The acreage in hay and forage in 1899 was 15.0 per cent greater than in 1889. Of the various kinds of hay and forage the acreages and yields were as follows: Wild, salt, and prairie grasses, 59,512 acres and 69,388 tons; millet and Hungarian grasses, 26,463 acres and 34,159 tons; clover, 225,636 acres and 264,312 tons; other tame and cultivated grasses, 1,926,131 acres

and 2,167,808 tons; grains cut green for hay, 42,643 acres and 49,693 tons; forage crops, 47,026 acres and 116,488 tons; and other hay and forage crops, 192,462 acres and 224,846 tons.

In Table 18 the production of cornstalks and corn strippings is included under "hay and forage," but the acreage is contained in that of "corn," as the forage secured was only an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	10,927,899	8,582,886	8,931,569	13,154,626
Apricots	8,663	2,829	730	299
Cherries	895,375	447,334	194,541	150,526
Peaches	8,104,415	1,919,104	339,637	216,311
Pears	1,187,110	270,482	170,702	194,099
Plums and prunes	1,378,952	168,318	213,682	87,068

In 1900 over one-half the farmers in the state reported orchard products, the aggregate value of all products reported being $3,675,845. Of this amount, the counties of Berrien, Van Buren, and Allegan, in the southwestern part of the state, contributed nearly one-fourth.

The total number of fruit trees in the state on June 1, 1900, exceeded the number reported on the corresponding date in 1890 by 11,140,302. More than one-half of this large gain was in the number of peach trees. In 1890 over three-fourths of all the fruit trees in the state were apple trees and only about one-sixth were peach trees, while in 1900 apple trees contributed less than one-half of the total, and peach trees, considerably more than one-third.

Since 1890, pear trees have increased in number over fourfold, the gain being distributed widely among the counties. More than eight times as many plum trees were reported in 1900 as in 1890, the counties bordering on Lake Michigan showing the greatest increases. These counties also reported the largest number of pear trees.

In addition to the trees given in Table 20, unclassified fruit trees to the number of 28,141 were reported, with a yield of 9,001 bushels of fruit. The value of orchard products, given in Table 18, includes the value of 72,875 barrels of cider, 13,796 barrels of vinegar, and 143,330 pounds of dried and evaporated fruits.

The seasons of 1889 and 1899 were particularly unfavorable to the raising of fruits. The peach crop in the latter year was almost a complete failure in many counties. As the quantity of fruit produced in any year is determined by the nature of the season, it is evident that comparisons of the crops in the census years are useless as indications of the growth or decline of the fruit-growing industry.

SMALL FRUITS.

Of the 29,197 acres devoted to small fruits in 1899, 10,837 acres, or 37.1 per cent, were used in the growing of 18,384,340 quarts of strawberries, and 10,193 acres, or 34.9 per cent, in the growing of 12,119,400 quarts of raspberries. The acreage and production of other berries were as follows: Blackberries and dewberries, 4,385 acres and 5,324,110 quarts; currants, 2,286 acres and 2,721,070 quarts; gooseberries, 559 acres and 673,360 quarts; cranberries, 150 acres and 3,884 bushels; and of other small fruits, 787 acres and 821,610 quarts.

Practically all of the small fruits are grown south of the forty-fourth parallel, the lake counties of Allegan, Berrien, and Van Buren reporting 48.1 per cent of the total acreage in strawberries in 1899, and 46.0 per cent of the total area in raspberries. These counties, situated in the extreme southwestern part of the state on the shores of Lake Michigan, possess unequaled advantages in the cultivation of all kinds of fruits and garden vegetables. In addition to a soil of almost inexhaustible fertility and a climate rendered temperate and equable by the nearness of the lake, they have the advantage of cheap transportation by water for their produce to the markets of Chicago and other large cities.

VEGETABLES.

The total area used in the cultivation of vegetables, including potatoes, sweet potatoes, and onions, was 369,535 acres. Of this area, 311,963 acres, or 84.4 per cent, were devoted to potatoes. This crop was reported in 1900 by 166,317 farmers, or 81.8 per cent of the total number in the state, the average area per farm reporting being 1.9 acres, and the average yield, 75.3 bushels per acre. The area reported in 1890 was 198,476 acres, showing a gain in the last decade of 57.2 per cent. Although grown throughout the state, Montcalm, Kent, Oakland, Wayne, and Mecosta counties reported 27.2 per cent of the total acreage of 1899.

Of the 54,890 acres devoted to miscellaneous vegetables, detailed reports were received for but 21,581 acres, or 39.3 per cent. Of this area, 4,028 acres were devoted to cabbages; 4,007, to sweet corn; 3,051, to cucumbers; 2,371, to tomatoes; 2,231, to muskmelons; 1,845, to celery; and 4,048, to other vegetables.

SUGAR BEETS.

The production of sugar beets in Michigan was reported in 1880, but it is only within the last decade that their cultivation has become an important branch of agriculture. In 1899, 9,085 farmers devoted to this crop an area of 40,247 acres, or an average of 4.4 acres per farm. They obtained and sold from this land 215,373 tons of beets, an average yield of 5.4 tons per acre, and received therefrom $877,481, an average of $97 per farm, $22 per acre, and $4 per ton.

Over half the counties of the state reported the production of sugar beets, but 78.0 per cent of the total acreage of

1899 was grown in Bay, Tuscola, Saginaw, Allegan, Ottawa, Gratiot, Berrien, and Oakland counties.

As a result of scientific study and experiments in systems of crop rotation, and of cultivation and fertilization, Michigan beet growers have been successful in the last decade in increasing the sugar content of the beets grown, as well as the average yield per acre.

PEPPERMINT.

In 1899, 497 farmers reported a total area of 7,648 acres devoted to peppermint, an average of 15.4 acres per farm. They obtained from this land a product of 164,177 pounds of oil, valued at $123,444, an average of $248 per farm and $16 per acre.

Peppermint was grown in 16 counties. St. Joseph, Van Buren, Allegan, and Cass, ranking in the order named, reported collectively 5,908 acres, or 77.2 per cent of the total area.

CHICORY.

Although but recently started, the growing of chicory has become an important industry in this state. In 1899, 1,104 farmers devoted 2,823 acres to the crop, an average of 2.6 acres per farm, and secured 19,876,970 pounds of chicory, valued at $64,640, an average of $59 per farm and $23 per acre. Chicory was reported from 14 counties, but Bay, St. Clair, Tuscola, and Saginaw reported about nine-tenths of the total product, the first-named county being the pioneer in the industry. In 1899 Michigan produced more than nine-tenths of all the chicory grown in the country.

TOBACCO.

The present census shows that in 1899 tobacco was grown by 102 farmers who devoted an aggregate area of 97 acres, or an average area of nearly one acre per farm, to the crop. From this area they secured 64,580 pounds of tobacco, a gain in ten years of 438.9 per cent. The crop reached its highest point in 1859, when the total production amounted to 121,099 pounds. The average yield per acre in 1889 was 545 pounds, while in 1899 it was 633 pounds. The total value of the crop in the latter year was $5,345, an average of $52 for each farm reporting.

FLORICULTURE.

