

HORTICULTURE.

BY J. H. HALE.

The statistics for nurseries, commercial floriculture, seed farms, tropic and semitropic fruits and nuts, and truck farms are contained in the following pages. The subjects have not appeared in previous census reports.

There was invested in the nursery business in 1889, \$52,425,669.51, and it furnished employment for 45,657 men (of which number 20,249 were engaged as salesmen) and 2,279 women. It required for the propagation and cultivation of trees and plants \$990,606.04 worth of implements.

There was invested in commercial floriculture in 1889, \$39,943,416.36, and it furnished employment for 16,847 men and 1,958 women, to whom was paid as wages during that year \$8,483,657. The cut flowers sold during 1889 were valued at \$14,175,328.01, while the shrubs and plants sold brought an additional sum of \$12,036,477.76, the total value of products amounting to \$26,211,805.77.

The establishments devoted exclusively to seed growing gave employment in 1889 to 13,500 men and 1,541 women, the total value of the 596 seed farms reported, together with their buildings and implements of husbandry, being \$18,325,935.86.

The investigation into the extent and value of the production of oranges, lemons, figs, almonds, cocoanuts, and other tropic and semitropic fruits and nuts has found the products in 1889 valued at \$14,116,226.59.

Truck farming, as considered in this report, is entirely distinct from market gardening, the former being carried on in favored localities at such a distance from market that either railroad or water transportation must be used, while the latter is conducted in the immediate vicinity of centers of population, the producer dealing directly with the retailer or the consumer. The total value of the products of truck farming in 1889 was \$76,517,155, and the number of persons employed, part or all of the year, 216,765 men, 9,254 women, and 14,874 children, the capital invested being upward of \$100,000,000.

NURSERIES.

There are in the United States 4,510 nurseries, valued at \$41,978,835.80 and occupying 172,806 acres of land, with a capital of \$52,425,669.51 invested, which employs 45,657 men (of which number 20,249 were engaged as salesmen), 2,279 women, and 14,200 animals propagating and cultivating trees and plants, with the aid of \$990,606.04 worth of implements.

There were found growing in the United States, 95,012 acres of trees, plants, shrubs, and vines of all ages, and figures based upon the best estimates of the nurserymen make the grand total of plants and trees 3,386,855,778 (not including miscellaneous fruit trees and plants grown on 1,477 acres), of which 518,016,612 are fruit trees, 685,603,396 grapevines and small fruits, and the balance evergreen and deciduous trees, hardy shrubs, and roses.

The following table shows the number grown of each class of trees and plants, together with the number of acres and the average number grown per acre:

TREES AND PLANTS.	Number of acres.	Average number grown per acre.	Total number grown.	TREES AND PLANTS.	Number of acres.	Average number grown per acre.	Total number grown.
Apple.....	20,233	11,891	240,570,666	Quince.....	517	11,698	6,047,050
Apricot.....	269	11,689	3,144,466	Nut.....	1,370	10,075	13,803,606
Cherry.....	3,600	10,362	38,236,254	Deciduous.....	12,342	105,121	1,297,408,257
Fig.....	63	11,781	743,200	Evergreen.....	8,644	95,099	822,038,324
Lemon.....	79	6,998	552,841	Hardy shrubs.....	2,879	16,003	46,072,530
Lime.....	6	10,693	64,125	Rose.....	340	11,311	3,913,053
Nectarine.....	50	13,054	652,679	Grapevines.....	5,073	28,052	150,130,248
Olive.....	26	12,016	328,016	Strawberry.....	4,432	61,171	271,108,253
Orange.....	607	7,197	4,363,322	Raspberry.....	5,756	15,026	86,487,491
Peach.....	3,357	14,861	49,887,894	Blackberry.....	4,888	21,545	105,310,810
Pear.....	6,853	11,269	77,223,462	Currant.....	2,020	24,444	49,276,695
Plum.....	7,825	11,809	88,494,367	Gooseberry.....	1,009	14,054	14,180,789
Pomelo.....	14	5,764	80,760	Miscellaneous fruit trees and plants.....	1,477	.....	.....
Prune.....	588	12,064	7,023,000				

As trees and many kinds of plants are seldom sold till 2 and 3 years old, the stock in nurseries, as above enumerated, really represents a 2 years' supply.

The tables following present statistics concerning the nurseries of the United States at the Eleventh Census.

NUMBER, AREA, VALUES, CAPITAL INVESTED, EMPLOYÉS AND WAGES, AND NUMBER OF ANIMALS EMPLOYED, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	NUMBER, AREA, AND VALUES.					Capital invested.	EMPLOYÉS AND WAGES.				Number of horses and other animals employed.
	Number of nurseries.	Area. (Acres.)	Value per acre. (a)	Total value of nurseries. (b)	Value of im- plements.		Number of men employed.	Number of women employed. (c)	Wages paid men per day.	Wages paid women per day.	
The United States	4,510	172,806	.....	\$41,978,835.80	\$900,000.04	\$52,425,600.51	25,408	2,270	.....	.....	14,200
North Atlantic division.....	1,198	39,491	.....	17,257,366.64	389,053.72	20,679,492.97	7,085	263	.....	.....	3,521
Maine	41	226	\$126.67	180,912.51	10,303.75	208,177.50	92	1	\$1.36	\$0.50	58
New Hampshire.....	5	23	275.00	8,166.65	400.00	14,500.00	15	.....	1.38	.....	10
Vermont.....	17	75	341.67	35,000.00	1,601.00	46,600.00	45	.....	1.25	.....	25
Massachusetts.....	120	1,891	404.71	1,393,006.80	37,240.20	1,773,500.00	540	22	1.63	1.00	270
Rhode Island.....	9	45	125.00	36,000.00	1,200.00	58,600.00	23	.....	1.50	.....	19
Connecticut.....	20	328	179.78	146,509.00	7,030.00	194,071.57	80	4	1.47	0.85	59
New York.....	530	24,840	272.50	10,609,866.30	172,048.60	12,292,814.50	3,970	160	1.27	0.79	1,810
New Jersey.....	145	5,465	266.13	1,712,404.75	53,195.35	1,970,693.90	705	42	1.21	0.68	437
Pennsylvania.....	311	6,698	357.29	3,134,780.03	106,895.82	4,210,895.50	1,555	34	1.15	0.81	833
South Atlantic division.....	350	8,027	.....	2,108,377.91	48,739.86	2,818,045.00	1,887	331	.....	.....	922
Delaware.....	35	725	132.50	111,805.40	4,480.00	155,801.15	175	5	1.00	0.50	90
Maryland.....	50	1,448	70.00	805,003.00	10,111.00	510,400.00	327	16	1.00	0.69	108
District of Columbia.....	1	120	500.00	120,000.00	600.00	125,000.00	25	.....	1.25	.....	6
Virginia.....	54	1,890	114.55	832,330.02	8,017.00	922,172.58	490	216	0.78	0.38	101
West Virginia.....	22	633	120.83	115,600.00	1,265.00	126,086.40	78	14	1.00	0.50	47
North Carolina.....	32	960	26.39	111,209.00	11,840.00	231,840.00	266	48	0.66	0.33	112
South Carolina.....	3	70	25.00	2,700.00	75.00	4,000.00	12	2	0.60	0.50	7
Georgia.....	10	812	105.67	180,070.00	1,600.00	277,960.00	80	12	0.78	0.50	38
Florida.....	137	1,374	228.34	419,766.49	10,761.86	456,224.03	434	18	1.10	0.50	233
North Central division.....	2,350	101,442	.....	15,033,141.98	435,180.42	19,629,676.58	13,017	1,142	.....	.....	7,775
Ohio.....	393	10,790	140.44	3,159,358.44	114,610.59	4,178,518.19	2,751	80	1.13	0.61	1,423
Indiana.....	223	5,404	90.75	791,848.47	26,209.10	1,056,611.91	948	64	1.14	0.68	612
Illinois.....	434	17,812	150.00	3,595,850.58	54,362.84	4,778,083.94	2,324	134	1.15	0.74	1,464
Michigan.....	155	3,015	116.40	562,290.65	25,062.50	869,491.10	878	100	1.08	0.63	430
Wisconsin.....	117	1,051	133.50	456,797.25	32,931.99	492,277.50	619	103	1.07	0.70	319
Minnesota.....	69	1,723	125.00	564,045.00	9,487.50	652,433.64	234	38	1.19	0.63	201
Iowa.....	183	12,040	93.40	1,276,979.40	29,048.48	1,591,799.73	1,107	86	1.06	0.72	705
Missouri.....	229	15,199	232.59	2,604,746.15	47,432.77	2,932,473.24	1,317	197	1.00	0.62	763
North Dakota.....	13	23	100.00	26,000.00	975.00	45,500.00	26	.....	1.50	.....	20
South Dakota.....	27	536	54.78	88,425.00	4,146.39	126,749.88	81	7	1.20	0.65	165
Nebraska.....	177	15,641	67.44	1,804,990.61	43,807.50	1,479,953.64	1,871	124	1.14	0.56	747
Kansas.....	339	11,492	83.39	1,261,798.34	45,605.07	1,425,792.81	1,361	149	1.08	0.59	974
South Central division.....	322	9,455	.....	2,151,318.53	54,758.73	3,556,820.33	2,229	401	.....	.....	1,076
Kentucky.....	40	621	102.88	240,610.58	8,483.37	504,993.75	239	49	0.80	0.53	118
Tennessee.....	54	1,042	86.36	604,200.00	15,390.00	1,015,971.66	867	206	0.80	0.53	222
Alabama.....	15	975	26.37	272,152.50	6,067.50	455,040.00	265	35	0.62	0.44	67
Mississippi.....	15	505	47.00	56,062.50	2,025.00	79,284.45	100	10	0.68	0.40	81
Louisiana.....	24	280	205.00	159,000.00	1,200.00	170,400.00	114	12	0.89	0.50	135
Texas.....	97	4,665	103.75	738,882.95	14,020.38	1,211,930.61	485	87	1.00	0.51	318
Arkansas.....	68	707	83.90	80,410.00	7,572.48	119,800.36	162	2	0.89	0.48	132
Western division.....	281	14,391	.....	4,738,639.74	61,973.31	5,741,634.07	1,199	52	.....	.....	908
Colorado.....	23	637	144.00	100,250.00	7,084.00	102,916.59	79	13	1.68	0.75	66
New Mexico.....	1	70	200.00	15,000.00	140.00	15,200.00	3	.....	1.00	.....	2
Arizona.....	3	82	50.00	6,175.00	100.00	8,500.00	5	.....	1.25	.....	5
Utah.....	17	199	108.75	61,880.00	708.30	83,810.00	29	2	1.55	0.50	20
Idaho.....	8	248	236.67	124,000.00	1,500.00	172,000.00	22	.....	1.88	.....	73
Washington.....	27	435	138.89	106,980.00	3,972.78	190,620.00	105	10	1.36	1.00	90
Oregon.....	36	1,570	93.79	165,494.16	4,287.24	236,658.00	140	2	1.41	1.00	90
California.....	106	11,144	290.08	4,158,831.58	44,180.90	4,871,920.48	804	25	1.57	1.00	558

a The value of nursery land in many instances is regulated more by its proximity to cities and towns than by its productive value for nursery purposes.

b It is evident from the figures furnished by the nurserymen as to the total value of nurseries that in most cases growing stock is not estimated at much more than one-fourth its market value when sold. Perishable products of this sort are of value only as they can be sold, and their sale depends largely upon advertising and the solicitation of catalogues and traveling salesmen; if not disposed of when they arrive at proper size and age they soon become valueless.

c Women in all states except the south, where a considerable number work as field hands, are mostly employed in nursery offices or about the nursery boarding houses.

NUMBER OF NURSERIES AND DATE OF ESTABLISHMENT.

STATES AND TERRITORIES.	Total number of nurseries.	Date of establishment unknown or unreported.	Previous to 1800 (a)	1800 to 1810	1810 to 1820	1820 to 1830	1830 to 1840	1840 to 1850	1850 to 1860	1860 to 1870	1870 to 1880	1880 to 1890
The United States.....	4,510	1,317	2			2	8	32	192	424	776	1,757
North Atlantic division.....	1,198	509	2			1	6	22	34	111	200	304
Maine.....	41	20							1	2	2	10
New Hampshire.....	5							1		1	1	2
Vermont.....	17	4							1	2	6	4
Massachusetts.....	120	68				1	1	6	6	4	10	24
Rhode Island.....	9	8										1
Connecticut.....	20	8	1					1	1	1	8	5
New York.....	530	226	1				3	6	6	57	90	141
New Jersey.....	145	10					2	2	4	26	38	54
Pennsylvania.....	311	161						6	15	18	54	57
South Atlantic division.....	350	73				1			6	34	46	100
Delaware.....	35	6				1				6	10	12
Maryland.....	50	23							1	8	6	12
District of Columbia.....	1								1			
Virginia.....	54	18							3	9	6	24
West Virginia.....	22									4	6	12
North Carolina.....	32	12								6	8	6
South Carolina.....	3	3										
Georgia.....	16	3								6	2	8
Florida.....	137	8							1	4	8	116
North Central division.....	2,350	577					2	10	143	256	420	642
Ohio.....	393	127					1	1	42	33	87	102
Indiana.....	223	6					1		27	27	45	117
Illinois.....	434	77						0	30	90	81	138
Michigan.....	155	83							9	8	27	83
Wisconsin.....	117	40							6	12	15	44
Minnesota.....	69	33								3	15	18
Iowa.....	133	69							8	13	26	67
Missouri.....	229	19							15	42	30	114
North Dakota.....	13	4										0
South Dakota.....	27	2									1	24
Nebraska.....	177	27							8	9	15	123
Kansas.....	330	90							3	15	78	153
South Central division.....	322	79							7	17	51	163
Kentucky.....	40	10							3	3	9	24
Tennessee.....	54	15							3	8	15	18
Alabama.....	15	2									3	10
Mississippi.....	15	3							1	1	2	8
Louisiana.....	24	14								2	2	6
Texas.....	97	15									16	66
Arkansas.....	68	20								8	4	36
Western division.....	281	70							2	6	41	153
Colorado.....	23	9									4	10
New Mexico.....	1											1
Arizona.....	3	2										1
Utah.....	17	7									4	6
Idaho.....	8	2									2	4
Washington.....	27	3									4	20
Oregon.....	36	3								2	4	27
California.....	166	53							2	4	23	84

a There was a considerable number of nurseries in existence prior to 1800; of the nurseries now in the country it is possible to trace two that date their establishment in the eighteenth century.

