

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, \$330,959,060, 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.

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 I.—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	21,961,562	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	\$56,006,000	\$125,588,715	\$245,270,600
1890.....	1,139,310,716	968,127,286	46,659,465	124,523,965	161,553,009
1880.....	1,216,637,765	1,056,176,741	42,532,741	117,868,283	178,025,695
1870 ²	1,494,788,190	1,272,857,766	45,997,712	175,882,712	³ 253,526,183
1860.....	936,366,584	803,843,593	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 1890 exceeds that reported for 1880 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.				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.
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	2,491,954	8,425,285	322,100	34,830
Broome	4,410	4,363	417,022	308,758	7,375,650	4,883,280	784,340	2,116,031	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	7,871,590	1,394,080	2,649,102	4,218,878	630,920	181,260
Chautauqua	7,404	7,201	614,303	434,246	16,470,490	8,869,090	1,563,600	3,934,751	5,805,773	676,430	102,630
Chester	2,438	2,398	233,976	176,828	5,487,560	7,437,540	551,460	1,093,174	4,731,254	228,250	29,920
Chemung	4,473	4,413	543,884	398,503	7,829,260	5,551,300	959,160	3,193,673	3,762,869	410,680	48,690
Clinton	3,764	3,730	435,825	214,929	6,081,670	8,503,290	700,590	1,764,482	1,968,568	265,070	17,600
Columbia	2,944	2,919	375,904	301,103	6,450,670	6,847,010	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	38,670
Delaware	5,232	5,168	795,997	502,086	9,349,570	7,437,090	1,147,460	4,123,897	5,205,633	433,550	84,550
Dutchess	3,587	3,515	466,453	348,495	10,399,650	10,316,800	1,380,880	2,927,062	3,831,536	901,600	55,600
Erie	7,929	7,782	571,084	428,024	84,212,480	11,026,460	2,247,420	4,111,360	5,801,603	752,860	186,870
Essex	2,412	2,387	401,912	152,255	3,571,120	2,678,670	441,560	1,195,881	1,125,008	188,860	13,410
Franklin	3,721	3,667	429,452	201,981	6,473,470	3,789,810	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	832,680	1,027,263	135,020	84,530
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	215,691	4,862,580	4,419,130	718,290	1,816,125	1,845,810	308,450	86,170
Hamilton	510	504	63,832	22,917	338,460	337,420	63,990	160,408	162,725	25,960	1,850
Herkimer	3,227	3,199	333,180	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	502,288	16,945,020	8,939,550	1,481,840	4,166,825	5,205,633	625,830	84,950
Kings	360	338	6,480	5,989	8,966,760	1,185,150	333,620	213,693	1,099,305	254,560	85,730
Lewis	3,338	3,747	494,165	272,866	6,455,090	3,748,190	702,640	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	338,866	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	11,597,680	1,894,860	2,823,543	6,454,975	1,091,660	214,030
Montgomery	2,407	2,387	236,934	202,394	5,941,000	4,608,840	769,990	1,608,651	2,064,886	358,780	17,810
Nassau	1,658	1,642	88,452	69,357	10,972,640	5,746,490	906,010	988,288	2,645,632	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	4,096,050	539,440	72,260
Oneida	7,232	7,146	657,748	447,359	12,560,500	8,657,940	1,435,730	3,987,463	6,450,018	818,800	112,630
Onondaga	6,305	6,231	455,934	383,621	16,474,420	10,149,940	1,679,100	3,480,038	5,332,363	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	103,540
Orange	8,966	8,918	402,519	284,093	10,426,180	9,462,550	1,180,400	3,486,031	4,993,307	811,430	63,150
Orleans	2,904	2,924	237,600	205,279	8,315,300	4,838,770	935,270	1,507,141	3,081,832	381,110	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	273,900	793,684	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	3,018,004	749,800	823,740
Rensselaer	3,668	3,639	365,007	256,584	6,122,330	6,266,400	1,048,920	1,852,146	3,123,532	564,830	52,170
Richmond	290	288	11,724	8,048	3,228,000	263,670	70,800	140,902	479,572	117,100	28,290
Rockland	939	923	62,050	32,649	2,764,650	2,024,090	223,310	366,633	604,243	169,870	19,890
St. Lawrence	8,353	8,278	1,063,798	550,010	18,732,620	10,872,490	1,743,080	5,952,795	6,481,416	602,030	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	2,623,870	2,016,150	377,260	675,180	927,340	147,060	21,310
Schoharie	3,437	3,400	367,023	283,225	5,331,490	4,515,620	789,820	1,774,038	2,458,156	374,950	29,690
Schuyler	2,103	2,078	196,718	158,991	3,904,310	2,903,930	538,950	969,863	1,318,858	167,760	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	62,460
Steuben	3,179	3,009	825,334	610,131	17,863,180	9,303,860	1,942,310	3,061,234	5,432,426	687,990	47,970
Suffolk	3,277	3,231	276,860	130,144	12,684,600	8,597,670	945,850	1,462,775	2,918,071	637,540	478,050
Sullivan	3,887	3,848	478,783	201,032	4,922,860	5,082,560	748,800	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	200,543	5,973,890	4,351,570	820,790	1,589,148	2,284,694	284,730	46,020