In 1899, flowers and plants, valued at $521,987, were cultivated by the operators of 287 farms and florists' establishments. Of this number, 215 were commercial florists who reported floral products valued at $500,623, and other products worth $29,970. These florists reported capital invested as follows: In land and improvements, $809,735; in buildings, $635,805; in implements, $40,670; and in live stock, $10,720. They expended $7,280 for fertilizers, and $132,595, or 25.0 per cent of the value of their gross product, for labor.

Of the 2,593,230 square feet under glass, the 215 florists reported 1,567,408 square feet, and the 743 truck farmers, 1,025,822 square feet.

SEEDS.

In 1900, 219 farmers reported the sale of seeds, cultivating 1,064 acres, and securing a product valued at $28,700. Jackson, Charlevoix, Berrien, Wayne, and Allegan counties, ranking in the order named, reported an aggregate area of 1,014 acres, and a total product valued at $24,575.

NURSERIES.

Nursery stock valued at $338,544 was reported by 159 farmers and nurserymen. The 54 commercial nurserymen reported $319,804 derived from the sale of nursery products, and $19,744 from the sale of other products. The area of land used was 6,029 acres, and the gross income per acre $56.32. The total investment was $528,530; $378,355 in land, $100,800 in buildings, $28,795 in implements, and $20,580 in live stock. Fertilizers cost $7,637, and farm labor, $71,435, or 21.0 per cent of the value of the gross product.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was $10,717,220, or an average of $53 per farm. The average was highest for the most intensively cultivated farms, being $1,323 for nurseries, $617 for florists' establishments, $156 for sugar farms, $100 for fruit farms, $55 for live-stock farms, $54 each for vegetable farms and dairy farms, and $52 for hay and grain farms. "Managers" expended, on an average, $323; "cash tenants," $52; "share tenants," $50; and "owners," $47. White farmers expended $53, and colored farmers, $20 per farm.

Fertilizers purchased in 1899 cost $492,360, an average of $2.42 per farm, and an increase since 1889 of 184.6 per cent. The average expenditure was $141 for nurseries, $34 for florists' establishments, $6 for sugar and vegetable farms, $5 for fruit farms, $3 for dairy farms, and $2 each for live-stock and hay and grain farms.

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 184. WASHINGTON, D. C. June 6, 1902.

AGRICULTURE.

NORTH DAKOTA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of North Dakota, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

> The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It also includes the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of North Dakota, June 1, 1900, numbered 45,332 and were valued at $198,780,700, of which amount $25,428,430, or 12.8 per cent, represents the value of buildings, and $173,352,270, or 87.2 per cent, the value of the land and improvements other than buildings. On the same date the value of farm implements and machinery was $14,055,560, and of live stock, $42,430,491. These values, added to that of farms, give the "total value of farm property," $255,266,751.

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value of such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was $64,252,494, of which amount $10,211,677, or 15.9 per cent, represents the value of animal products, and $54,040,817, or 84.1 per cent, the value of crops, including forest products cut or produced on farms. The total value of farm products for 1899 is approximately three times that for 1889, but a part of this increase is doubtless due to a more detailed enumeration in 1900 than in 1890.

The "gross farm income" is obtained by deducting the value of the products fed to live stock on the farms of the producers from the total value of farm products. In 1899 the reported value of products fed was $10,288,390, leaving $53,964,104 as the gross farm income. The percentage which this latter amount is of the "total value of farm property" is referred to as the "percentage of income upon investment." For North Dakota, in 1899, it was 21.1 per cent. As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the report on agriculture in the United States. The present publication is designed to present a summarized advance statement for North Dakota.

Very respectfully,

L. G. Powers.
Chief Statistician for Agriculture.

CP 15M

AGRICULTURE IN NORTH DAKOTA.

GENERAL STATISTICS.

The total land area of North Dakota is 70,195 square miles, or 44,924,800 acres, of which 15,542,640 acres, or 34.6 per cent, are included in farms.

The greater portion of the state lies within the drainage basins of the Missouri River and the Red River of the North. West and south of the Missouri, the surface is generally undulating, growing rugged and mountainous in the extreme west and southwest. The eastern half of the state is a rolling country abounding in small lakes and rivers, many of which are bordered by timber. The prairie land of this region is unequalled for grazing. Except for the "Bad Lands" district in the southwestern part, the soil throughout the state is unusually fertile, being nearly everywhere a rich, black loam, varying in depth from a few inches on the highest hills to from 5 to 18 feet in the valleys. It is easily tilled, and as its composition favors the absorption and retention of moisture, it is especially adapted to the production of wheat and barley. The subsoil is strongly impregnated with lime and alkaline elements, which serve as perpetual fertilizers.

NUMBER AND SIZE OF FARMS.

Table 1 gives, by decades since 1860, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1860 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	45,332	15,542,640	9,644,520	5,898,120	342.9	62.1
1890	27,611	7,660,333	4,658,015	3,002,318	277.4	60.8
1880[1]	17,435	3,800,656	1,150,413	2,650,243	218.0	30.3
1870[1]	1,720	302,376	42,645	259,731	175.8	14.1
1860[1]	123	26,448	2,115	24,333	215.0	8.0

[1] Dakota territory.

Since 1860, both the number of farms and the total farm acreage show a continuous increase for each decade, notwithstanding the fact that statistics for 1860 to 1880 inclusive, are for the entire territory now divided between North and South Dakota. The rates of gain in the last decade were 64.2 per cent and 102.9 per cent, respectively. The greater rapidity of the gain in total farm acreage in each decade since 1870 is shown by the increase in the average size of farms. A gain in the percentage of farm land improved is shown for each decade since 1860, the comparatively small increase in the last decade being due, in part, to a stricter definition of the term "improved land" in 1900 than in previous census years.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1860.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1860 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products.[1]
1900	$255,266,751	$193,780,700	$14,055,560	$42,430,491	$64,252,494
1890	100,745,779	75,310,305	6,648,180	18,787,294	21,264,938
1880[2]	31,254,449	22,401,084	2,390,091	6,463,274	5,648,814
1870[2,3]	8,007,829	2,085,265	142,612	779,952	[4]495,657
1860[2]	151,135	96,445	15,574	39,116	

[1] For the year preceding that designated.
[2] Dakota territory.
[3] Values in 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.
[4] Includes betterments and additions to live stock.

As in Table 1, figures for early decades are for the undivided territory, but despite this fact, all kinds of farm property show a constant and rapid increase throughout the entire period. The increase in the last decade amounted to $154,520,972, or 153.4 per cent. Of this amount, $123,470,395, or 79.9 per cent, represents the increase in the value of farms; $23,643,197, or 15.3 per cent, in that of live stock; and $7,407,380, or 4.8 per cent, in that of implements and machinery. The increase in the value of farms, for the decade, was 163.9 per cent; of implements and machinery, 111.4 per cent; and of live stock, 126.0 per cent. The value of farm products for 1899 exceeds that reported for 1889 by $42,987,556, a gain of over 200 per cent. A portion of this increase, and of that noted in the case of implements and machinery, is doubtless the result of a more detailed enumeration in 1900 than in previous census years.

COUNTY STATISTICS.