ACREAGE OF NURSERY TREES AND PLANTS BY KINDS, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Total.	Apple.	Apricot.	Cherry.	Fig.	Lemon.	Limè.	Nectar- ine.	Olive.	Orango.	Peach.	Pear.	Plum.	Pomelo.
The United States	95,012	20,232	209	3,600	63	70	6	50	26	607	3,357	6,853	7,825	14
North Atlantic division	20,246	2,671	14	700				2			932	2,015	1,694	
Maine	102	53										1	7	
New Hampshire	6	6												
Vermont	28	5		1								3	3	
Massachusetts	655	54									6	3	3	
Rhode Island	13													
Connecticut	206	17									8	4	2	
New York	12,356	2,000	8	493				1			400	1,587	1,331	
New Jersey	2,709	206	1	34							208	142	60	
Pennsylvania	4,171	330	5	178				1			220	275	288	
South Atlantic division	5,064	652	15	47	23	53	3	3		298	669	863	390	11
Delaware	562	53									140	50	6	
Maryland	801	140	1	5							221	26	52	
Virginia	1,028	288	1	23							114	93	82	
West Virginia	314	50	2					1			14	21	31	
North Carolina	427	63	9	16	1			2			80	33	30	
Georgia	707	51	2	3	14						81	193	63	
Florida (a)	1,165	7			13	53	3			298	10	447	127	11
North Central division	58,800	14,949	31	2,630	1			20			1,181	3,342	4,880	
Ohio	11,095	2,756	2	608							337	945	1,078	
Indiana	4,167	1,025	1	70							79	271	293	
Illinois	12,307	3,016	2	503				1			155	981	1,514	
Michigan	1,754	363	1	40							120	105	48	
Wisconsin	1,211	199		33									13	
Minnesota	800	185											25	
Iowa	7,917	1,741	3	506							37	258	562	
Missouri	5,646	1,880	7	193	1			5			176	497	708	
South Dakota	347	46		10									10	
Nebraska	5,794	1,248	5	369				9			116	138	329	
Kansas	7,243	2,490	10	261				5			155	147	300	
South Central division	4,086	1,022	7	94	9	1		5		6	328	281	261	1
Kentucky	576	117	2	20							31	17	6	
Tennessee	872	453	1	26							51	18	65	
Alabama	204	110			(b)						24	30	28	
Mississippi	163	28									16	14	18	
Louisiana	68	6								4	6	1	4	
Texas	2,382	213	3	27	9	1		4		2	178	166	118	1
Arkansas	421	84	1	21				1			22	35	32	
Western division	6,186	933	202	213	25	25	3	20	26	303	244	352	600	2
Colorado	249	64		6								6	8	
New Mexico	6	5									1			
Utah	105	42	7	6							15	5	6	
Idaho	82	12	1	13				1			3	24	8	
Washington	269	59	2	40							7	26	45	
Oregon	743	180	18	40				6			48	40	92	
California (a)	4,732	576	174	108	25	25	3	13	26	303	170	242	441	2

a In both California and Florida a very great number of small nurseries produce only orange trees on a small scale in connection with an orange grove planted for the fruit.

b Less than 1 acre.

ACREAGE OF NURSERY TREES AND PLANTS BY KINDS, BY STATES AND TERRITORIES: 1889—Continued.

STATES AND TERRITORIES.	Prune.	Quince.	Nut.	Deciduous.	Evergreen.	Hardy shrubs.	Rose.	Grapevines.	Strawberry.	Raspberry.	Blackberry.	Currant.	Gooseberry.	Miscellaneous fruit trees and plants. (a)
The United States.....	588	517	1,370	12,342	8,044	2,879	940	6,073	4,432	5,756	4,888	2,020	1,000	1,477
North Atlantic division.....		266	93	2,575	1,025	740	61	1,800	1,077	1,021	1,204	596	88	157
Maine.....									11		5	2	23	
Vermont.....		1							3	3	3	3	3	
Massachusetts.....				152	99	189	3	1	94	31	18	3		
Rhode Island.....		1							6	3				6
Connecticut.....		3		2	4	4			81	53	10	17	1	
New York.....		189	41	962	980	402	17	1,527	448	1,018	429	405	20	8
New Jersey.....		29	40	109	328	39	13	45	287	394	302	112	36	146
Pennsylvania.....		43	12	1,260	516	115	29	227	147	119	347	54	5	
South Atlantic division.....		5	74	392	281	42	31	200	302	120	190	23	19	215
Delaware.....				52	50				44	41	118			
Maryland.....				103	74			6	62	45	55	6	5	
Virginia.....				116	50	10		29	150	30	17	10	9	
West Virginia.....		4	10	76	50	15	4	9	8	4	4	6	5	
North Carolina.....		(b)	13	18	34	1	4	84	35	1	2	1	(b)	
Georgia.....		1	34	14	10	10	8	26						197
Florida.....			17	13	7		15	52	63	2				18
North Central division.....		190	219	8,729	5,831	1,081	200	2,454	2,304	3,786	3,311	1,383	879	577
Ohio.....		47	25	1,088	948	430	45	364	360	1,228	746	451	131	68
Indiana.....		23	5	401	513	32	48	78	230	390	300	133	155	21
Illinois.....		34	24	1,206	1,400	504	12	604	460	730	635	383	126	12
Michigan.....		21	14	181	345	55	4	9	87	150	82	28	10	82
Wisconsin.....			8	249	286	29	5	20	101	94	73	12	27	62
Minnesota.....				200	80	20	7	6	20	70	123	16	57	
Iowa.....		6	25	1,081	1,057	398	13	427	298	475	302	92	56	10
Missouri.....		32	67	157	431	196	22	403	176	189	95	131	110	75
South Dakota.....				183	29	6	2	18	12	15	3	8	5	
Nebraska.....		9	28	1,900	355	301	20	225	135	150	229	82	110	16
Kansas.....		27	23	1,483	387	100	23	210	425	255	573	47	62	231
South Central division.....		18	326	441	280	41	29	472	625	184	127	7	11	110
Kentucky.....		4	6	124	43	6	3	6	105	50	5	1	5	25
Tennessee.....		4			2			12	142	87	13		3	
Alabama.....					2			2	2					
Mississippi.....							3	21	20	1				34
Louisiana.....			42		(b)	(b)	2	2	1	(b)	(b)			
Texas.....		7	278	317	231	35	21	395	221	27	96	2	1	29
Arkansas.....		3						54	128	10	13	4	2	22
Western division.....	588	20	658	205	327	66	25	741	64	39	50	11	12	419
Colorado.....				41	47	47	2	6	12	7				3
Utah.....				10				3	3	3	2			3
Idaho.....														20
Washington.....		2		13	10	3		8	7	3	1	1	2	4
Oregon.....	174	7	10	19	16	3		10	9	5	5	5	4	43
California.....	378	20	648	122	254	13	23	714	33	21	42	5	3	346

a Persimmons, guavas, mulberries, and dewberries, as well as many small mixed plots of standard fruits, are here enumerated.
 b Less than 1 acre.

APPLE TREES—Continued.

STATES AND TERRITORIES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
North Central division.....				4,711						
Ohio.....	40	33	18	718	62	24	14	27		20
Indiana.....	76	14	10	570	54	28	18	32		37
Illinois.....	63	24	13	1,081	60	22	18	175		20
Michigan.....				110						
Wisconsin.....	62	18	20	59	58	24	18	183		25
Minnesota.....	25	63	12	59	75	15	10	50		
Iowa.....	66	21	13	514	63	21	10	75		20
Missouri.....	51	23	18	448	62	23	16	200		30
South Dakota.....	48	32	20	8	50	30	20	68		28
Nebraska.....	62	30	8	300	65	25	10	114		40
Kansas.....	57	27	10	850	60	24	10	100		27
South Central division.....				294						
Kentucky.....	53	32	15	41	50	20	30	147		18
Tennessee.....	52	24	24	151	65	23	12	61		20
Alabama.....	55	30	15	20	61	20	10			25
Mississippi.....	75	15	10	7	62	28	10			30
Louisiana.....				1	60	30	10	62		25
Texas.....	75	15	10	60	64	26	10	58		27
Arkansas.....	50	25	25	14	62	28	10	100		35
Western division.....				164						
Colorado.....	70	20	10	12						
New Mexico.....	75	25								
Utah.....	50	30	20							
Idaho.....	60	20	20							
Washington.....	70	30		9						
Oregon.....	80	20		13				80		50
California.....	80	20		130				98		5

APRICOT TREES.

STATES AND TERRITORIES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States.....	209								
North Atlantic division.....	14								
New York.....	8	13,788	\$2.50	\$8.67	64	40	17		
New Jersey.....	1	12,000	2.75	12.00	65	40	25		
Pennsylvania.....	5	10,000	2.80	10.00	50	25	25		
South Atlantic division.....	15								
Maryland.....	1	12,000							
Virginia.....	1	13,500	3.00	15.00	76	15	10		
West Virginia.....	2	13,000	3.50	13.66	67	33			
North Carolina.....	9	14,000	2.75	12.00	50	25	25		
Georgia.....	2	12,000	3.00	16.00	50	40	10		
North Central division.....	31								
Ohio.....	2	10,127	3.95	7.17	61	26	13	27	20
Indiana.....	1	11,000	3.66	8.00	72	28		50	25
Illinois.....	2	11,500	4.00	7.75	55	30	15	10	25
Michigan.....	1	12,000	4.00	7.50					
Iowa.....	3	12,000	3.75	8.10	57	26	17		
Missouri.....	7	13,200	4.37	8.70	47	23	30	200	23
Nebraska.....	5	10,500	3.58	8.00	67	27	6	300	53
Kansas.....	10	10,800	3.85	8.40	70	20	10	172	41
South Central division.....	7								
Kentucky.....	2	13,000	4.00	8.00	70	20	10		10
Tennessee.....	1	15,000	4.00	8.00	70	20	10		
Texas.....	3	11,500	3.00	6.58	74	19	7	75	27
Arkansas.....	1	12,000	3.00	7.00	75	25			
Western division.....	202								
Utah.....	7	12,500	5.00	15.00	50	30	20		
Idaho.....	1	12,000	5.00	10.00	95	5			
Washington.....	2	11,750	5.25	11.00	80	20			
Oregon.....	18	12,500	5.33	11.00	70	30		75	70
California.....	174	11,376	5.86	12.97	84	12	4	146	27

FIG TREES

[1 and 2 year.]

STATES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.
The United States.....	45						
North Carolina.....	1	12,000	\$5.00	\$10.00	50	50	
Georgia.....	14	12,000	2.00	10.00	50	40	10
Florida.....	9	9,375	2.00	11.00	50	40	10
Missouri.....	1	10,000					
Alabama.....	(a)	12,000	2.50	8.00	50	40	10
Texas.....	5	11,750	2.60	8.00	70	11	10
California.....	15	12,863	2.78	11.00	80	14	6

STATES.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States.....	18						
Florida.....	4	\$4.00	\$15.50	75	25		
Texas.....	4	3.50	12.00			37	27
California.....	10	3.60	15.00			43	5

a Less than 1 acre.

NECTARINE TREES.

STATES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.
The United States.....	50						
New York.....	1	15,000	\$4.75	\$10.00	70	30	
Pennsylvania.....	1	12,000	5.00	10.00	65	35	
West Virginia.....	1	15,000	3.00	8.00	70	30	
North Carolina.....	2	16,000	5.00	8.00	75	25	
Illinois.....	1	15,000	4.00	10.00	65	35	10
Missouri.....	5	15,000	4.25	10.00	70	30	
Nebraska.....	9	15,000	4.00	10.00	65	35	10
Kansas.....	5	14,000	3.50	9.00	75	25	
Texas.....	4	10,000	4.00	9.00	60	40	10
Arkansas.....	1	12,000	4.50	10.00	60	40	15
Idaho.....	1	12,000	5.00	10.00	65	35	
Oregon.....	9	10,000	5.50	10.00	60	40	
California.....	13	12,283	5.00	10.00	78	22	

PEACH TREES.