Ulster	5,181	5,125	522,113	254,310	7,354,510	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	1,573,950	278,520	654,339	825,523	88,340	10,780
Washington	3,715	3,693	454,502	314,993	6,411,280	5,572,510	880,710	2,099,953	2,727,680	449,850	29,960
Wayne	5,265	5,230	363,211	305,299	12,167,630	7,782,750	1,377,090	2,344,327	4,700,730	603,420	107,900
Westchester	2,326	2,301	134,512	124,916	16,884,890	10,006,110	981,070	1,956,678	2,568,955	891,090	63,610
Wyoming	3,519	3,490	367,894	270,374	8,608,380	4,625,840	908,550	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	7.5	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.	NUMBER OF FARMS OPERATED BY—				PER CENT OF FARMS OPERATED BY—	
		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	601,797	0.1
Chinese farmers	11	3.5	88	(¹)	108,920	(¹)
Owners	152,956	90.4	13,828,567	61.1	628,707,561	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	185.6	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	160,343,607	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—					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
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	9,461	286	133	19	831	8.4
Owners	1,962	1,399	233	504	732	17.9
Part owners	8,206	1,630	306	646	1,067	18.4
Owners and tenants	2,940	1,982	333	703	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	2,869	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)	8,367,281	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	105,969,883	10.2
50 to 99 acres.....	63,789	71.3	4,551,103	20.1	251,343,891	23.5
100 to 174 acres.....	63,846	127.8	8,157,512	36.0	338,307,707	31.7
175 to 259 acres.....	21,385	207.0	4,416,428	19.5	162,097,992	15.1
260 to 499 acres.....	8,728	323.9	2,827,956	12.5	96,898,600	9.0
500 to 999 acres.....	1,169	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—				Gross income (products of 1899 not fed to live stock).	Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.					
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.		
The State.....	\$2,431	\$1,486	\$247	\$564	\$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	13.7
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	13.7
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	91.8	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	7,862	(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—					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.	Implementments and machinery.	Live stock.		
The State.....	\$2,431	\$1,486	\$247	\$554	\$802	17.0
Hay and grain.....	2,988	1,548	248	410	708	13.6
Vegetables.....	3,743	1,511	281	353	902	15.3
Fruits.....	2,719	1,651	244	321	892	20.1
Live stock.....	1,607	1,337	219	560	552	14.6
Dairy produce.....	2,564	1,582	269	817	984	18.8
Tobacco.....	2,535	1,654	260	407	979	20.2
Sugar.....	3,037	1,177	196	405	553	10.1
Flowers and plants.....	4,466	4,039	272	66	2,916	53.0
Nursery products.....	10,685	4,654	493	835	7,060	44.0
Miscellaneous.....	2,033	1,354	281	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, \$889.34; 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	2,021,616	0.2
\$1 to \$49.....	3,370	32.7	110,095	0.5	5,616,490	0.5
\$50 to \$99.....	7,944	29.3	233,020	1.0	12,099,130	1.1
\$100 to \$249.....	31,918	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	184,070,925	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—					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.	Implementments 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.....	730	613	64	110	74	4.9
\$100 to \$249.....	833	750	94	174	172	9.1
\$250 to \$499.....	1,368	994	158	330	369	12.6
\$500 to \$999.....	2,233	1,433	251	503	733	16.5
\$1,000 to \$2,499.....	4,023	2,275	401	943	1,450	19.0
\$2,500 and over.....	10,349	4,713	765	1,703	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.
		Number.	Value.	Average value.	
Calves.....	Under 1.....	507,140	\$3,144,954	\$6.20	5,963
Steers.....	1 and under 2.....	95,446	578,624	15.88	790
Steers.....	2 and under 3.....	23,492	656,229	27.93	2,875
Steers.....	3 and over.....	3,253	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	5,151,703	15.34	3,196
Cows kept for milk.....	2 and over.....	1,501,608	48,691,512	32.43	36,313
Cows and heifers not kept for milk.....	2 and over.....	95,466	2,393,248	24.31	314
Colts.....	Under 1.....	20,027	650,894	32.50	856
Horses.....	1 and under 2.....	80,033	1,771,023	58.97	1,192
Horses.....	2 and over.....	578,878	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	4,632
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	3,046
Fowls: ¹					
Chickens ²		8,964,736			
Turkeys.....		190,879			
Geese.....		45,933			
Ducks.....		150,864			
Bees (swarms of).....		187,208	593,784	3.17	
Unclassified.....			6,075		
Value of all live stock.....			125,583,715		