Table 3 gives an exhibit of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With buildings.	Total.	Improved.	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		Labor.	Fertilizers.
The State	45,332	43,550	15,542,640	9,644,520	$173,352,270	$25,428,430	$14,055,560	$42,430,491	$53,964,104	$9,207,220	$13,855
Barnes	1,665	1,599	740,553	525,320	9,125,050	1,227,770	670,650	1,569,747	2,901,972	518,340	390
Benson	1,266	1,245	374,939	224,127	3,908,780	617,300	425,950	911,209	1,186,090	196,290	300
Billings	163	154	88,156	22,498	202,600	117,490	41,940	1,078,290	202,887	56,400	----------
Bottineau	1,966	1,644	440,792	194,211	3,291,670	420,750	358,040	900,918	986,752	123,520	200
Burleigh	565	541	204,749	81,745	830,180	170,780	84,370	693,503	389,736	54,620	----------
Cass	2,309	2,200	1,080,650	977,951	22,551,710	2,832,160	1,309,070	2,566,290	6,825,887	1,524,740	1,790
Cavalier	2,230	2,149	595,266	322,399	5,882,090	807,900	635,050	1,312,717	1,982,281	224,640	720
Dickey	933	892	470,810	249,915	2,542,380	442,680	212,920	978,833	864,758	104,130	250
Eddy	577	566	235,517	146,641	1,955,780	292,600	192,540	431,063	621,075	107,750	140
Emmons	820	767	286,542	103,482	986,900	234,700	121,420	1,030,080	509,464	53,210	150
Foster	564	540	246,952	165,147	2,839,330	295,090	249,270	502,302	732,176	84,550	----------
Grand Forks	2,368	2,258	861,872	749,567	14,983,410	2,141,980	872,400	2,001,454	4,410,853	886,370	1,600
Griggs	767	747	327,947	219,100	3,449,010	444,350	311,870	670,629	1,242,692	208,100	260
Kidder	264	257	128,731	48,632	537,190	136,530	61,590	598,303	222,635	30,830	70
Lamoure	906	890	347,861	218,055	3,128,180	589,050	410,930	835,265	998,960	97,990	70
Logan	253	246	97,518	31,271	368,700	72,440	41,760	544,654	206,085	19,000	----------
McHenry	1,104	1,086	264,969	92,908	1,871,520	269,190	180,650	836,937	405,868	57,340	980
McIntosh	744	730	275,983	142,728	1,254,010	270,840	182,790	609,384	606,778	82,200	----------
McLean	763	751	177,589	65,264	1,201,230	182,320	143,130	836,764	402,702	23,260	170
Mercer	295	292	120,164	37,789	354,280	111,030	41,520	685,835	225,768	20,190	200
Morton	1,040	1,000	405,467	124,300	1,242,870	405,600	192,230	1,636,976	734,228	54,580	500
Nelson	1,216	1,171	433,738	254,434	3,995,290	576,750	367,320	915,902	1,345,368	240,810	----------
Oliver	197	184	62,081	21,573	174,630	43,480	24,750	292,100	130,137	5,280	----------
Pembina	2,106	2,077	655,324	547,040	11,337,840	1,631,750	814,340	1,657,806	3,190,014	481,640	820
Pierce	1,039	1,014	269,299	126,609	1,930,060	258,310	267,490	647,680	517,190	104,910	275
Ramsey	1,551	1,527	536,495	314,512	5,258,190	784,840	498,920	1,118,961	1,536,675	246,450	350
Ransom	928	883	393,383	234,461	3,733,820	534,520	312,290	1,027,340	1,216,003	241,300	460
Richland	2,256	2,164	719,052	577,916	11,399,940	1,825,770	772,320	1,715,458	3,458,286	705,620	1,180
Rolette	1,003	987	257,694	127,777	1,642,940	232,620	237,570	579,433	590,770	72,000	----------
Sargent	924	908	359,779	208,645	2,886,480	462,810	285,730	893,279	950,410	133,510	400
Stark	846	805	523,624	137,515	1,401,440	289,900	180,470	2,882,728	834,441	117,920	10
Steele	871	844	386,261	320,337	6,365,410	681,960	405,000	820,004	1,705,603	287,050	----------
Stutsman	1,165	1,123	516,248	268,941	4,105,000	743,830	421,410	1,182,017	1,189,630	148,920	500
Towner	1,207	1,132	348,699	220,990	3,277,490	406,180	374,170	792,735	1,117,609	200,710	270
Traill	1,296	1,274	553,597	515,687	13,616,920	1,788,540	785,390	1,430,407	3,461,434	810,980	520
Walsh	2,636	2,578	771,914	615,279	13,389,690	1,915,680	825,830	1,777,187	3,801,920	642,740	410
Ward	1,670	1,603	330,847	71,200	1,377,470	315,480	179,250	1,244,651	405,259	42,000	120
Wells	1,444	1,420	470,004	291,201	4,575,820	591,860	478,520	1,042,140	1,361,552	182,300	750
Williams	122	119	32,593	15,036	171,950	78,480	26,850	403,300	334,897	21,310	----------
Devils Lake[1]	198	197	49,416	8,560	117,230	27,410	24,140	33,171	33,998	----------	----------
Fort Berthold[1]	240	225	61,273	12,652	69,010	59,550	37,420	175,496	58,621	1,670	----------
Standing Rock[1]	787	756	35,571	14,480	58,450	96,040	45,690	554,543	103,903	1,650	----------
Turtle Mountain[1]	68	5	2,721	1,675	15,380	670	100	13,000	10,757	----------	----------

[1] Indian reservation.

In nearly one-half of the counties of the state more than twice as many farms were reported in 1900 as in 1890, and substantial gains were made by all counties except Dickey, Kidder, and Sargent, in each of which a slight decrease occurred.

Increases in the total farm acreage, and also in the acreage of improved land, are shown for all counties. The average size of farms is, as a rule, smallest for the counties in the northern half of the state, and largest for the southern counties. It ranges from 198.1 acres in Ward county to 618.9 acres in Stark county, though most counties show but slight variation from the state average of 342.9 acres. For the state the average value of farms (lands, improvements, and buildings) is $4,385; in Traill and Cass counties it is more than $10,000, but ranges generally from $2,000 to $5,000. All counties show large gains over the values reported in 1890.

Dickey and Kidder are the only counties in which the value of implements and machinery reported in 1900 was less than that in 1890. In about two-thirds of the counties this valuation has more than doubled, and the remaining counties show marked increases.

An increase in the value of live stock is shown for every county in the state, the value in many counties being three times as great as it was in 1890.

The counties at the eastern end of the state, lying in the great wheat region of the Red River Valley, report the largest expenditures for labor in 1899. The amounts expended vary widely in the different sections of the state, but, as a rule, were smallest for the less cultivable western counties, where stock raising is the principal industry.

The total expenditure for fertilizers in 1899 was over 50 per cent greater than in 1889, but the average per farm is still under $0.50. In 1889 barely one-third of the counties of the state reported the use of commercial fertilizers, while in 1899 it was purchased by farmers in over two-thirds of the counties. A few counties, which have undergone territorial reductions in the decade, show decreased expenditures.

FARM TENURE.

Table 4 gives a comparative exhibit of the number of farms operated by owners and tenants in 1880, 1890, and 1900. Tenants are subdivided into two groups: "Cash tenants," who pay a rental in cash or a stated amount of labor or farm produce, and "share tenants," who pay as rental a stated share of the products.