STATES AND TERRITORIES.	Number of acres 1 year trees. (a)	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....	3,357									
North Atlantic division.....	932									
Massachusetts.....	6	15,000	\$4.00	\$5.00	60	30	10			
Connecticut.....	8	15,000	4.00	5.00	60	20	14	50		10
New York.....	490	14,077	2.14	5.13	65	25	10	100		
New Jersey.....	208	21,816	1.61	3.42	61	22	17	10		3
Pennsylvania.....	230	12,940	3.13	4.00	62	21	17	72		15
South Atlantic division.....	669									
Delaware.....	140	22,000	1.17	3.33	42	29	29	25		
Maryland.....	221	19,728	1.70	4.42	70	19	11			17
Virginia.....	114	16,400	2.70	5.00	75	18	7			
West Virginia.....	14	16,000	2.16	5.33	50	25	25			
North Carolina.....	80	16,000	3.00	7.50	55	35	10	50	25	
Georgia.....	81	16,000	3.00	7.25	63	32	5	50		50
Florida.....	19	12,200	6.50	13.75	33	37	30			

a Peaches budded on yearling seedling stocks are always sold when 1 year old from the bud, being considered of little value when older, hence there were found no older trees to report.

STATISTICS OF AGRICULTURE.

PEACH TREES—Continued.

STATES AND TERRITORIES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
North Central division.....	1,184									
Ohio.....	337	12,105	\$3.39	\$6.89	72	18	10	160		
Indiana.....	70	13,700	3.15	6.50	70	12	12	75		15
Illinois.....	155	12,000	3.11	5.09	72	19	9			
Michigan.....	120	13,200	3.50	5.17	62	25	13	300		20
Iowa.....	37	15,000	3.00	5.50	70	25	5			
Missouri.....	170	15,000	2.88	5.80	68	18	14	400		30
Nebraska.....	110	13,000	3.00	5.50	60	30	10			
Kansas.....	155	12,510	3.02	5.30	73	22	5	80		40
South Central division.....	328									
Kentucky.....	31	15,000	2.50	5.25	69	22	9		25	
Tennessee.....	51	17,000	2.40	5.30	77	23		100		
Alabama.....	24	15,000	2.50	5.00	90	10				
Mississippi.....	10	15,000	2.60	5.00	75	15	10			
Louisiana.....	6	10,333	2.60	6.00	75	25		75		
Texas.....	178	15,000	3.08	6.25	76	18	6	62		20
Arkansas.....	22	13,000	3.16	5.37	75	10	6	200		
Western division.....	244									
New Mexico.....	1	10,000	3.00	12.50	75	25				
Utah.....	15	12,000	2.50	13.50	50	50				
Idaho.....	3	15,000	5.00	10.00	95	5				
Washington.....	7	12,000	5.00	7.00	75	10	15			
Oregon.....	48	10,067	4.12	9.50	62	38		80		60
California.....	170	11,504	5.02	10.00	82	14	4	60		40

PEAR TREES.

[1, 2, and 3 year.]

STATES AND TERRITORIES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States.....	2,787							2,227		
North Atlantic division.....	910							818		
Maine.....	1	12,000						1	\$7.00	\$20.00
Vermont.....	1	10,800	\$5.00	\$16.50	45	35	20			
Massachusetts.....	3	10,000						3	7.00	20.00
Connecticut.....	1	10,000	6.00	15.00	40	40	20			
New York.....	720	11,833	4.58	12.02	56	32	12	680	0.85	13.50
New Jersey.....	14	11,500	5.00	12.00	50	30	20	55	7.00	12.00
Pennsylvania.....	164	10,285	6.00	13.00	40	42	18	70	7.05	15.00
South Atlantic division.....	265							231		
Delaware.....	15	10,000	5.00	12.00	60	30	10	95	7.00	16.00
Maryland.....	14	10,000	5.00	12.00	58	30	12	12	7.50	16.00
Virginia.....	52	11,000	4.00	15.00	75	15	10	27	8.00	18.00
West Virginia.....	9	8,500	5.33	10.66	67	30	3	12	7.00	18.00
North Carolina.....	15	12,000	5.50	12.50	50	25	25	18	7.00	17.00
Georgia.....	85	10,000	5.75	14.00	40	32	28	90	7.00	15.00
Florida.....	75	11,416	4.62	9.20	37	35	28	37	7.00	15.00
North Central division.....	1,100							958		
Ohio.....	266	10,275	6.42	13.45	60	23	17	264	8.00	13.80
Indiana.....	115	10,571	6.33	15.15	63	26	11	101	8.10	16.28
Illinois.....	341	12,440	7.00	15.71	52	24	24	270	9.35	15.50
Michigan.....	54	12,000	7.00	15.00	54	22	24	30	9.00	15.00
Iowa.....	37	10,000	6.00	13.33	54	31	15	26	7.75	15.00
Missouri.....	240	10,341	5.72	12.52	46	28	26	185	7.03	13.50
Nebraska.....	76	10,643	6.00	11.00	59	35	6	47	7.33	15.07
Kansas.....	70	10,991	7.12	11.45	44	38	18	35	8.50	15.50
South Central division.....	105							86		
Kentucky.....	11	12,000	6.25	15.00	45	33	22	6	9.00	16.00
Tennessee.....	14	14,000	7.00	16.00	60	30	10	4	9.50	16.00
Alabama.....	24	11,000	5.75	15.00	50	30	20	6	9.25	15.00
Mississippi.....	6	11,000	6.00	15.00	55	25	20	8	9.00	15.50
Louisiana.....	(a)	8,000	6.00	12.00	50	30	20	1	8.75	15.00
Texas.....	115	11,857	5.11	14.72	67	23	10	51	8.00	14.50
Arkansas.....	25	10,000	6.25	13.50	50	25	25	10	8.00	16.00
Western division.....	218							134		
Colorado.....	4	10,000	5.00	15.00	50	28	22	2	9.00	18.00
Utah.....	4	10,500	5.00	17.50	50	30	20	1	9.00	20.00
Idaho.....	12	10,000	5.00	8.00	95	5		12	7.00	11.00
Washington.....	14	10,000	6.00	10.00	75	10	15	12	8.50	13.50
Oregon.....	22	9,780	6.00	10.58	57	33	10	27	8.00	12.00
California.....	162	13,514	5.50	12.75	80	15	5	80	9.00	16.50

a Less than 1 acre.

PEAR TREES—Continued.

STATES AND TERRITORIES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....				1,839						
North Atlantic division.....				287						
Maine.....								5		
Vermont.....	80	80	10	1	65	25	10			15
New York.....	82	82	16	172	55	33	12	50		18
New Jersey.....	50	25	25	73	34	33	33	35		20
Pennsylvania.....	50	25	25	41	40	40	20	50		18
South Atlantic division.....				307						
Delaware.....	00	30	10							
Maryland.....	02	28	10							
Virginia.....	75	15	10	14	60	20	20			
North Carolina.....	50	25	25					50	25	
Georgia.....	08	22	10	18	08	22	10	125		50
Florida.....	60	30	10	335	60	25	15			17
North Central division.....				1,185						
Ohio.....	43	35	22	415	55	27	18	100		18
Indiana.....	00	20	20	55	60	20	20	50		20
Illinois.....	05	24	11	370	00	20	20	20		30
Michigan.....	00	30	10	21	60	30	10			
Iowa.....	72	10	0	195	06	23	11	200		26
Missouri.....	52	31	17	72	64	20	10	475		40
Nebraska.....	80	15	5	15	50	50		117		56
Kansas.....	47	30	23	42	50	25	25	100		40
South Central division:										
Kentucky.....	50	80	20					20		20
Tennessee.....	50	40	10					125		
Alabama.....	45	45	10							
Mississippi.....	40	50	10							
Louisiana.....	45	50	5					75		
Texas.....	55	40	5					50		20
Arkansas.....	50	25	25					50		20
Western division:										
Colorado.....	00	00	10							
Utah.....	00	00	10							
Idaho.....	70	80								
Washington.....	00	30	10							
Oregon.....	00	40						50		40
California.....	65	25	10					66		15

PLUM TREES.

[1, 2, and 3 year.]

STATES AND TERRITORIES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States.....	3,224							2,680		
North Atlantic division.....	787							600		
Maine.....	5	12,000	\$5.00	\$10.00	40	45	15	2	\$0.50	\$20.00
Vermont.....	1	10,800	5.00	10.00	45	35	20	1	6.50	18.00
Massachusetts.....	3	11,000								
Connecticut.....	2	11,000								
New York.....	587	11,865	4.92	12.00	53	30	17	538	5.90	15.33
New Jersey.....	24	11,000	6.00	15.00				18	8.00	16.00
Pennsylvania.....	165	10,800	6.00	15.00	75	18	7	81	8.00	16.00
South Atlantic division.....	202							98		
Delaware.....	2	12,500						3		
Maryland.....	20	12,500	6.00	12.00	00	25	15	26	8.00	14.00
Virginia.....	52	12,000	5.75		62	23	15	30		
West Virginia.....	18	11,500	4.66	11.00	00	30	10	13	6.00	15.00
North Carolina.....	20	12,000	5.00	10.00	50	25	25	10	6.00	15.50
Georgia.....	54	10,700	3.50	10.00	50	33	17	9	5.00	12.00
Florida.....	120	30,000	3.25	15.00	50	40	10	7		20.00
North Central division.....	1,564							1,621		
Ohio.....	288	10,518	6.43	13.00	00	27	13	483	7.75	14.20
Indiana.....	107	10,807	6.07	13.42	65	20	6	128	7.25	13.50
Illinois.....	445	10,289	6.33	12.00	60	20	20	273	7.83	15.50
Michigan.....	48	12,000	6.50	12.00						
Wisconsin.....	6	11,000						7		
Minnesota.....	10	15,000	6.50	12.00				15	8.00	17.00
Iowa.....	192	11,142	6.65	12.87	63	25	12	175	8.86	13.50
Missouri.....	163	13,000	5.25	12.00	60	22	18	293	7.56	13.50
South Dakota.....	4	10,267	5.82	10.17	47	35	18	6	7.25	16.67
Nebraska.....	154	10,750	5.94	11.00	50	28	18	108	6.60	14.83
Kansas.....	147	10,115	5.90	10.15	66	24	10	133	7.00	14.18

QUINCE TREES.

[1, 2, and 3 year.]

STATES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States.....	233							223		
North Atlantic division.....	85							120		
Vermont.....	1	10,000								
Rhode Island.....	1	12,000	\$4.00	\$10.00	60	80	10			
Connecticut.....	2	12,000	4.00	10.00	62	28	10	1	\$5.00	\$12.00
New York.....	47	12,500	4.00	9.18	61	22	17	86	4.75	11.10
New Jersey.....	11	10,000	4.50	10.00	50	25	25	13	5.00	12.50
Pennsylvania.....	23	10,000	4.50	11.00	50	25	25	20	5.00	13.00
South Atlantic division.....	5									
West Virginia.....	4	10,000	3.66	10.33	67	33				
North Carolina.....	(a)	12,000	5.00	10.00	65	35				
Georgia.....	1	10,000	5.00	9.00	40	40	20			
North Central division.....	107							92		
Ohio.....	24	11,000	4.00	10.00	58	27	15	23	5.50	12.00
Indiana.....	13	10,750	4.00	10.00	62	38		10	5.50	12.00
Illinois.....	23	10,225	4.18	10.50	55	30	15	12	5.58	13.00
Michigan.....	11	11,000	4.25	10.00	50	30	20	10	5.00	13.00
Iowa.....	2	12,000	4.25	10.00	50	30	20	4	5.00	13.00
Missouri.....	19	13,200	3.53	10.80	43	25	32	13	4.87	11.50
Nebraska.....	5	12,000	3.75	10.25	75	25		4	4.75	12.00
Kansas.....	11	12,800	4.00	10.16	75	25		16	5.00	12.00
South Central division.....	16							2		
Kentucky.....	2	10,000	4.00	10.00	75	15	10	2	8.00	13.50
Tennessee.....	4	11,000	4.50	10.50	65	30	5			
Texas.....	7	10,000	4.50	8.33	77	13	10			
Arkansas.....	3	11,000	3.50	8.00	60	40				
Western division.....	20							9		
Washington.....	1	11,000	4.00	12.50				1		
Oregon.....	5	11,000	4.00	13.50	50	50		2		
California.....	14	13,333	5.40	15.58	87	13		6		

STATES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States.....				61					
North Atlantic division.....				61					
Vermont.....									16
New York.....	49	31	20	50	55	30	15	150	30
New Jersey.....	50	25	25	5	50	38	12	50	25
Pennsylvania.....									23
North Central division:									
Ohio.....	60	25	15						
Indiana.....	62	25	13						
Illinois.....	65	20	15						
Michigan.....	65	30	5						
Iowa.....	60	30	10						
Missouri.....	62	23	15						
Nebraska.....	60	25	15						
Kansas.....	60	30	10						
South Central division:									
Kentucky.....	75	15	10					50	5
Texas.....								22	27
Western division:									
Oregon.....								100	50
California.....								66	5

a Less than 1 acre.