¹The number reported is of fowls over 3 months old. The value is of all, old and young.

²Including 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	628,488	3,651	984,516	676,639
1890.....	1,440,230	691,162	664,430	4,636	1,528,979	843,342
1880.....	1,437,855	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

¹Lambs 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	1772,799,352	255,474,155
Butter	Pounds	74,714,376	
Cheese	Pounds	2,624,552	8,630,062
Eggs	Dozens	62,096,690	
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

¹Comprises all milk produced, whether sold, consumed, or made into butter or cheese.

²Comprises 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 1,772,799,352 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 85.6 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 report- ing.	Number.	Average per farm.	Farms report- ing.	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	80,227	33,299	4.6
100 to 174 acres	61,540	219,312	3.6	61,117	564,130	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	137,632	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	33,299	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

¹Including "part owners" and "owners and tenants."

²Including 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.....	20,021,865	\$9,181,791
Wheat.....	557,736	Bushels.....	10,412,675	7,352,597
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.....	7,890	42,384
Grass seed.....		Bushels.....	3,619	5,406
Hay and forage.....	5,154,965	Tons.....	6,329,496	55,237,446
Tobacco.....	11,307	Pounds.....	13,958,870	1,172,236
Hops.....	27,533	Pounds.....	17,332,310	1,600,305
Peppermint.....	62	Pounds.....	700	613
Broom corn.....	856	Pounds.....	201,060	8,967
Dry beans.....	129,298	Bushels.....	1,360,445	2,472,668
Dry pease.....	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.....	188,285			9,590,016
Maple sugar.....		Pounds.....	3,623,510	307,184
Maple sirup.....		Gallons.....	413,159	323,996
Sorghum sirup.....	114	Gallons.....	973	371
Sugar beets.....	2,053	Tons.....	16,003	75,457
Small fruits.....	25,051			2,538,333
Grapes.....	242,337	Centals.....	2,476,981	2,763,711
Orchard fruits.....	2437,582	Bushels.....		410,542,272
Nuts.....				71,122
Forest products.....				7,671,099
Willows.....	366			22,495
Flowers and foliage plants.....	1,496			2,867,678
Seeds.....	529			54,148
Nursery products.....	8,238			1,642,107
Miscellaneous.....	442			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.....	356,629	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	38,896,479	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	35,175,134	4,786,905	8,681,105
1849.....	3,585,059	3,183,955	17,858,400	26,552,814	4,148,182	13,121,438

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.		BUSHEL OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples.....	15,054,832	14,428,381	24,111,257	8,493,846
Apricots.....	25,605	6,540	15,710	281
Cherries.....	339,742	391,446	218,642	44,298
Peaches.....	2,522,729	1,014,110	465,850	189,976
Pears.....	2,183,909	1,173,206	960,170	588,767
Plums and prunes.....	988,147	504,365	303,688	73,411

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 \$2,538,868, 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 1830. 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 1880 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 11,907 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 moun-

tain 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.