In Table 5 the tenure of farms for 1900 is given by race of farmer, the farms operated by owners being subdivided into four groups, designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners.[1]	Cash tenants.	Share tenants.	Owners.[1]	Cash tenants.	Share tenants.
1900	45,332	41,467	591	3,274	91.5	1.3	7.2
1890	27,611	25,698	539	1,374	93.1	1.9	5.0
1880[2]	17,935	16,757	72	606	96.1	0.4	3.5

[1] Including "part owners," "owners and tenants," and "managers."
[2] Dakota territory.

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State	45,332	33,866	6,894	212	495	591	3,274
White	43,998	32,549	6,889	211	495	588	3,266
Colored	1,334	1,317	5	1		3	8
Indian	1,316	1,309		1		1	5
Negro	18	8	5			2	3

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State	100.0	74.7	15.2	0.5	1.1	1.3	7.2
White	100.0	74.0	15.7	0.5	1.1	1.3	7.4
Colored	100.0	98.7	0.4	0.1		0.2	0.6

The number of farms in North Dakota has increased rapidly since 1890. Comparisons going farther back than that can not be made, as no separate statistics for the farms within the area now forming the state are available in the reports of earlier censuses. It is noticeable, however, that the number of farms in North Dakota alone, in 1890, was much greater than the number in the entire territory of Dakota in 1880. In the last decade the total number of farms increased 17,721, or 64.2 per cent. In the same period owners increased in number 15,769, or 61.4 per cent; cash tenants, 52, or 9.6 per cent; and share tenants, 1,900, or 138.3 per cent. The share-tenant class shows an increase for each decade, and a large and growing preponderance over cash tenants, who were approximately one to two and one-half share tenants in 1890, and one to five and one-half in 1900; the total number of tenant-operated farms in 1900, however, constituted only 8.5 per cent of the whole number. This increase in the proportion of share to cash tenants, is the opposite of what is taking place in many Eastern and Southern states, and is probably due to the fact that settlers who come to the wheat-growing regions of this state with the intention of ultimately owning farms find share tenancy an exceptionally favorable step toward this end. Early comers have taken up, on easy terms, more land than they can work, and are willing to rent on shares to newcomers who may not have sufficient capital to purchase land outright, or to meet the expense required for stock and implements on farms for which a cash rental is demanded.

Of the farms of the state 97.1 per cent are operated by white farmers, and 2.9 per cent by colored farmers, 98.7 per cent of the latter being Indians. Of the white farmers, 90.2 per cent own all or a part of the farms they operate, and 9.8 per cent operate farms owned by others. The corresponding percentages for colored farmers are 99.2 and 0.8.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	45,332	342.9	15,542,640	100.0	$255,266,751	100.0
White farmers	43,998	349.7	15,384,854	99.0	253,834,652	99.5
Indian farmers	1,316	116.0	152,714	1.0	1,344,089	0.5
Negro farmers	18	309.6	5,572	(1)	88,010	(1)
Owners	33,866	283.9	9,614,178	61.8	159,129,886	62.3
Part owners	6,894	554.1	3,820,029	24.6	57,100,278	22.4
Owners and tenants	212	497.6	105,482	0.7	1,326,944	0.5
Managers	495	1,336.8	661,711	4.3	11,372,982	4.5
Cash tenants	591	336.2	198,682	1.3	3,415,271	1.3
Share tenants	3,274	349.0	1,142,558	7.3	22,921,395	9.0

[1] Less than one-tenth of 1 per cent.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,824	$561	$310	$936	$1,190	21.1
White farmers	3,932	574	317	946	1,222	21.2
Indian farmers	220	133	83	585	155	15.2
Negro farmers	3,439	437	237	776	971	19.9
Owners	3,100	500	276	823	989	21.1
Part owners	5,895	753	451	1,184	1,745	21.1
Owners and tenants	1,309	578	366	1,006	1,357	21.7
Managers	14,043	1,680	820	6,483	5,007	21.8
Cash tenants	4,090	449	243	997	1,094	18.9
Share tenants	5,326	638	301	736	1,585	21.9

The average value of the various forms of farm property and the average value of products are much lower for farms operated by Indians than for those operated by white farmers. The few farms operated by negroes have almost as great an average acreage as farms operated by white farmers, and almost as high a value of farm property and products per acre, but as the number of their farms is only 18, the averages have comparatively little significance, as showing any general prosperity on the part of negro farmers as a class. The farms operated by "managers" have the largest average area, 1,336.8 acres, and those operated by "owners" the smallest, 283.9 acres. Of the 1,346 farms, each containing 1,000 acres or over, 586 are operated by "part owners;" 513 by "owners;" 143 by "managers;" 72 by "share tenants;" 18 by "cash tenants;" and 14 by "owners and tenants."

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 give the most important statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	45,332	342.9	15,542,640	100.0	$255,266,751	100.0
Under 3 acres	154	2.2	346	(1)	785,526	0.3
3 to 9 acres	253	6.0	1,524	(1)	146,192	0.1
10 to 19 acres	384	15.2	5,841	(1)	312,341	0.1
20 to 49 acres	555	32.5	18,063	0.1	702,590	0.3
50 to 99 acres	716	82.5	59,040	0.4	1,330,780	0.5
100 to 174 acres	18,471	159.5	2,945,787	19.0	43,382,624	17.0
175 to 259 acres	2,526	220.2	556,133	3.6	11,458,994	4.5
260 to 499 acres	15,813	369.8	5,847,415	37.6	99,033,788	38.8
500 to 999 acres	5,114	696.4	3,561,491	22.9	59,226,295	23.2
1,000 acres and over	1,346	1,892.3	2,547,000	16.4	38,892,671	15.2

[1] Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,824	$561	$310	$936	$1,190	21.1
Under 3 acres	77	142	36	4,846	809	15.9
3 to 9 acres	137	152	37	252	130	22.6
10 to 19 acres	115	160	45	493	133	16.4
20 to 49 acres	335	208	67	656	252	19.9
50 to 99 acres	1,042	252	109	456	371	20.0
100 to 174 acres	1,400	245	151	553	452	19.2
175 to 259 acres	3,021	532	260	721	1,001	22.1
260 to 499 acres	4,366	641	341	915	1,370	21.9
500 to 999 acres	8,255	1,138	626	1,562	2,476	21.4
1,000 acres and over	20,506	2,871	1,385	4,633	6,051	20.9

The group of farms containing from 100 to 174 acres comprises the largest number of farms of any one group, and the group between 260 and 499 acres the next largest, showing the large proportion of half and quarter-section holdings. The two groups together contain 34,284 farms, or 75.5 per cent of the total number. The group of farms of 260 to 499 acres is the most important in respect to the value of farm property and acreage, showing over one-third of the totals for each.