STATISTICS OF AGRICULTURE.

SEMITROPICAL FRUITS.

LEMON TREES.

[1, 2, and 3 year.]

STATES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States.....	46							20		
Florida.....	33	6,572	\$18.21	\$25.30	63	37		12		
Texas.....	1	10,000								\$15.00
California.....	12	7,781	22.50	63.12	75	18	7	8	\$30.00	75.00

LIME TREES.

The United States.....	6									
Florida.....	3	6,375	12.50	25.00						
California.....	3	15,000	20.00	75.00						

OLIVE TREES.

California.....	14	12,616	6.27	12.00	82	18		12	9.00	17.25
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ORANGE TREES.

The United States.....	200							140		
Florida.....	123	5,855	16.31	28.88	50	27	17	77	22.87	32.30
Louisiana.....	4	10,000	15.00	30.00						
Texas.....	2	10,000	15.00	25.00				(a)	17.00	35.00
California.....	170	8,444	20.77	65.83	62	22	10	72	19.77	85.00

POMELO TREES.

The United States.....	9							3		
Florida.....	6	4,700	13.00	27.55	50	50		3	14.00	34.00
Texas.....	1	6,000	15.00	30.00						
California.....	2	11,500	5.00	18.50						

PRUNE TREES.

The United States.....	311							277		
Washington.....	20	12,000	5.25	9.50	75	25		10	6.00	15.00
Oregon.....	88	12,000	5.33	9.25	77	21		86	6.00	15.00
California.....	203	13,500	6.33	17.50	73	24	3	176	7.25	20.00

a Less than 1 acre.

SEMITROPICAL FRUITS—Continued.

LEMON TREES—Continued.

[1, 2, and 3 year.]

STATES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States				13					
Florida	100			8	33	33	34		25
Texas								50	
California	80	15	5	5	70	25	5	25	40

LIME TREES—Continued.

The United States									
Florida									
California									

OLIVE TREES—Continued.

California								00	5
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ORANGE TREES—Continued.

The United States				159					
Florida	68	25	7	08	56	28	16		57
Louisiana									
Texas									
California	73	15	12	61	70	20	10	100	37

POMELO TREES—Continued.

The United States									
Florida	50	50		2					25
Texas									
California									

PRUNE TREES—Continued.

The United States									
Washington	80	15	5					600	50
Oregon	80	20						150	50
California	70	20	10					200	50

DECIDUOUS SHADE OR TIMBER TREES. (a)

[1, 2, and 3 year.]

STATES AND TERRITORIES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States.....	4,022							4,026		
North Atlantic division.....	950							1,485		
Massachusetts.....	58	13,000	\$2.25	\$3.75	34	33	33	63	\$6.00	\$12.00
Connecticut.....	2	11,500								
New York.....	430	11,000	2.55	3.50	65	24	11	403	5.00	10.50
New Jersey.....	56	10,000	2.00	3.75	75	15	10	119	5.50	12.00
Pennsylvania.....	395	10,000	3.50	3.60	70	30		840	5.00	12.00
South Atlantic division.....	143							148		
Delaware.....	8	12,000	3.50	5.00	60	30	10	9	6.00	15.00
Maryland.....	51	10,000	3.00	4.50	60	30	10	20	7.00	17.50
Virginia.....	50	10,000	3.00	4.75	50	30	20	60	8.00	15.00
West Virginia.....	18	10,500	3.00	4.50	50	40	10	38	7.00	15.00
North Carolina.....	3	10,000	3.50	5.00	50	50		0	7.25	10.00
Georgia.....	4	10,000	5.00	7.00	30	50	20	5	7.00	12.00
Florida.....	3	12,000	2.25	14.00	30	60	10	4	5.00	10.00
North Central division.....	3,258							3,102		
Ohio.....	282	2,333	2.00	6.00	55	23	22	403	8.00	8.00
Indiana.....	158	25,000	2.00	5.50	65	5		178	8.00	8.00
Illinois.....	455	37,025	2.50	5.08	67	20	13	308	8.33	7.10
Michigan.....	115	1,000,000	0.03	0.30				40		
Wisconsin.....	187	1,050,000	0.03	0.10	75	25		62	0.04	0.15
Minnesota.....	40	65,000	1.00	1.75	50	25	25	40	2.00	3.00
Iowa.....	450	57,010	0.78	1.44	63	27	10	442	1.13	3.45
Missouri.....	105	60,332	0.61	1.50	62	23	15	52	2.00	5.00
South Dakota.....	98	383,333	0.66	0.10	58	43		85	0.13	0.16
Nebraska.....	730	171,600	0.24	0.53	52	30	9	855	0.48	1.08
Kansas.....	629	38,706	0.70	1.34	81	17	2	547	0.67	2.25
South Central division.....	157							120		
Kentucky.....	37	16,000	2.00	5.00	60	25	15	37	12.50	15.00
Texas.....	120	11,601	4.75	8.00	55	32	13	80	5.00	8.00
Western division.....	114							75		
Colorado.....	26	10,000	1.50	5.00	34	33	33	15		
Utah.....	8	14,000	5.00	10.00	45	40	15	2		
Washington.....	7	10,000	2.00	5.00	40	60		6		
Oregon.....	9	10,000	2.00	5.00	40	60		10		
California.....	61	12,000	5.00	14.16	95	5		42		

STATES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....				2,784						
North Atlantic division.....				140						
Massachusetts.....	40	40	20	31	50	30	20			
New York.....	68	20	12	60	75	15	10			
New Jersey.....	70	25	5	24	68	20	12			
Pennsylvania.....	65	30	5	25	66	22	12			25
South Atlantic division.....				101						
Delaware.....				35						
Maryland.....				26						
West Virginia.....				20						
North Carolina.....				0						
Georgia.....				5						
Florida.....				0						
North Central division.....				2,860						
Ohio.....	55	28	17	403	60	30	10			
Indiana.....				65	60	30	10	60		
Illinois.....	67	20	13	353	60	22	18	50		
Michigan.....				20				303		30
Wisconsin.....								50		25
Minnesota.....				120						
Iowa.....	61	29	10	730	64	30	6	48		20
Missouri.....	50	22	28					300		30
South Dakota.....	58	42								
Nebraska.....	55	35	10	315	45	35	20	147		67
Kansas.....	80	20		307	90	10		70		50

a Forest tree seedlings are grown quite largely in most of the states of the North Central division for planting of timber claims and for replanting by other nurserymen, some growers producing as many as 500,000 seedling trees per acre at a low cost per 100, while others in the same state grow other trees for ornamental planting not more than 3,000 per acre at a cost of some dollars per 100. The grouping of all of these gives only a general idea of average production, cost, and selling price.

STATISTICS OF AGRICULTURE.

DECIDUOUS SHADE OR TIMBER TREES—Continued.

STATES.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
South Central division				158						
Kentucky	60	25	15	50				75	10	
Texas	85	10	5	108				47		15
Western division				10						
California				10						

EVERGREEN SHADE OR TIMBER TREES. (a)

[1, 2, and 3 year.]

STATES.	Number of acres 1 year trees.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling trees.	Per cent of No. 2 grade yearling trees.	Per cent of No. 3 grade yearling trees.	Number of acres 2 year trees.	Approximate cost of production per 100.
The United States	2,874							2,520	
North Atlantic division	810							611	
Massachusetts	43	13,000	\$2.50	\$4.00	33	34	33	40	\$3.00
Connecticut	2	12,500						2	
New York	430	14,944	2.20	6.10	75	10	9	437	3.00
New Jersey	84	14,750	2.50	3.50	62	18	20	30	3.00
Pennsylvania	245	15,750	2.50	5.80	64	16	20	102	3.50
South Atlantic division	111							83	
Delaware	11	12,000	2.00	5.75	58	26	16	10	4.00
Maryland	10	13,000	3.00	6.00	60	30	10	12	4.00
Virginia	30	15,000	3.00	6.50	62	28	10	20	4.25
West Virginia	30	12,500	3.00	6.00	61	20	19	20	4.00
North Carolina	25	12,000	2.50	6.00	60	25	15	9	4.50
Georgia	4	10,000	2.00	7.00	30	60	20	6	4.00
Florida	1	12,000	1.75	7.50	35	35	30	0	3.00
North Central division	1,727							1,603	
Ohio	215	148,781	2.50	6.00	77	17	0	223	3.75
Indiana	160	44,833	2.50	6.00	64	36		115	4.00
Illinois	341	50,000	2.33	6.25	77	15		348	3.00
Michigan	31	83,250	2.50	7.20	70	30	8	273	3.00
Wisconsin	65	1,317,500	0.51	1.25	55	40		151	0.55
Minnesota	30	17,500	5.00	9.00	60	20	5	30	5.50
Iowa	452	107,727	0.91	2.70	67	23	7	232	1.18
Missouri	90	5,572	3.00	7.00	66	30	14	141	4.00
South Dakota	15	32,500	2.00	6.00	60	30	10	1	3.00
Nebraska	168	5,420	3.17	5.67	68	22	10	112	4.67
Kansas	170	56,110	3.32	5.71	60	30	10	57	4.33
South Central division	66							62	
Kentucky	6	7,000	5.00	9.00	80	10	10	12	8.00
Tennessee	2	12,000	4.50	8.00					
Alabama	2	12,000	5.00	7.50					
Mississippi	2	12,000	4.75	8.25					
Louisiana	(b)	10,000	5.50	9.00					
Texas	54	6,571	6.70	10.00	50	28	22	50	8.10
Western division	150							110	
Colorado	12	45,000	3.00	5.00				12	
Washington	4	12,000						5	
Oregon	0	12,500						7	
California	128	13,250	0.90	2.54	95	6		80	

a A very large share of all the evergreens grown in the country are started by specialists in a few states of the North Central division, who grow from 300,000 to 1,000,000 per acre at a very low cost, and sell them to other nurserymen, who replant them 5,000 to 12,000 to the acre, hence the very great difference in the average number grown to the acre and the cost and the selling price in the various states, some producing at one-fourth the average here given and others selling at two and three times the price quoted.

b Less than 1 acre.

EVERGREEN SHADE OR TIMBER TREES—Continued.

STATES.	Average wholesale price per 100.	Per cent of No. 1 grade 2 year trees.	Per cent of No. 2 grade 2 year trees.	Per cent of No. 3 grade 2 year trees.	Number of acres 3 year trees or over.	Per cent of No. 1 grade 3 year trees or over.	Per cent of No. 2 grade 3 year trees or over.	Per cent of No. 3 grade 3 year trees or over.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States.....					3,241					
North Atlantic division.....					504					
Massachusetts.....	\$6.00	70	20	10	16	75	20	5		
New York.....	7.00	68	20	12	107	68	23	9		15
New Jersey.....	7.00	68	22	10	212	65	25	10		20
Pennsylvania.....	8.00	66	24	10	169	83	17		75	26
South Atlantic division.....					87					
Delaware.....	7.50				35					
Maryland.....	7.25				52					
Virginia.....	8.00									
West Virginia.....	8.50									
North Carolina.....	9.00									
Georgia.....	9.00									
Florida.....	8.00									
North Central division.....					2,431					
Ohio.....	9.58	58	33	9	510	75	18	7		10
Indiana.....	10.00	75	20	5	238				20	
Illinois.....	8.00	74	17	9	711	68	10	13	100	50
Michigan.....	8.00				41				600	30
Wisconsin.....	1.02	75	15	10	70	75	20	5	50	25
Minnesota.....	10.00				40					
Iowa.....	4.04	68	30	12	373	73	24	3	62	
Missouri.....	10.00	42	35	23	200	68	28	4	515	38
South Dakota.....	7.00	40	60		13	60	20	20	100	
Nebraska.....	8.00	57	30	13	75	63	25	12	67	44
Kansas.....	9.83	75	25		100				600	46
South Central division.....					152					
Kentucky.....	17.50	80	10	10	25				25	5
Texas.....	12.33	95	5		127				52	80
Western division.....					67					
Colorado.....					23					
Washington.....					1					
Oregon.....					3					
California.....					40					

STATISTICS OF AGRICULTURE.

HARDY SHRUBS.

[1, 2, and 3 year.]