With a few exceptions the average values of the several forms of farm property and products increase with the size of the farms. The high average value of live stock on farms of the first group is due to the fact that among them are some farms, the operators of which use large ranges on the public domain but actually own or rent less than 3 acres of land. The high average gross income for this class of farms is due to the fact that it includes the stock farms just mentioned, the florists' establishments, and a number of city dairies. It should be borne in mind that the incomes from these industries are determined, not so much by the acreage of land used, as by the capital invested in buildings, implements, and live stock, and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, $360.32; 3 to 9 acres, $21.64; 10 to 19 acres, $8.78; 20 to 49 acres, $7.74; 50 to 99 acres, $4.50; 100 to 174 acres, $2.83; 175 to 259 acres, $4.55; 260 to 499 acres, $3.71; 500 to 999 acres, $3.56; 1,000 acres and over, $3.20.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading statistics relating to farms classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products not fed to live stock, the

farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of farm products. Farms for which no income was reported in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	45,332	342.9	15,542,640	100.0	$255,266,751	100.0
Hay and grain	40,058	342.7	13,726,973	88.3	230,500,680	90.3
Vegetables	125	130.3	16,282	0.1	253,633	0.1
Fruits	7	177.1	1,240	(1)	12,893	(1)
Live stock	3,056	450.4	1,376,325	8.9	19,351,964	7.6
Dairy produce	1,196	222.5	266,059	1.7	3,278,252	1.3
Flowers and plants	3	1.0	3	(1)	11,635	(1)
Nursery products	3	41.0	123	(1)	5,035	(1)
Miscellaneous	884	176.1	155,635	1.0	1,851,759	0.7

[1] Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,824	$561	$310	$936	$1,190	21.1
Hay and grain	4,113	583	328	730	1,287	21.5
Vegetables	1,178	372	126	354	336	16.6
Fruits	964	279	129	460	923	17.6
Live stock	1,847	477	209	3,709	1,251	19.8
Dairy produce	1,334	267	145	965	295	10.8
Flowers and plants	2,867	963	28	----	987	25.4
Nursery products	653	1,080	158	87	1,855	93.8
Miscellaneous	1,823	284	99	439	226	10.8

Table 10 shows that by far the most important class of farms in the state is that composed of hay and grain farms, which constitute 88.4 per cent of the total number of farms, 88.3 per cent of the total acreage, and 90.3 per cent of the total value of farm property. Live-stock farms, next in importance, comprise 8.9 per cent of the acreage and 7.6 per cent of the value of farm property. For the several classes of farms the average values per acre of products not fed to live stock are as follows: For flower and plant farms, $986.67; nursery farms, $45.24; hay and grain farms, $3.61; live-stock farms, $2.78; vegetable farms, $2.58; fruit farms, $1.82; dairy farms, $1.33; and miscellaneous farms, $1.28. In computing these averages, the total area of the farms of each group is used, and not the acreage devoted to the crop from which the principal income is derived.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that in computing gross income no deductions are made for expenditures. For florists' establishments and nurseries, the average expenditure for such items as labor and fertilizers represents a far greater percentage of the gross income than in the case of "live-stock" or "miscellaneous" farms. Were it possible to present the average net income, the variations shown would probably be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	45,332	342.9	15,542,640	100.0	$255,266,751	100.0
$0	2,528	183.8	464,771	3.0	4,172,610	1.6
$1 to $49	1,762	164.9	290,601	1.9	2,671,370	1.1
$50 to $99	2,144	187.0	400,848	2.6	3,687,010	1.4
$100 to $249	4,122	189.9	782,618	5.0	8,357,630	3.3
$250 to $499	5,645	210.9	1,190,305	7.7	13,689,360	5.4
$500 to $999	10,161	269.6	2,740,126	17.6	36,618,030	14.3
$1,000 to $2,499	13,843	391.8	5,423,386	34.9	96,067,401	37.6
$2,500 and over	5,124	829.4	4,249,922	27.3	90,002,840	35.2

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State	$3,824	$561	$310	$936	$1,190	21.1
$0	1,058	82	57	454	----	----
$1 to $49	979	126	82	329	30	2.6
$50 to $99	1,060	158	96	466	48	2.8
$100 to $249	1,139	195	126	578	139	6.9
$250 to $499	1,449	232	163	681	352	14.5
$500 to $999	2,269	371	235	728	713	19.8
$1,000 to $2,499	4,780	733	373	1,054	1,538	22.2
$2,500 and over	12,601	1,686	899	2,379	4,431	25.2

Many of the farms reporting no income for 1899 were homesteads, taken up too late for cultivation during that year. Some were farms from which no reports of the products of 1899 could be secured, as the persons in charge,

June 1, 1900, did not operate the farms in 1899 and could give no definite information concerning the products of that year. To this extent the reports fall short of giving a complete exhibit of farm income in 1899.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep, by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves	Under 1	156,420	$1,540,116	$9.85	1,729
Steers	1 and under 2	92,294	1,866,101	20.23	581
Steers	2 and under 3	69,920	2,073,268	29.65	462
Steers	3 and over	25,531	971,168	38.04	168
Bulls	1 and over	10,342	476,817	46.10	60
Heifers	1 and under 2	69,338	1,379,518	19.90	489
Cows kept for milk	2 and over	125,503	4,078,540	32.50	5,616
Cows and heifers not kept for milk.	2 and over	108,146	3,425,103	31.67	558
Colts	Under 1	28,625	546,743	19.10	415
Horses	1 and under 2	32,131	1,127,105	35.08	398
Horses	2 and over	299,192	21,054,668	70.37	15,301
Mule colts	Under 1	408	11,615	28.47	2
Mules	1 and under 2	510	25,237	49.48	4
Mules	2 and over	5,962	439,514	73.72	210
Asses and burros	All ages	96	13,231	137.82	18
Lambs	Under 1	230,515	381,406	1.65	143
Sheep (ewes)	1 and under 2	340,273	1,193,611	3.51	224
Sheep (rams and wethers).	2 and over	111,164	412,119	3.71	72
Swine	All ages	191,798	930,470	4.85	3,016
Goats	All ages	1,122	5,308	4.73	58
Fowls:[1]					
Chickens[2]		1,409,205	477,358		
Turkeys		39,073			
Geese		17,206			
Ducks		23,816			
Bees (swarms of)		279	1,474		
Value of all live stock			42,430,491		

[1] The number reported is of fowls over 3 months old. The value is of all, old and young.
[2] Including Guinea fowls.

The total value of all live stock on farms and ranges, June 1, 1900, was $42,430,491. Of this amount, 53.6 per cent represents the value of horses; 27.6 per cent, the value of all neat cattle other than dairy cows; 9.6 per cent, that of dairy cows; 4.7 per cent, that of sheep; 2.2 per cent, that of swine; and 2.3 per cent, that of all other live stock.

The average value of horses two years old and over is higher in North Dakota than in adjacent states. This is due to the fact that on many of the stock farms in the eastern counties unusual efforts have been made to improve the grade of horses kept, and the number of valuable imported horses in these counties is sufficient to raise the average value for the state.

No reports were secured of the value of live stock not on farms and ranges, but it is probable that such animals have higher average values than farm or range animals. Allowing the same averages, however, the total value of domestic animals not on farms would be $1,394,790. That would make the total value of all live stock in the state, exclusive of poultry and bees not on farms, $43,825,300.

CHANGES IN LIVE STOCK KEPT ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1860 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep.[1]	Swine.
1900	125,503	531,931	359,948	6,976	451,437	191,798
1890	88,289	193,585	180,931	8,709	136,413	92,213
1880[2]	40,572	100,243	41,570	2,703	80,244	63,394
1870[2]	4,151	8,816	2,514	225	1,901	2,039
1860[2]	286	515	84	19	193	287

[1] Lambs not included.
[2] Dakota territory.

Stock raising forms a very important part of the agriculture of North Dakota. The decade of greatest development was presumably that from 1870 to 1880, as during that period the numbers of all kinds of domestic animals in Dakota territory increased from ten to thirty times. Over three times as many dairy cows were reported in 1900 in North Dakota as were reported by Dakota territory in 1880. The number reported in 1900 shows an increase of 42.2 per cent for the last decade, while the gain in the number of other neat cattle during the same time was 174.8 per cent. The number of horses reported in 1900 was nearly three times as great as in 1890, but a decrease of 19.9 per cent occurred in the number of mules. Both sheep and swine show large increases over the numbers reported in 1890, the gain in the number of sheep being 230.9 per cent, and that for swine, 108.0 per cent. A comparison of the poultry report for 1900 (see Table 14) with that for 1890 shows large increases for all kinds of fowls, notwithstanding that in 1900 no fowls under three months old were reported, while in 1890 no such limitation was made.

ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the animal products of agriculture.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	3,030,478	$503,744
Mohair and goat hair	Pounds	1,220	448
Milk	Gallons	[1]48,845,280	
Butter	Pounds	9,178,815	2,853,133
Cheese	Pounds	70,881	
Eggs	Dozens	7,438,400	782,790
Poultry			594,751
Honey	Pounds	7,530	1,149
Wax	Pounds	90	
Animals sold			3,902,074
Animals slaughtered			1,578,588
Total			10,211,677

[1] Includes all milk produced, whether sold, consumed, or made into butter or cheese.

The value of animal products in 1899 was $10,211,677, or 15.9 per cent of the value of all farm products and 18.9 per cent of the gross farm income. Of the above amount 53.6 per cent represents the value of animals sold and slaughtered on farms; 27.9 per cent, that of dairy products; 13.5 per cent, that of poultry and eggs; and 5.0 per cent, that of wool, mohair, goat hair, honey, and wax.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms is 10.1 per cent of the gross farm income. Of all farms reporting live stock, 18,551, or 43.2 per cent, report sales of live animals, the average receipts being $210.34 per farm. Of all farms reporting live stock, 25,582, or 59.5 per cent, report animals slaughtered, the average value per farm being $61.51.

DAIRY PRODUCE.

The production of milk in 1899 was 22,279,168 gallons greater than in 1889, a gain of 83.9 per cent; during the same time, the gain in the number of dairy cows was only 42.2 per cent. This difference is probably due in great part to a more strict definition of the term "dairy cows" in the Twelfth Census, by which many animals, formerly included in this class, were excluded, but it may also indicate that better cows are kept than in 1890 and that better care is given them. Notwithstanding the establishment in the state, during the last ten years, of numerous creameries and cheese factories, the quantity of butter made on farms has increased 60.6 per cent, although a decrease of 46.0 per cent is shown in the quantity of cheese made on farms.

Of the $2,853,133 given in Table 16 as the value of all dairy produce, $1,989,890, or 69.7 per cent, represents the value of such products consumed on farms, and $863,243, or 30.3 per cent, the amount received from sales. Of the latter amount $545,362 was received from the sale of 3,551,805 pounds of butter; $298,741, from 3,177,971 gallons of milk; $14,296, from 23,095 gallons of cream; and $4,844, from 46,762 pounds of cheese.

POULTRY AND EGGS.

The total value of the products of the poultry industry for 1899 was $1,377,541, of which amount 56.8 per cent represents the value of eggs produced, and 43.2 per cent, that of fowls raised. In 1899, 7,438,400 dozens of eggs were produced—more than twice as many as ten years before.

WOOL.

Nearly six times as much wool was reported in 1900 as in 1890. Fleeces, however, decreased in average weight from 6.7 pounds in 1890 to 6.5 pounds in 1900. Wool-growing is confined chiefly to the southern half of the state, Stark county reporting the greatest number of sheep, while Billings, Logan, and Mercer counties show the greatest percentages of increase since 1890.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
The State	41,694	359,948	8.6	35,044	125,503	3.6
White farmers	40,386	347,149	8.6	34,758	124,799	3.6
Colored farmers	1,308	12,799	9.8	286	718	2.5
Owners[1]	37,720	314,959	8.3	31,689	114,444	3.6
Managers	457	17,036	37.3	368	1,990	5.4
Cash tenants	509	4,013	8.0	446	1,530	3.4
Share tenants	3,017	23,940	7.9	2,591	7,539	2.9
Under 20 acres	695	7,435	10.7	252	867	3.4
20 to 99 acres	1,040	9,526	9.2	747	2,130	2.9
100 to 174 acres	15,773	88,470	5.6	11,970	32,199	2.7
175 to 259 acres	2,425	15,284	6.3	2,128	6,855	3.2
260 acres and over	21,761	239,233	11.0	19,947	83,452	4.2
Hay and grain	36,789	290,118	7.9	30,890	106,067	3.4
Vegetable	107	796	7.4	50	152	3.0
Live-stock	2,946	56,963	19.3	2,368	10,081	4.3
Dairy	1,131	7,847	6.9	1,196	7,571	6.3
Miscellaneous[2]	721	4,224	5.9	540	1,629	3.0

[1] Including "part owners" and "owners and tenants."
[2] Including fruit farms, florists' establishments, and nurseries.

CROPS.

The following table gives the statistics of the principal crops grown in 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	62,373	Bushels	1,284,870	$397,278
Wheat	4,451,251	Bushels	59,888,817	31,738,763
Oats	780,517	Bushels	22,125,331	5,852,516
Barley	287,092	Bushels	6,752,060	1,996,082
Rye	27,995	Bushels	368,210	138,77
Buckwheat	1,121	Bushels	10,760	7,459
Flaxseed	773,999	Bushels	7,766,610	7,735,640
Kafir corn	25	Bushels	375	103
Grass seed		Bushels	14,045	10,054
Hay and forage	1,410,534	Tons	1,748,213	5,182,917
Tobacco	1	Pound	210	22
Broom corn	3	Pounds	2,030	85
Dry beans	270	Bushels	2,389	8,572
Dry peas	84	Bushels	710	1,991
Sweet potatoes		Bushels	1	2
Potatoes	21,936	Bushels	2,257,350	587,496
Onions	128	Bushels	21,378	16,377
Miscellaneous vegetables	4,161			239,829
Sorghum		Gallons	114	47
Sorghum cane	10	Tons	41	131
Small fruits	67			7,785
Grapes	12	Centals	15	[2]168
Orchard fruits	[1]120	Bushels	1,647	[3]1,001
Nuts				8
Forest products				112,807
Flowers and plants	2			2,900
Seeds	48			653
Nursery products	131			7,249
Miscellaneous	5			[4]4,717
Total	7,821,875			54,040,847

[1] Estimated from number of vines or trees.
[2] Including value of wine, raisins, etc.
[3] Including value of cider and vinegar.
[4] The greater part of this value was derived from products for which no acreage was reported.

Of the total value of crops, wheat contributed 58.8 per cent; other cereals, including Kafir corn, 15.5 per cent; flaxseed, 14.3 per cent; hay and forage, 9.6 per cent; and all other crops, 1.8 per cent.

The average values per acre of the various crops are as follows: Flowers and plants, $1,450.00; onions, $127.95;

small fruits, $116.19; miscellaneous vegetables, $57.64; nursery products, $55.34; potatoes, $26.78; seeds, $13.60; flaxseed, $9.99; orchard fruits, $8.84; cereals, including Kafir corn, $7.15; and hay and forage, $3.67. The crops yielding the highest average returns per acre were grown upon highly improved land. Their production requires a relatively great amount of labor and large expenditures for fertilizers.