STATES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.	Approximate cost of production per 100.	Average wholesale price per 100.
The United States	1,193							1,247		
North Atlantic division.....	335							334		
Massachusetts.....	110	26,750	\$2.00	\$4.00	33	34	33	63	\$2.00	\$5.00
Connecticut.....	2	25,000						2		
New York.....	189	17,500	3.75	7.00	78	18	4	176	5.00	9.00
New Jersey.....	13	17,000	4.00	7.50	60	30	10	13	5.25	9.00
Pennsylvania.....	30	19,250	4.00	7.50	75	13	12	70	5.00	9.00
South Atlantic division.....	24							18		
Virginia.....	10	15,000	3.50	7.00	60	30	10	6	5.00	9.00
West Virginia.....	7	15,000	3.00	8.00	45	40	15	8	5.25	8.75
North Carolina.....	1	10,000	5.00	7.50	40	40	20	(a)	6.00	9.00
Georgia.....	6	10,000	5.00	8.00	30	50	20	4	5.00	10.00
North Central division.....	795							840		
Ohio.....	326	16,333	4.00	7.00	65	25	10	108	5.00	9.00
Indiana.....	3	16,000	4.00	7.50	76	24		29	5.00	9.00
Illinois.....	199	17,000	3.50	6.00	70	18	12	225	4.12	8.75
Michigan.....	20	13,000	3.75	6.50	70	20	10	15	5.00	8.50
Wisconsin.....	21	15,000	4.00	6.00	72	20	8	8	5.00	8.75
Minnesota.....	10	10,000						10		
Iowa.....	123	13,730	3.02	6.52	55	34	11	112	5.75	9.25
Missouri.....	29	10,875	3.08	6.33	50	23	27	87	5.60	10.00
South Dakota.....		7,500	3.25	7.50				3	5.40	8.60
Nebraska.....	122	12,000	4.50	7.50	75	25		162	5.50	9.50
Kansas.....	42	15,750	4.50	7.50	70	30		40	6.00	9.65
South Central division.....	16							25		
Kentucky.....	6	11,000	4.00	8.00	80	10	10		9.00	13.50
Louisiana.....	(a)	15,000	3.50	7.50	70	20	10	(a)	7.00	12.00
Texas.....	10	21,500	3.16	8.33	70	15	15	25	6.50	11.00
Western division.....	23							31		
Colorado.....	12	8,000						23		
Washington.....	2	7,000						1		
Oregon.....	2	7,500						1		
California.....	7	8,000						6		
STATES.	Per cent of No. 1 grade 2 year plants.	Per cent of No. 2 grade 2 year plants.	Per cent of No. 3 grade 2 year plants.	Number of acres 3 year plants or over.	Per cent of No. 1 grade 3 year plants or over.	Per cent of No. 2 grade 3 year plants or over.	Per cent of No. 3 grade 3 year plants or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States				439						
North Atlantic division.....				90						
Massachusetts.....	50	30	20	16	50	50				
New York.....	73	22	5	40	70	20	10	50		25
New Jersey.....	65	20	15	13	50	50		15		15
Pennsylvania.....	60	25	15	15	55	45		20		10
North Central division.....				337						
Ohio.....	60	25	15	36	75	18	7			18
Illinois.....	82	10	8	80	90	5	5	30	15	
Michigan.....				20						
Iowa.....	53	30	12	73	73	24	3	62		
Missouri.....	47	25	28	80	68	28	4			35
South Dakota.....	30	50	20	3	60	20	20			
Nebraska.....	80	15	5	27	88	12		158		33
Kansas.....				18				150		50
South Central division:										
Kentucky.....	80	10	10							5
Louisiana.....	70	30						100		
Texas.....	72	23	5					62		27
Western division.....				12						
Colorado.....				12						

(a) Less than 1 acre.

HORTICULTURE.

559

ROSE PLANTS.

[1 and 2 year.]

STATES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....	222							124					
North Atlantic division.....	27							34					
Massachusetts.....	2	15,000											
New York.....	9	14,444	\$1.83	\$10.71	62	33	5	8	\$6.50	\$12.00	50		40
New Jersey.....	7	16,000	4.75	10.00	60	30	10	4	6.00	12.00			50
Pennsylvania.....	9	14,000	4.80	16.00	75	13	12	26	3.50	12.00			
South Atlantic division.....	31												
West Virginia.....	4	15,000	3.00	10.00	62	28	10						
North Carolina.....	4	20,000	4.00	12.00	60	30	10						
Georgia.....	8	10,000	5.00	10.00	53	37	10						
Florida.....	15	8,333	5.83	10.75	42	50	8						
North Central division.....	134							60					
Ohio.....	35	12,000	4.50	10.67	70	0	21	10	6.00	12.00			
Indiana.....	30	12,300	4.50	10.75	77	21	2	9	6.25	12.00			
Illinois.....	8	12,250	4.80	10.00	60	30	10	4	6.25	12.00			
Michigan.....	4	10,000	4.75	10.00									
Wisconsin.....	5	5,000	5.00	10.00									
Minnesota.....	2	15,000	5.00	10.50							50		
Iowa.....	10	8,800	5.00	10.00	50	28	22	3	6.40	12.50			
Missouri.....	8	10,000	4.80	12.50	40	43	17	14	6.25	12.50	500		30
South Dakota.....	1	12,000	5.25	12.00				1	6.50	13.00			
Nebraska.....	10	8,500	5.67	12.00	67	20	13	10	6.00	12.00	200		
Kansas.....	12	6,755	6.00	12.50				10	6.00	12.00	150		50
South Central division.....	10							10					
Kentucky.....	2	10,000	5.50	10.00				1	6.50	12.00			
Mississippi.....	1	12,000	5.60	12.00				2	7.00	15.00			
Louisiana.....	1	10,000	5.30	11.00				1	7.00	15.00			
Texas.....	6	14,000	3.12	12.00	72	18	10	15	5.17	13.50			
Western division.....	20							5					
Colorado.....	2	15,000						5			50	10	
California.....	18	6,100	5.50	10.00	75	25							

GRAPEVINES.

[1, 2, and 3 year.]

STATES AND TERRITORIES.	Number of acres 1 year vines.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling vines.	Per cent of No. 2 grade yearling vines.	Per cent of No. 3 grade yearling vines.	Number of acres 2 year vines.
The United States.....	3,720							1,700
North Atlantic division.....	1,147							608
Massachusetts.....	1	15,000						
New York.....	986	20,529	\$1.10	\$2.40	57	84	9	511
New Jersey.....	25	12,333	1.15	2.45	55	85	10	15
Pennsylvania.....	135	20,125	1.00	2.50	45	42	13	82
South Atlantic division.....	100							46
Maryland.....	4	17,500	2.00	3.00	57	23	20	2
Virginia.....	24	18,000	2.00	3.00	60	30	10	5
West Virginia.....	7	15,000	2.00	3.50	55	35	10	2
North Carolina.....	55	18,330	1.75	3.00	55	60	15	20
Georgia.....	18	17,333	2.33	3.33	62	41	7	8
Florida.....	52	20,025	2.87	3.50	43	66	21	
North Central division.....	1,617							837
Ohio.....	252	20,313	1.02	2.75	50	30	20	112
Indiana.....	58	10,571	1.42	2.78	62	34	4	20
Illinois.....	336	20,010	1.31	2.63	53	32	15	268
Michigan.....	6	22,200	1.50	2.75	50	25	25	3
Wisconsin.....	12	16,000	1.50	2.33	55	35	10	8
Minnesota.....	4	20,000	1.50	3.00	50	50		2
Iowa.....	305	20,000	2.16	2.81	55	30	15	122
Missouri.....	352	22,785	2.31	3.05	40	43	17	141
South Dakota.....	15	18,000	2.50	2.50	40	40	20	3
Nebraska.....	100	21,714	1.25	2.58	60	26	14	65
Kansas.....	117	20,453	1.12	2.80	63	27	10	93

STATISTICS OF AGRICULTURE.

GRAPEVINES—Continued.

STATES AND TERRITORIES.	Number of acres 1 year vines.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling vines.	Per cent of No. 2 grade yearling vines.	Per cent of No. 3 grade yearling vines.	Number of acres 2 year vines.
South Central division	236							124
Kentucky	4	25,000	\$1.25	\$3.00	63	20	17	2
Tennessee	9	25,000	1.45	3.25	50	50		3
Alabama	2	20,000	2.50	3.10	55	45		
Mississippi	8	20,000	2.40	3.00	60	40		3
Louisiana	1	20,000	2.25	3.15	65	35		1
Texas	184	14,200	2.64	3.33	78	12	10	100
Arkansas	28	15,571	2.03	4.07	60	30	10	6
Western division	566							175
Colorado	6	20,000	2.50	6.00	50	50		
Utah	3	20,000	3.00	7.00	60	40		
Washington	6	30,000	2.00	4.50	80	20		2
Oregon	7	30,000	2.00	4.50	80	20		3
California	544	83,571	0.56	1.39	92	6	2	170

STATES.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade 2 year vines.	Per cent of No. 2 grade 2 year vines.	Per cent of No. 3 grade 2 year vines.	Number of acres 3 year vines or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States						157			
North Atlantic division						45			
New York	\$1.83	\$3.60	75	20	5	30	75		25
New Jersey	1.85	3.75	60	30	10	5			
Pennsylvania	1.15	3.50	80	20		10	20	17	
South Atlantic division:									
Maryland	3.00	4.00	64	30	6				
Virginia	3.00	4.00	62	28	10				
West Virginia	3.00	4.00	60	30	10				
North Carolina	2.00	3.25	70	30					
Georgia	2.50	4.00	75	25					
Florida	3.00	4.25	70	30					
North Central division:									
Ohio	2.10	3.50	63	22	15				32
Indiana	2.00	3.33	75	25			30		
Illinois	1.68	3.50	70	18	12				25
Michigan	2.00	4.00	70	30					35
Wisconsin	2.10	3.85							38
Minnesota	2.50	3.75	70	20	10		59		
Iowa	2.50	3.80	80	18	2		185		27
Missouri	2.00	4.00	70	20	10		300		30
South Dakota	2.00	4.25							
Nebraska	1.80	3.33	80	20			180		43
Kansas	1.68	3.20	80	20			100		35
South Central division						112			
Kentucky	2.50	4.00	80	10	10		10		5
Tennessee	2.30	4.00	75	25			100		
Mississippi	2.80	5.00				10			
Louisiana	3.00	4.00							
Texas	3.00	5.00	95	5		102	108		75
Arkansas	3.16	5.75	75	15	10				25
Western division:									
Washington	3.50	6.00							
Oregon	3.50	6.00					150		75
California	1.00	1.75					83		5

HORTICULTURE.

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STRAWBERRY PLANTS.

STATES AND TERRITORIES.	Number of acres 1 year plants. (a)	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States	4,432								
North Atlantic division	1,077								
Maine.....	11	30,000	\$0.15	\$0.30					
Vermont.....	3	25,000	0.10	0.30					25
Massachusetts.....	94	25,000	0.20	0.40					
Rhode Island.....	6	40,000	0.20	0.30					
Connecticut.....	81	150,000	0.20	0.30				50	25
New York.....	448	50,222	0.20	0.30				50	25
New Jersey.....	287	120,000	0.15	0.30					
Pennsylvania.....	147	88,000	0.15	0.30				66	50
South Atlantic division	362								
Delaware.....	44	100,000	0.13	0.20					
Maryland.....	62	43,750	0.13	0.20					
Virginia.....	150	40,000	0.15	0.20					
West Virginia.....	8	62,500	0.15	0.30					
North Carolina.....	35	25,000	0.20	0.25					
Florida.....	63	100,000	0.13	0.30					
North Central division	2,304								
Ohio.....	860	77,725	0.14	0.27	00	10		50	23
Indiana.....	230	90,000	0.13	0.23	00	1		30	
Illinois.....	460	80,181	0.17	0.20	00	10			10
Michigan.....	87	80,000	0.17	0.30	02	8			
Wisconsin.....	101	52,750	0.15	0.28	70	20	10		
Minnesota.....	20	35,000	0.15	0.30	00	10		50	
Iowa.....	298	94,217	0.13	0.30	31	18	1	75	41
Missouri.....	170	37,423	0.13	0.31	60	04	0	200	22
South Dakota.....	12	100,000	0.20	0.30	60	40		000	37
Nebraska.....	135	87,000	0.13	0.25	02	8			
Kansas.....	425	71,000	0.13	0.25	03	7		100	32
South Central division	625								
Kentucky.....	105	39,800	0.15	0.33				50	5
Tennessee.....	142	30,000	0.15	0.25					
Alabama.....	2	30,000	0.15	0.25					
Mississippi.....	26	28,000	0.13	0.27					
Louisiana.....	1	40,000	0.16	0.28					
Texas.....	221	43,333	0.17	0.30				50	03
Arkansas.....	123	44,000	0.20	0.28					
Western division	64								
Colorado.....	12	27,000	0.25	0.35					
Utah.....	3	25,000	0.25	0.40					
Washington.....	7	25,000	0.20	0.32					
Oregon.....	9	25,000	0.20	0.33				100	60
California.....	33	77,000	0.15	0.23					

a A very considerable acreage of strawberries here reported is cultivated for the purpose of producing both plants and fruit, plants to supply the demand of the nursery trade being dug from the middle of the rows, which are finally left for fruiting, wide or narrow, as the demands for the plants will admit. Often one-half of the plants may be taken up and then leave the field in better condition for fruiting.

STATISTICS OF AGRICULTURE.

RASPBERRY PLANTS. (a)

[1 and 2 year.]