CEREALS.

The following table is an exhibit of the changes in cereal production since 1859.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1859 TO 1899.

PART 1.—ACREAGE.

YEAR.[1]	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	287,092	1,121	62,373	780,517	27,995	4,451,251
1889	109,400	137	11,954	402,855	1,568	2,709,421
1879[2]	16,156	321	90,852	78,220	2,385	265,298

[1] No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899	6,752,060	10,760	1,284,870	22,125,331	338,240	59,888,817
1889	1,570,717	939	178,729	5,773,129	12,195	26,403,365
1879[2]	277,424	2,521	2,005,864	2,217,132	24,359	2,830,289
1869[2]	4,118	179	133,140	114,327	----------	170,662
1859[2]	----------	115	20,269	2,540	700	945

[2] Dakota territory.

The total area devoted to cereals in 1889 was 3,235,345 acres, and in 1899, 5,610,349 acres, a gain of 73.4 per cent. The percentages of increase for the principal cereals were as follows: Corn, 421.9; barley, 162.4; oats, 93.7; and wheat, 64.3. Of the total area in cereals in 1899, 79.4 per cent was devoted to wheat; 13.9 per cent, to oats; 5.1 per cent, to barley; 1.1 per cent, to corn; and 0.5 per cent, to rye and buckwheat.

Wheat is grown throughout the state, and was reported by 33,094 farmers, or 73.0 per cent of the total number. The six counties along the eastern border, Cass, Grand Forks, Walsh, Richland, Traill, and Pembina, ranking in the order named, reported almost half of the total area devoted to this cereal. In 1899 the per capita acreage in wheat in North Dakota, 13.9 acres, was larger than in any other state in the Union.

An average of 2.4 acres per capita was devoted to oats in 1899. The six counties above designated as reporting the most wheat, together with Barnes county, also lead in the production of oats. Nearly half the acreage of oats was in these counties. Most of the barley is raised in the northeastern counties, while nearly one-third of the corn is grown in the two southeastern counties of Richland and Cass. Rye, buckwheat, and Kafir corn are of minor importance.

The value of the cereals of 1899, inclusive of Kafir corn, was $40,125,948, or 74.3 per cent of the total value of crops, and 62.5 per cent of the value of all farm products.

FLAX.

Flax was grown in 1899 by the operators of 17,447 farms, or 38.5 per cent of the total number in the state. Compared with 1889 the area devoted to this crop shows an increase from 43,724 acres to 773,999 acres. The production increased from 164,319 to 7,766,610 bushels of seed, the average yield per acre rising from 3.8 bushels in 1889, to 10.0 bushels in 1899. The average area per farm in 1899 was 44.3 acres. All counties of the eastern half of the state report large areas in this crop, the cultivation being most extensive in Cass, Wells, Barnes, Ransom, and Grand Forks counties.

HAY AND FORAGE.

In 1900, 34,422 farmers, or 75.9 per cent of the total number, reported hay or forage crops. The average yield per acre, exclusive of cornstalks and corn strippings, was 1.2 tons. The acreage in hay and forage in 1899 was 152.5 per cent greater than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, or prairie grasses, 1,248,259 acres and 1,536,951 tons; millet and Hungarian grasses, 85,655 acres and 112,538 tons; alfalfa or lucern, 334 acres and 479 tons; clover, 291 acres and 349 tons; other tame and cultivated grasses, 38,095 acres and 38,471 tons; grains cut green for hay, 21,783 acres and 30,486 tons; forage crops, 16,117 acres and 28,116 tons; other crops, 570 acres and 823 tons. In Table 18 the production of cornstalks and corn strippings is included under "hay and forage," but the acreage is included under "corn," the forage being an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUIT.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	2,351	65	1,273	6
Cherries	79	24	4	----------
Peaches	2	----------	----------	----------
Pears	3	----------	1	----------
Plums and prunes	4,745	681	365	21

The growing of orchard fruits is confined almost exclusively to the eastern half of the state, more than one-third of the total number of trees being reported by Walsh county.

In 1890 there were only 770 fruit trees in the state; of this number, 681 were plum and prune trees. In 1900 the number of fruit trees had increased to 7,329—nearly ten times that of the previous census. The number of plum and prune trees was 4,745, while the number of apple trees, of which there were only 65 in 1890, was 2,351. Taken together these varieties constituted 97.8 per cent of all the fruit trees reported. In addition to the number of trees shown in Table 20, 149 unclassified orchard trees were reported.

The value of the orchard products of 1899, including the value of 5 barrels of cider and 4 barrels of vinegar, was $1,061.

Seasonal variations so affect the quantity of fruit produced in any given year, that comparisons between the crops of 1889 and 1899 have little significance.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 67 acres, distributed among 893 farms. The value of the fruits grown was $7,785, an average of $8.72 per farm. The acreage and production of the various berries were as follows: Currants, 36 acres and 35,440 quarts; raspberries and Logan berries, 12 acres and 13,700 quarts; gooseberries, 10 acres and 11,690 quarts; and other berries, 9 acres and 9,322 quarts.

VEGETABLES.

The value of all vegetables grown in 1899, including potatoes and onions, was $843,706. Of this amount $587,498, or 69.6 per cent, represents the value of potatoes. This important crop was reported by 26,148 farmers, or 57.7 per cent of the total number in the state. Aside from the land devoted to potatoes and onions, 4,161 acres were used in the growing of miscellaneous vegetables. The products of 3,345 acres were not reported in detail, but of the remaining 816 acres, 259 were devoted to cabbages; 156, to watermelons; 133, to sweet corn; 70, to turnips; 60, to beets; and 138, to other vegetables.

FLORISTS' ESTABLISHMENTS AND NURSERIES.

Floriculture is a relatively unimportant industry in North Dakota, only 3 florists' establishments having been reported in 1900. The operators of these 3 establishments had a gross income of $2,960, of which $2,900 was derived from the sale of flowers and plants, and $60 from other products. They used 10,184 square feet of glass surface.

The 3 nurseries in the state reported products valued at $5,565, the entire amount being derived from the sale of nursery stock. The capital invested in land, buildings, and other improvements, was $5,200; that in implements, $475; and that in live stock, $260; a total investment of $5,935.

LABOR AND FERTILIZERS.

The total expenditure in 1899 for labor on farms, including the value of board furnished, was $9,207,220, an average of $203 per farm. The average per farm was $825 for nurseries, $216 for hay and grain farms, $167 for florists' establishments, $157 for live-stock farms, $43 for vegetable farms, $40 for fruit farms, and $27 for dairy farms. The average per acre was highest on the most intensively cultivated farms. "Managers" expended, on an average, $1,294; "share tenants," $247; "cash tenants," $177; and "owners," $161. White farmers expended $209 per farm, and colored farmers, $5.

Fertilizers purchased in 1899 cost $13,855, an average of less than $0.50 per farm, but an increase of over 50 per cent since 1890. The average expenditure was $7.00 for florists' establishments, the only class of farms which shows an average expenditure per farm greater than $1.00.

INDIAN RESERVATIONS.

North Dakota contains four Indian reservations: Devils Lake, Fort Berthold, Standing Rock, and Turtle Mountain. The larger portion of Standing Rock reserve lies in South Dakota, but as the agency is located in North Dakota, the reservation was reported in that state. Agriculture is very uncertain on these reserves on account of the hot winds and irregularity of rainfall during the summer months. The census year, however, was favorable, and fair crops were raised on all the land cultivated. The land, in general, is best adapted to stock raising, and this occupation is receiving much attention, especially on the Fort Berthold and Standing Rock reservations, which have extensive ranges and hay lands.

With the exception of the Turtle Mountain, the Chippewa, and the Arikara of Fort Berthold, these North Dakota Indians are all of Siouan stock. Only a small per cent can speak English, and Government rations still constitute a large part of their subsistence. The larger number wear citizens' clothing, are industrious, and seem desirous of becoming self-supporting.

DEVILS LAKE RESERVATION.

Devils Lake reservation, comprising an area of 360.4 square miles, is situated in the northeastern part of the state, in Benson and Eddy counties. The land is high and rolling and the soil is a light sandy or gravelly loam which dries out very rapidly. Failures of crops from drought have been so frequent in recent years that few of the Indians cultivate as extensively as they would if they had greater assurance of a harvest.

The population of the reservation, June 1, 1900, was 1,268, of whom 190 were farm operators, cultivating from 20 to 80 acres each.

Flax is the principal crop, closely followed by wheat, while oats, barley, and corn are raised to some extent. Wild grasses furnish the entire crop of hay, which is generally larger than the Indians can manage with the implements at hand. Most farmers cultivate small areas of potatoes, and a number also raise dry beans and other garden vegetables. Few of them have any cattle, and their horses are Indian pony stock, too small to run the gang plows and other heavy machinery required for prairie farming. A few own dairy cows, swine, and chickens.

FORT BERTHOLD RESERVATION.

Fort Berthold reservation is located in the west central part of North Dakota, on the Missouri River, and comprises an area of 1,508 square miles. This region is well adapted to stock raising, the upland prairies furnishing ample range throughout the year. On account of the hot, dry winds and uncertain rainfall, agriculture is not carried on extensively, although the land is fertile and in seasons of sufficient moisture produces good crops.

The three years preceding 1899 were so discouraging

that many Indians at Fort Berthold did not plant their usual crops in the census year, although the season proved to be a favorable one. Of the cereals, wheat and corn were raised most extensively, although many farmers also sowed oats. Nearly all had several acres of potatoes under cultivation in addition to small patches of melons, onions, beans, pease, cabbages, and other vegetables. The majority of the 239 farmers cultivated from 5 to 40 acres besides cutting large areas of prairie grass.

Stock raising is growing rapidly in importance and will eventually place the people of this reservation on a self-supporting basis. The last issue of live stock was made to them in 1898 and consisted of 1,000 heifers and 40 bulls. Nearly all Indians now own a small number of cattle while some have large herds. Although in recent winters severe storms have scattered and killed many of their cattle, the majority reported sales of live stock in 1899 ranging from $25 to $500, while the receipts of one Indian from this source amounted to $5,475. The larger number of their horses are Indian pony stock, but a few have a good grade of American horses. Dairy cows and chickens are found on but few farms.

Only 24 per cent know enough English for ordinary conversation, and Government rations still constitute 60 per cent of their subsistence.

STANDING ROCK RESERVATION.

Standing Rock reservation lies on the west bank of the Missouri River, and contains an area of 4,176 square miles, of which approximately three-fifths are in South Dakota.

This reserve is the home of the Blackfeet, the Hunkpapa, and the Lower and Upper Yanktonai bands of the Sioux, numbering in all 3,886. The reservation is best adapted to grain, but, although the soil is in general a deep, rich loam, the hot winds and insufficient rainfall often prevent crops from maturing. Consequently stock raising is the principal pursuit of the Indian farmers, although most of them grow a few crops and in addition cut large quantities of wild grass. They are beginning to realize that from their cattle must eventually come their support, and are giving them much better care than formerly.

Their cereals, planted every year in hope of a harvest, rarely yield more than the quantity seeded. The season of 1899, however, was a favorable one on the Standing Rock reserve and the Indians harvested considerable quantities of corn and oats. Individual acreage in these crops was very small, usually from 2 to 10 acres. Vegetables did well and nearly all farmers raised potatoes, while many had small fields of melons, pumpkins, pease, beans, and onions. A few grew sugar beets, which have been found to be well adapted to this soil. Wild hay, however, is the most important and extensive crop, and besides making enough for their own use, the Indians sell large quantities to the agency, military post, and traders. The improved area of the farms of the majority of the 780 Indian farmers ranged from 5 to 40 acres.

Most Indian farmers have made a start in stock raising, and some already have substantial herds. The majority reported small sales of live stock, the annual receipts ranging from $25 to $500. Indian ponies constitute the greater part of their wealth in horseflesh, although some have horses of a better grade. Swine and chickens are found on a number of farms.

Approximately 98 per cent of these Indians wear citizens' clothing and 23 per cent speak English. Government rations constitute 50 per cent of their subsistence.

TURTLE MOUNTAIN RESERVATION.

Turtle Mountain reservation, the home of the Turtle Mountain Chippewa, is situated in the extreme north central part of the state, in Rolette county, and contains an area of 72 square miles. Less than one-third of this tract is cultivable, lakes and timber land comprising a large part of the surface, while the southern half is a prairie, rough, stony, rolling, and containing but little good farming land. Most of the soil is poor, and innumerable failures of crops have greatly discouraged the Indians and kept them in poor circumstances. The timber supply, which is rapidly decreasing, is their only resource when crops fail. The number of Indians, 2,393, is too large to find subsistence on the reservation, and many have taken up claims beyond the borders.

The principal crop of the Turtle Mountain Indian is wheat, although oats, barley, and flax are generally grown. Their hay crop consists of the prairie grass. Nearly all Indian farmers raised potatoes, but no other vegetables were reported. The season of 1899 was a favorable one and all crops did well, the majority of the 67 Indian farmers cultivating in that year from 20 to 80 acres. Nearly every farmer had a few cattle in addition to his ponies and work horses, but none owned any considerable number of range cattle, or raised beef for the market. Many had dairy cows, and chickens were found on most farms.

Government rations constitute but 25 per cent of the support of this band, 94 per cent wear the garb of the white man, and 59 per cent know enough English for ordinary conversation.

IRRIGATION STATISTICS.

Irrigation in North Dakota is confined to the northwestern part of the state, and is not generally practiced even there, as the total farm area of the two counties of Ward and Williams is almost ninety times the irrigated area, and comprises 84.5 per cent of the irrigated acreage of the state. The water is applied chiefly to pasture and wild hay lands.

The principal statistics of irrigation are shown in Table 21.

Of the area irrigated in 1889, 4,815 acres were supplied with water from streams, and 57 acres from wells. In 1889, 7 farmers reported an irrigated area of 445 acres.

TABLE 21.—NUMBER OF IRRIGATED FARMS, AREA IRRIGATED, AND COST OF IRRIGATION SYSTEMS IN 1889.

COUNTIES.	Number of irrigated farms.	Acreage irrigated.	Construction cost of irrigation systems.	Average cost of construction per acre irrigated.
The State	54	4,872	17,980	$3.71
McHenry	7	475	2,462	5.12
Ward	15	1,484	5,582	3.76
Williams	23	2,632	7,989	3.04
Other counties	9	281	947	3.37