STATES AND TERRITORIES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
The United States.....	4,305							1,451		
North Atlantic division.....	1,621									
Vermont.....	3	20,000	\$0.40	\$0.60	70	30				25
Massachusetts.....	31	20,000	0.45	0.80	75	25				
Rhode Island.....	3	25,000	0.45	0.80	70	30				
Connecticut.....	53	20,000	0.50	0.80	70	30				
New York.....	1,018	15,000	0.48	0.70	75	25			48	25
New Jersey.....	394	15,000	0.40	0.60	75	25				
Pennsylvania.....	119	19,125	0.40	0.60	75	25			50	50
South Atlantic division.....	126									
Delaware.....	44	20,000	0.50	0.65						
Maryland.....	45	17,000	0.38	0.60						
Virginia.....	30	18,000	0.38	0.60						
West Virginia.....	4	17,500	0.40	0.60						
North Carolina.....	1	16,000	0.40	0.60						
Florida.....	2	20,000	0.45	0.70						
North-Central division.....	2,300							1,426		
Ohio.....	721	15,900	0.48	0.78	78	20	2	547	44	37
Indiana.....	232	11,166	0.45	0.75	96	4		168	60	
Illinois.....	330	13,355	0.52	0.77	90	10		400	5	
Michigan.....	150	13,000	0.45	0.70	90	10				
Wisconsin.....	94	16,340	0.43	0.71						
Minnesota.....	65	25,000	0.48	0.68	90	10		6	75	
Iowa.....	221	15,000	0.53	0.75	80	16	4	254	50	32
Missouri.....	130	15,151	0.47	0.77	69	31	3	59	135	32
South Dakota.....	12	17,000	0.53	0.93	65	35		3		
Nebraska.....	150	13,263	0.43	0.80	72	28			400	75
Kansas.....	255	13,000	0.45	0.76	100				75	50
South Central division.....	159							25		
Kentucky.....	25	18,600	0.33	0.55	70	15	15	25	5	10
Tennessee.....	87	20,000	0.35	0.50	80	20				
Mississippi.....	1	21,000	0.38	0.50	85	15				
Louisiana.....	(b)	20,000	0.37	0.55	82	18				
Texas.....	27	15,000	0.36	0.60	85	15			25	50
Arkansas.....	19	20,000	0.35	0.60	90	10				
Western division.....	39									
Colorado.....	7	20,000	0.30	0.80	75	25				
Utah.....	3	20,000	0.30	0.85	70	30				
Washington.....	3	21,870	0.30	0.90						
Oregon.....	5	20,000	0.30	0.90						
California.....	21	25,000	0.30	2.04						

a Much of the acreage of raspberries reported is cultivated for the double purpose of plant and fruit production, and it is a question whether a part of the cost of production should not have been charged to the fruit crop.

b Less than 1 acre.

HORTICULTURE.

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BLACKBERRY PLANTS. (a)

[1 and 2 year.]

STATES AND TERRITORIES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....	3,594							1,294			
North Atlantic division.....	1,204										
Maine.....	5	21,000	\$0.80	\$1.25							25
Vermont.....	3	20,500	0.80	1.25							25
Massachusetts.....	18	20,000	0.50	1.00							
Connecticut.....	10	30,000	0.40	1.00					100		25
New York.....	429	21,185	0.35	0.65					75		25
New Jersey.....	392	21,500	0.35	0.50							
Pennsylvania.....	347	21,000	0.30	0.50					50		50
South Atlantic division.....	100										
Delaware.....	118	30,000	0.50	0.60							
Maryland.....	55	20,007	0.40	0.75							
Virginia.....	17	20,000	0.35	0.65							
West Virginia.....	4	20,000	0.40	0.65							
North Carolina.....	2	21,000	0.40	0.75							
North Central division.....	2,017							1,294			
Ohio.....	374	18,480	0.39	0.75	75	20	5	372	04		33
Indiana.....	270	19,220	0.38	0.70	91	9		120			
Illinois.....	285	20,000	0.39	0.85	90	10		350	22		20
Michigan.....	82	20,000	0.40	0.85	90	10					
Wisconsin.....	73	18,000	0.40	0.90	90	10					
Minnesota.....	73	22,500	0.45	0.90	90	10		50	75		
Iowa.....	175	22,154	0.45	1.00	86	14		187	50		41
Missouri.....	95	20,416	0.30	0.90	83	17			200		33
South Dakota.....	3	18,500	0.40	1.00	90	10					
Nebraska.....	205	20,140	0.38	0.87	93	7		24	848		25
Kansas.....	382	21,350	0.37	0.87	95	5		191	150		65
South Central division.....	127										
Kentucky.....	5	10,000	0.50	1.00	90	10			90	5	
Tennessee.....	18	18,000	0.45	0.85	85	15					
Louisiana.....	(b)	20,000	0.45	0.80	90	10					
Texas.....	90	17,500	0.46	1.10	80	10	10		75		50
Arkansas.....	13	20,000	0.45	0.85	90	10					
Western division.....	50										
Utah.....	2	12,000	0.80	0.90	90	10					
Washington.....	1	11,925	0.80	0.90	92	8					
Oregon.....	5	15,000	0.30	0.80	90	10					
California.....	42	125,000	0.20	1.68	98	2					

(a) Much of the acreage of blackberries reported is cultivated for the double purpose of plant and fruit production, and it is a question whether a part of the cost of production should not have been charged to the fruit crop.
 (b) Less than 1 acre.

CURRENT PLANTS.

[1 and 2 year.]

STATES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.
The United States.....	1,316							704
North Atlantic division.....	374							222
Maine.....	1	25,000	\$1.00	\$1.80	80	10	10	1
Vermont.....	2	20,800	1.00	2.25	80	15	6	1
Massachusetts.....	2	25,000	1.00	1.75	80	20		1
Connecticut.....	15	30,000	1.00	1.80	85	15		2
New York.....	236	27,533	1.10	1.80	64	28	8	160
New Jersey.....	78	27,000	1.25	1.70	55	45		50
Pennsylvania.....	42	25,000	1.10	1.80	50	25	25	12
South Atlantic division.....	23							
Maryland.....	6	20,000	1.00	1.60				
Virginia.....	10	18,000	1.00	1.60				
West Virginia.....	6	17,000	1.00	1.75				
North Carolina.....	1	17,000	1.25	1.50				
North Central division.....	903							480
Ohio.....	312	25,000	1.17	2.00	65	28	7	130
Indiana.....	84	25,100	1.16	1.90	63	35	2	49
Illinois.....	273	20,450	1.10	2.10	60	20	20	110
Michigan.....	18	10,000	1.00	2.00	50	25	25	10
Wisconsin.....	8	10,333	1.10	1.85				4
Minnesota.....	0	20,000	1.00	2.00	75	25		10
Iowa.....	30	24,458	1.15	2.10	63	24	13	63
Missouri.....	72	25,500	1.15	2.15	60	23	17	50
South Dakota.....	5	23,607	1.25	2.25	63	37		3
Nebraska.....	60	24,000	1.09	2.25	84	16		22
Kansas.....	20	21,941	1.10	2.25	80	20		21
South Central division.....	7							
Kentucky.....	1	24,333	1.50	2.00	75	15	10	
Texas.....	2	20,000	0.60	1.80	40	30	30	
Arkansas.....	4	20,000	1.25	1.80	50	40	10	
Western division.....	0							2
Washington.....	1	21,750	1.00	3.00	70	30		
Oregon.....	4	20,000	1.00	3.00	68	32		1
California.....	4	25,000	1.18	6.50	95	5		1

STATES.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade 2 year plants.	Per cent of No. 2 grade 2 year plants.	Per cent of No. 3 grade 2 year plants.	Per cent of increased production since 1885.	Per cent of decreased price on each since 1885.
North Atlantic division:							
Maine.....	\$1.50	\$3.00	80	20			
Vermont.....	1.50	3.10	80	20			
Massachusetts.....	1.50	3.00	75	25			30
Connecticut.....	1.60	3.25	82	18			18
New York.....	2.00	2.75	78	22			25
New Jersey.....	2.00	2.80	72	20	8		20
Pennsylvania.....	1.80	3.00	80	20			25
North Central division:							
Ohio.....	1.60	2.83	60	32	8		18
Indiana.....	1.80	2.87	60	30	10	50	
Illinois.....	1.40	2.75	60	30	10	60	50
Michigan.....	1.40	2.50	60	25	15		20
Wisconsin.....	1.45	2.50	60	30	10		
Minnesota.....	1.50	2.50	60	25	15		
Iowa.....	1.30	2.00	77	15	8	175	18
Missouri.....	1.50	2.00	70	15	15	510	20
South Dakota.....	1.65	2.40	60	40		600	20
Nebraska.....	1.55	2.50	60	30	10	83	20
Kansas.....	1.50	2.50	62	28	10	300	45
South Central division:							
Kentucky.....	2.00	3.50					5
Texas.....	0.90	2.10				10	50
Arkansas.....	1.50	2.60					
Western division:							
Washington.....						100	40
Oregon.....							5

GOOSEBERRY PLANTS. (a)

[1, 2, and 3 year.]

STATES.	Number of acres 1 year plants.	Number grown per acre.	Approximate cost of production per 100.	Average wholesale price per 100.	Per cent of No. 1 grade yearling plants.	Per cent of No. 2 grade yearling plants.	Per cent of No. 3 grade yearling plants.	Number of acres 2 year plants.
The United States.....	540							447
North Atlantic division.....	39							27
Maine.....	1	11,200	\$2.50	\$4.00	00	80	10	1
Vermont.....	2	10,000	2.50	4.00	05	80	5	1
Connecticut.....	1	20,000						
New York.....	15	22,000	1.28	2.00	04	28	8	4
New Jersey.....	18	17,000	1.25	3.00	00	20	20	18
Pennsylvania.....	2	20,000	1.30	3.00	05	25	10	3
South Atlantic division.....	10							
Maryland.....	5	20,000	1.25	3.00				
Virginia.....	9	20,000	1.35	3.00				
West Virginia.....	5	17,000	1.50	4.00				
North Carolina.....	(b)	20,000	1.50	2.50				
North Central division.....	450							420
Ohio.....	85	13,100	1.17	2.50	75	23	2	40
Indiana.....	80	15,000	1.88	2.50	83	15	2	75
Illinois.....	88	15,733	1.25	2.70	75	15	10	90
Michigan.....	0	10,000	1.25	2.75				0
Wisconsin.....	21	11,500	1.33	3.00				8
Minnesota.....	17	14,000	1.25	3.00	75	25		40
Iowa.....	21	15,773	1.81	3.00	03	23	14	85
Missouri.....	50	11,375	1.00	2.70	43	45	12	60
South Dakota.....	3	17,000	1.47	2.00	55	45		2
Nebraska.....	00	10,027	1.71	2.08	83	17		20
Kansas.....	50	11,711	1.40	3.07	80	20		42
South Central division.....	11							
Kentucky.....	5	24,333	1.30	2.00	75	15	10	
Tennessee.....	3	20,000	1.25	2.10				
Texas.....	1	10,000	0.80	1.00	40	80	80	
Arkansas.....	2	15,000	1.35	2.10				
Western division.....	12							
Colorado.....	3	20,000	3.00	8.00	75	25		
Washington.....	2	20,000	1.75	4.00	75	25		
Oregon.....	4	15,000	1.75	4.00	70	30		
California.....	3	55,000	1.32	6.50	80	20		

STATES.	Approximate cost of production per 100.	Average wholesale price per 100.	Number of acres 3 year plants or over.	Per cent of No. 1 grade 3 year plants or over.	Per cent of No. 2 grade 3 year plants or over.	Per cent of No. 3 grade 3 year plants or over.	Per cent of increased production since 1885.	Per cent of increased price on each since 1885.	Per cent of decreased price on each since 1885.
The United States.....			22						
North Atlantic division.....			22						
Maine.....	\$5.00	\$8.00	21	50	85	15		15	
Vermont.....	3.00	5.00							50
New York.....	2.00	4.05	1				25		25
New Jersey.....	2.25	4.50							
Pennsylvania.....	2.25	4.00					13		33
North Central division:									
Ohio.....	1.58	4.50					12		25
Indiana.....	1.70	4.50							
Illinois.....	1.02	4.25					5		
Michigan.....	1.05	4.00							
Wisconsin.....	1.00	4.00							
Minnesota.....	1.50	4.00							
Iowa.....	1.80	4.31					50		26
Missouri.....	1.75	3.00					320		32
South Dakota.....	1.80	4.00					200		
Nebraska.....	1.75	4.00					15		25
Kansas.....	1.32	4.15					350		55
South Central division:									
Kentucky.....	2.00	4.00					5		5
Texas.....	1.25	3.00					10		50
Western division:									
Oregon.....							100		40
California.....									5

a Much of the acreage of gooseberries reported is cultivated for the double purpose of plant and fruit production, and it is a question whether a part of the cost of production should not have been charged to the fruit crop.
 b Less than 1 acre.

STATISTICS OF AGRICULTURE.

SALESMEN AND PUBLICATIONS.

Of the 4,510 nurseries in the United States fully two-thirds are small concerns, from 2 to 25 acres in extent, and producing a full variety of trees and plants for local demands, much of the stock sold being taken direct from the nursery by the planters and local agents, so that there is but little call for advertising, catalogues, or traveling salesmen. Another class of nurserymen, propagating largely a general line of nursery stock or making specialties of a few lines only, such as grapes or small fruits, cater to a direct retail trade with customers all over the country, advertise extensively in the newspapers, and mail hundreds of thousands of catalogues, and in return receive their orders by mail, when stock is shipped direct to planters by mail, freight, or express. There are other and still larger nurseries that produce stock by the hundreds of acres and cater to the wholesale trade by issuing trade catalogues only to other nurserymen, extensive planters, and to nursery agents and dealers. Some of these nurseries are upward of 1,000 acres in extent, and their products are shipped in car load lots, and in the busy season almost by train loads. Still another class of nurserymen produce a general assortment of stock and sell direct to planters through the solicitation of traveling salesmen, who canvass from house to house and from farm to farm and sell millions of trees and plants, mostly to persons who would not take the trouble to visit a nursery or send for a catalogue and order direct from the nursery. The following table shows the details:

NURSERY SALESMEN, PUBLICATIONS, AND EXPENDITURES FOR FREIGHT AND EXPRESS, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	SALESMEN.		PUBLICATIONS.				EXPENDITURES FOR FREIGHT AND EXPRESS.	
	Number of salesmen employed. (a)	Monthly wages paid salesmen.	Number of wholesale catalogues issued.	Number of retail catalogues issued.	Amount paid for newspaper advertising.	Amount paid for postage.	Amount paid for freight bills.	Amount paid for express bills.
The United States	20,249		3,299,895	9,550,980	\$512,054.61	\$394,163.76	\$785,387.91	\$442,004.67
North Atlantic division	5,276		542,500	1,882,400	180,054.47	198,522.86	164,070.78	70,520.00
Maine	122	\$42.50	20,500	25,000	2,400.00	5,180.91	2,304.20	1,003.47
New Hampshire	7	45.00		10,000		150.00	125.00	75.00
Vermont	17	40.00		25,000	1,020.00	3,000.00	425.00	340.00
Massachusetts	60	42.50	25,000	140,000	11,175.00	8,828.40	20,805.60	8,571.20
Rhode Island	3	45.00		5,000	600.00	125.00	140.00	115.00
Connecticut	25	45.00	10,000	150,000	6,008.27	3,600.00	1,121.04	1,865.00
New York	4,240	39.80	205,000	750,000	113,050.00	75,603.00	64,417.70	37,817.30
New Jersey	100	45.00	58,000	335,000	23,472.10	20,170.05	9,512.50	12,807.85
Pennsylvania	612	37.08	164,000	442,499	20,078.50	21,858.50	65,720.74	10,012.18
South Atlantic division	946		159,160	699,340	58,071.55	31,008.48	67,141.70	21,524.01
Delaware	115	42.50	85,000	52,000	1,318.45	1,225.00	840.00	1,200.00
Maryland	115	40.00	16,655	116,750	5,632.00	5,002.50	8,683.50	1,875.00
District of Columbia			10,000	50,000	2,000.00	1,000.00	1,000.00	600.00
Virginia	124	85.00	43,200	170,040	3,834.00	6,551.82	14,276.25	3,465.18
West Virginia	76	85.00	16,500	87,000	618.74	743.00	707.80	418.00
North Carolina	88	44.33	10,000	96,000	24,320.00	10,730.50	6,590.40	3,300.00
South Carolina					15.00	5.00		
Georgia	154	40.00	5,200	24,000	1,012.00	800.00	7,020.00	1,365.72
Florida	274	47.40	22,005	147,550	18,122.36	5,754.00	27,119.15	6,320.11
North Central division	12,023		2,059,373	5,710,990	222,290.42	180,411.23	415,078.18	170,814.04
Ohio	3,716	45.00	890,000	763,206	56,440.59	27,380.31	67,765.95	21,607.53
Indiana	630	35.80	215,195	364,605	13,730.03	14,437.02	25,250.20	11,595.70
Illinois	1,947	42.50	159,500	1,609,150	42,300.18	35,453.46	53,072.24	28,565.88
Michigan	310	42.50	51,615	263,500	11,184.80	15,190.00	17,218.40	7,409.00
Wisconsin	151	40.00	117,000	255,938	24,347.70	29,109.00	18,954.00	17,784.00
Minnesota	259	42.30	48,300	82,800	5,749.77	4,890.00	8,280.00	5,680.00
Iowa	1,213	45.42	183,000	482,037	13,515.66	10,134.54	30,330.36	6,614.82
Missouri	1,399	45.45	357,313	755,097	14,143.04	21,033.05	71,000.74	30,707.00
North Dakota			1,200	20,000	325.00	650.00	975.00	1,025.00
South Dakota	63	50.00	20,250	40,500	2,000.61	976.59	6,174.00	747.09
Nebraska	1,534	47.50	177,000	446,040	22,969.20	18,015.99	51,469.83	26,091.60
Kansas	1,404	46.02	339,000	621,217	13,644.75	11,231.07	64,077.28	17,787.33
South Central division	790		232,000	739,537	15,741.04	21,357.31	85,224.50	146,840.10
Kentucky	94	55.00	50,000	110,250	3,593.17	1,617.00	8,025.00	3,225.00
Tennessee	363	35.00	162,000	162,000	810.00	4,598.02	28,890.00	5,602.00
Alabama	70	35.00	35,000	10,000	750.00	1,113.15	22,297.50	2,002.50
Mississippi	30	30.00		150,000	2,307.00	1,470.00	1,875.00	2,550.00
Louisiana	34	27.50	25,000	60,000	1,680.00	3,150.00	3,761.28	2,583.00
Texas	142	46.25	97,000	208,035	5,927.67	9,073.48	16,199.00	129,022.00
Arkansas	57	37.50		38,352	678.20	344.70	3,608.72	2,205.00
Western division	614		306,862	524,005	26,891.13	12,904.38	59,272.75	15,286.92
Colorado	69	62.50	28,750	44,850	2,204.09	977.50	6,785.00	1,495.00
Utah	42	40.00		8,500	1,700.00	170.00	850.00	
Idaho	10	100.00		10,000	2,500.00	1,600.00	7,009.00	1,000.00
Washington	81	60.00	2,700	85,991	2,700.00	1,355.94	2,091.15	1,850.00
Oregon	44	50.00	36,000	102,852	2,768.04	1,532.16	9,020.52	4,284.00
California	368	60.83	229,412	312,412	15,019.00	7,368.78	27,526.08	7,157.92

a Some of the large nurseries, making a specialty of selling stock through traveling salesmen direct to planters, employ from 200 to 300 agents each.

The table showing the date of establishment and the columns in the various tables of production indicating the per cent of increase clearly prove the steady growth of the nursery industry. While a few eastern states show a slight falling off in the production of some kinds of nursery stock, Vermont is the only state to show a falling off in all lines of production. Maine also shows a considerable decrease in several lines. Florida shows a decrease in orange tree production, but with these few exceptions the increased production is from 15 to 300 per cent, being greatest in the states of the North Central division and on the Pacific coast. With this increased production has come about a considerable decrease in the selling price. Damage in transit and climatic conditions, coupled with the carelessness of many planters, result in killing nearly one-half the plants and trees sent out each year, and further neglect results in the loss of one-half of those remaining before the end of the third year; it has been estimated by some horticulturists that of all the trees set out not more than 1 in 20 ever comes to full fruiting. This is not so much on account of soil and climatic conditions as from the ignorance and carelessness of the average planter, for skilled orchardists have little trouble in bringing 90 per cent of all trees planted into full fruitage.

A fruit orchard 50 acres in extent was considered a wonder 20 years ago; now in nearly every state apple, pear, and peach orchards of 100, 200, and 300 acres are being planted, while in Georgia and California there are many peach orchards of 1,000 or more acres each. The greatest, and a steady, demand continues to be for plants and trees for the home ground and the fruit garden.

COMMERCIAL FLORICULTURE.

While flowers and flowering plants were grown for sale to a very limited extent in this country 100 years ago, the business of the commercial florist has made the greater part of its development during the past 25 years, and the larger proportion of this business in the past 10 years.

After inquiry of every florist in the United States, record is found of but 1 commercial florist in the year 1800, and of only 3 establishments that started between 1810 and 1820; 8 more were started in the next decade; 25 in the next, followed by 45 between 1840 and 1850; 96 between 1850 and 1860; 313 between 1860 and 1870; 998 between 1870 and 1880, and 1,797 between 1880 and 1890.

The dates of the establishment in business of 72 per cent of the florists have been traced, and judging from these it will be seen that 80 per cent of the whole business has been developed during the past 25 years. The business being of so comparatively recent development, and not before having been brought within the scope of census statistics, there have naturally been many obstacles in the way of making a complete report. The florists have generally responded with remarkable clearness, and it is believed that the figures given fairly represent the business at the present time.

Floral establishments were found in every state and territory except Idaho, Nevada, Indian territory, and Oklahoma, and while there is a possibility that they contain some small establishments, the most careful inquiry has failed to find them. In the United States there were in 1890, 4,659 floral establishments, 312 of which were owned and conducted by women. The total number of square feet of glass in use in these establishments was 38,823,247, and the establishments themselves, including fixtures and heating apparatus, were valued at \$38,355,722.43. The value of the tools and implements used was \$1,587,693.93. There were employed 16,847 men and 1,958 women; the wages paid in 1889 amounted to \$8,483,657. Fuel cost \$1,160,152.66; 3,425,600 wholesale and 17,630,094 retail catalogues were issued, while \$767,438.21 was paid for postage, \$1,161,168.31 for advertising, \$534,221.86 for freight, and \$554,390.55 for express bills.

The total products were 49,056,253 roses, 38,380,872 hardy plants and shrubs, and 152,835,292 of all other plants, the value of which was \$12,036,477.76, and cut flowers to the amount of \$14,175,328.01 were reported as sold.

The greatest area of glass in any one establishment reported was 150,000 square feet, and the smallest 60 square feet, the latter a cozy attachment to the sitting room of a New England farmhouse, whose mistress sells annually \$35 to \$50 worth of plants and flowers.

There are in the United States 965 state and local floral societies and clubs, besides the Society of American Florists, and to these and the 358 or more horticultural societies, combined with the educational influences of the agricultural and horticultural press, is largely due the rapidly growing taste for flowers and their culture.

The statistics here given have been obtained from the florists themselves in answer to questions sent them on special schedules, by personal visitation, and by the combined efforts of some of the florists' clubs. The California State Floral Society appointed a special committee and made a careful canvass of the whole state, and the Census Office investigations fully corroborate the thoroughness of their work.

The table following shows, by states and territories, the number of florists' establishments, number owned by women, largest and smallest greenhouse in each state, total number of square feet of glass, area of land cultivated, value of tools and implements, and total value of establishments. New Jersey, situated as it is between the New York and Philadelphia city markets, makes the largest showing of any state in the Union in proportion to its size.

STATISTICS OF AGRICULTURE.

NUMBER OF FLORISTS' ESTABLISHMENTS IN THE UNITED STATES, LARGEST AND SMALLEST ESTABLISHMENTS, TOTAL NUMBER OF SQUARE FEET OF GLASS, AREA CULTIVATED, AND VALUES.

STATES AND TERRITORIES.	NUMBER OF FLORISTS' ESTABLISHMENTS.		SQUARE FEET OF GLASS REPORTED FOR ONE ESTABLISHMENT.		Total number of square feet of glass.	Acres of land cultivated.	Value of tools and implements used.	Total value of establishments. (a)
	Total.	Owned and managed by women.	Largest number.	Smallest number.				
The United States.....	4,650	312			98,823,247	12,101	\$1,587,693.93	\$38,355,722.43
North Atlantic division.....	2,448	110			21,560,540	5,485	881,647.03	23,195,051.67
Maine.....	45		10,000	1,440	211,050	108	4,707.00	183,013.50
New Hampshire.....	42	1	12,000	250	182,952	52	7,007.22	162,827.28
Vermont.....	29	2	15,000	800	126,602	77	4,263.00	108,055.12
Massachusetts.....	407	25	40,000	400	2,717,940	407	104,000.25	2,632,587.08
Rhode Island.....	102		25,000	500	540,984	178	14,280.00	526,507.08
Connecticut.....	120	5	100,000	60	1,060,920	255	24,010.20	980,055.00
New York.....	793	50	90,000	200	6,947,298	2,150	911,000.34	9,254,873.03
New Jersey.....	366	8	90,000	700	3,703,554	741	155,107.14	3,666,518.46
Pennsylvania.....	544	19	100,000	300	6,060,144	1,448	255,282.88	5,641,513.02
South Atlantic division.....	293	31			2,210,134	903	78,408.81	1,907,571.98
Maryland.....	102	7	60,000	400	872,304	350	22,285.98	758,004.48
Delaware.....	19		12,000	300	120,243	70	10,625.00	99,750.00
District of Columbia.....	35	3	150,000	1,440	640,310	61	20,205.00	571,392.80
Virginia.....	48	7	28,000	150	281,904	86	10,040.83	236,707.84
West Virginia.....	19	1	8,800	350	88,255	31	1,045.00	72,880.10
North Carolina.....	16	6	5,000	150	28,000	112	697.50	22,123.00
South Carolina.....	20	2	7,000	350	60,000	60	740.00	40,800.00
Georgia.....	23	5	15,000	750	99,018	100	5,720.00	81,932.70
Florida.....	8		10,000	200	19,200	12	1,040.50	14,592.00
North Central division.....	1,466	115			11,405,032	4,159	524,710.20	10,303,956.70
Ohio.....	393	21	65,000	60	2,785,102	918	114,251.00	2,500,228.56
Indiana.....	107	13	80,000	500	899,540	535	11,020.50	782,607.03
Illinois.....	330	20	70,000	160	3,236,750	900	220,515.00	2,945,442.50
Michigan.....	107	15	100,000	450	1,293,443	583	50,121.71	1,195,484.05
Wisconsin.....	105	6	23,500	300	464,520	367	40,893.00	450,584.40
Minnesota.....	51	5	92,000	200	408,612	115	28,051.00	388,181.40
Iowa.....	69	9	95,000	100	476,583	207	17,383.80	424,158.87
Missouri.....	141	10	65,000	500	1,240,095	287	23,152.21	1,078,882.05
North Dakota.....	4		2,500	500	7,000	2	175.00	6,440.00
South Dakota.....	3		4,000	300	8,500	3	350.00	7,700.00
Nebraska.....	33	4	20,000	200	401,464	65	7,042.00	340,273.08
Kansas.....	58	12	38,000	185	183,324	87	4,844.00	174,373.36
South Central division.....	212	21			2,464,213	948	60,614.64	1,887,581.65
Kentucky.....	81	6	120,000	880	1,163,241	497	24,457.14	918,000.39
Tennessee.....	32	2	25,000	200	411,840	224	17,920.00	313,108.40
Alabama.....	14	2	18,000	1,000	56,700	28	7,700.00	46,404.00
Mississippi.....	9	3	2,000	150	13,050	61	945.00	7,072.50
Louisiana.....	59	2	50,000	500	742,050	100	5,530.00	549,117.00
Texas.....	16	5	3,500	78	29,232	18	2,000.00	21,339.36
Arkansas.....	10	1	15,000	1,000	47,200	20	2,062.50	30,800.00
Western division.....	240	35			1,168,328	666	42,233.25	1,002,100.43
Montana.....	6		10,000	200	22,000	12	1,500.00	21,120.00
Wyoming.....	3		6,030	300	7,100	3	750.00	6,319.00
Colorado.....	33	8	45,000	100	345,543	150	5,948.25	321,354.99
New Mexico and Arizona.....	3		1,000	200	2,200	7	145.00	950.00
Utah.....	7		10,000	600	24,425	7	700.00	13,678.00
Washington.....	14	6	4,500	700	37,850	28	2,450.00	29,508.50
Oregon.....	24	3	15,000	330	119,088	36	4,520.00	102,415.68
California.....	160	18	14,000	150	610,622	423	26,210.00	506,816.26

a Including fixtures and heating apparatus.

DATE OF ESTABLISHMENT OF 72 PER CENT OF THE FLORISTS IN BUSINESS IN THE UNITED STATES. (a)

STATES AND TERRITORIES.	Total reporting date of establishment.	1800 to 1810	1810 to 1820	1820 to 1830	1830 to 1840	1840 to 1850	1850 to 1860	1860 to 1870	1870 to 1880	1880 to 1890	1890 (b)	Total number of florists. (c)
The United States.....	3,305	1	3	8	25	45	96	313	908	1,797	79	4,059
North Atlantic division.....	1,835	1	3	7	19	32	47	197	500	902	31	2,448
Maine.....	30						1	5	11	13		46
New Hampshire.....	39						1	1	13	23	1	42
Vermont.....	25					1	1	3	8	12		29
Massachusetts.....	354		1	2	3	5	9	37	102	192	9	407
Rhode Island.....	90				1	2	2	6	26	52	1	102
Connecticut.....	82				1	1	3	14	40	21	2	120
New York.....	476	1	1	2	4	14	12	62	146	226	18	793
New Jersey.....	296			1	2	5	6	33	106	140	3	366
Pennsylvania.....	443		1	2	8	4	12	46	144	223	3	514
South Atlantic division.....	198			1	4	4	12	13	58	97	9	293
Delaware.....	15						1	2	5	6	1	19
Maryland.....	63			1	3	1	4	6	20	24	4	102
District of Columbia.....	16						1	1	0	8		35
Virginia.....	40					1	2	1	13	22	1	48
West Virginia.....	11							1	2	7	1	19
North Carolina.....	15						1		5	9		19
South Carolina.....	8					1	2	1	1	3		20
Georgia.....	24				1	1	1	1	4	14	2	29
Florida.....	6								2	4		8
North Central division.....	1,037				2	6	20	70	257	600	28	1,463
Ohio.....	300				2	3	10	26	80	182	6	399
Indiana.....	98							12	24	54	8	107
Illinois.....	230					2	6	10	64	144	4	256
Michigan.....	98						2	9	21	66		107
Wisconsin.....	73						2	5	20	44	2	105
Minnesota.....	30							2	3	24	1	51
Iowa.....	44						3	7	9	24	1	60
Missouri.....	80					1	3	5	27	60	8	141
North Dakota.....	4									3	1	4
South Dakota.....	3									2	1	3
Nebraska.....	20							1	2	23		28
Kansas.....	33							2	7	23	1	58
South Central division.....	100					3	9	15	52	30	1	212
Kentucky.....	62						5	4	22	31		81
Tennessee.....	19							2	4	18		32
Alabama.....	13							1	8	8	1	14
Mississippi.....	7							2	3	2		9
Louisiana.....	35					2	2	1	17	13		50
Texas.....	15					1	2	4	2	6		16
Arkansas.....	9							1	1	7		10
Western division.....	135						2	9	35	79	10	240
Montana.....	6								1	4	1	6
Wyoming.....	3									3		3
Colorado.....	24								7	16	1	33
New Mexico.....	1									1		1
Arizona.....	2									1	1	2
Utah.....	7							1	2	3	1	7
Washington.....	10								2	6	2	14
Oregon.....	18							1	5	11	1	24
California.....	64						2	7	18	34	3	150

a It has been found impossible to obtain the date of establishment of the remaining 28 per cent of the florists of the United States.

b As the column for 1890 includes only the new establishments started before June 1, 1890, and as at least four-fifths of the new greenhouses are built in the fall of the year, these figures are about one-fifth of the new enterprises for 1890.

c This includes the entire number of florists engaged in business in the United States without reference to date of establishment.

STATISTICS OF AGRICULTURE

LABOR, WAGES, AND FUEL.

A very considerable number of small greenhouses were found having only from 300 to 1,500 square feet of glass area, and in these no outside labor is employed, the owner or some member of his family doing all the work, often in connection with market gardening or a small nursery trade, while some of these small establishments are conducted by women or persons who are invalids, not being able, or caring, to work all the time. Again, in many of the large establishments, during the busy seasons of plant trade, a number of extra men are employed for a short period. Therefore, in making up these tables of labor, they have been based on an estimate of the number of men and women employed for 300 days in the year, as it was difficult for many of the florists to account accurately for extra help employed.

The average of wages paid represents all labor, skilled and unskilled, yet in nearly every establishment of any considerable size there are one or more men acting as foremen or experts who receive from \$15 to \$20 per week, and in some instances even more.

NUMBER OF MEN AND WOMEN EMPLOYED, WAGES PAID PER DAY, TOTAL AMOUNT PAID IN WAGES, NUMBER OF HORSES EMPLOYED, AND FUEL USED, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Men employed.	Wages paid men per day.	Total amount of wages paid men.	Women employed.	Wages paid women per day.	Total amount of wages paid women.	Number of horses employed.	Cost of fuel used.
The United States	16,847	-----	\$7,954,827.00	1,958	-----	\$528,830.00	4,635	\$1,100,152.08
North Atlantic division	8,549	-----	4,549,914.00	707	-----	190,461.00	2,271	716,453.00
Maine	114	\$1.38	47,106.00	58	\$0.75	13,650.00	80	10,331.10
New Hampshire	105	1.57	49,455.00	4	1.25	1,200.00	25	8,217.00
Vermont	58	1.53	26,022.00	1	0.75	225.00	18	5,282.06
Massachusetts	814	1.67	407,814.00	64	1.05	20,100.00	305	101,329.72
Rhode Island	306	1.64	150,552.00	23	0.98	6,702.00	88	23,727.42
Connecticut	421	1.63	205,869.00	14	1.00	4,200.00	101	32,037.60
New York	3,172	1.55	2,074,980.00	240	0.92	66,240.00	782	276,591.24
New Jersey	1,191	1.54	550,242.00	63	0.90	18,144.00	289	127,805.70
Pennsylvania	2,308	1.46	1,037,184.00	240	0.84	60,480.00	683	133,171.20
South Atlantic division	1,030	-----	366,414.00	123	-----	20,123.00	280	80,711.25
Delaware	45	1.70	16,200.00	2	1.50	450.00	19	3,000.00
Maryland	302	1.19	107,814.00	45	0.72	9,720.00	102	20,811.60
District of Columbia	388	1.31	152,484.00	13	0.87	9,132.00	66	44,075.00
Virginia	118	0.93	32,922.00	31	0.81	7,533.00	40	7,413.12
West Virginia	38	1.31	14,934.00	4	1.00	1,200.00	23	1,108.27
North Carolina	34	0.90	9,180.00	8	0.42	1,608.00	5	1,027.20
South Carolina	20	0.83	4,950.00	16	0.45	2,150.00	6	2,250.00
Georgia	33	1.00	24,000.00	5	0.62	930.00	26	2,100.00
Florida	8	1.25	3,000.00				2	
North Central division	4,892	-----	1,984,392.00	737	-----	105,180.00	1,630	302,050.32
Ohio	1,128	1.32	440,688.00	230	0.85	60,945.00	413	55,030.15
Indiana	510	1.32	141,960.00	53	0.94	14,946.00	90	10,407.88
Illinois	1,151	1.45	503,685.00	71	0.76	16,188.00	322	85,344.70
Michigan	518	1.30	202,020.00	122	0.75	27,450.00	220	80,414.35
Wisconsin	375	1.39	154,375.00	75	0.81	18,225.00	154	25,814.25
Minnesota	281	1.65	114,345.00	33	1.00	9,900.00	68	20,597.88
Iowa	106	1.33	60,234.00	40	0.94	13,818.00	88	9,322.20
Missouri	579	1.48	267,076.00	58	1.25	21,750.00	191	38,237.70
North Dakota	4	1.50	1,800.00	1	1.50	375.00		200.00
South Dakota	3	1.00	1,350.00	1	0.50	150.00	1	1,200.00
Nebraska	109	1.47	48,069.00	9	1.06	2,862.00	30	7,194.54
Kansas	118	1.35	47,790.00	20	1.16	8,580.00	44	5,106.08
South Central division	844	-----	321,288.00	221	-----	51,147.00	272	34,322.03
Kentucky	377	1.26	142,506.00	57	0.93	15,903.00	62	10,192.95
Tennessee	180	1.30	70,200.00	43	0.81	10,440.00	85	7,563.70
Alabama	38	1.12	12,708.00	5	0.80	1,200.00	7	618.24
Mississippi	27	0.78	6,418.00	27	0.50	4,050.00	6	135.00
Louisiana	170	1.32	67,320.00	80	0.72	17,280.00	65	5,000.00
Texas	36	1.04	17,712.00	5	1.05	1,575.00	9	710.08
Arkansas	16	0.93	4,464.00	4	0.50	600.00	8	500.00
Western division	1,526	-----	732,810.00	170	-----	65,010.00	173	17,007.00
Montana	21	2.63	5,523.00				5	1,200.00
Wyoming	4	2.00	2,400.00					2,300.00
Colorado	352	1.95	295,920.00	10	0.87	2,610.00	53	7,024.38
New Mexico and Arizona	6	1.50	2,700.00					40.00
Utah	21	2.12	13,356.00	2			3	1,662.50
Washington	15	1.58	7,110.00	2	1.00	600.00	2	1,715.00
Oregon	60	1.37	24,060.00	5	1.00	1,500.00	8	1,685.12
California	1,047	1.50	471,150.00	150	1.35	60,750.00	100	2,000.00

CATALOGUES, POSTAGE, ADVERTISING, FREIGHT, AND EXPRESS.

The following table shows, by states and territories, the total number of wholesale and retail catalogues issued, the amount paid for postage and express, and freight bills:

NUMBER OF CATALOGUES ISSUED AND AMOUNT PAID FOR ADVERTISING, POSTAGE, FREIGHT, AND EXPRESS.

STATES AND TERRITORIES.	Wholesale catalogues issued.	Retail catalogues issued.	Paid for postage.	Paid for advertising.	Paid for freight.	Paid for express.
The United States.....	3,425,000	17,630,094	\$707,438.21	\$1,161,168.31	\$534,221.80	\$554,300.55
North Atlantic division.....	2,147,400	10,902,494	478,270.45	633,077.74	302,723.73	281,190.01
Maine.....	18,000	60,000	4,505.75	4,200.30	1,049.30	5,464.35
New Hampshire.....	1,000	33,000	1,559.46	2,529.65	678.72	2,179.80
Vermont.....	1,200	115,420	5,133.00	5,275.00	3,100.00	2,120.88
Massachusetts.....	40,700	770,044	20,708.89	41,469.23	46,707.32	40,327.88
Rhode Island.....	3,000	171,400	12,385.82	13,935.24	5,480.46	5,455.98
Connecticut.....	15,000	102,000	5,616.00	21,650.40	24,000.00	8,092.80
New York.....	902,000	4,588,000	303,481.11	335,325.91	145,050.31	141,027.12
New Jersey.....	274,500	1,683,878	20,038.50	24,097.68	31,882.26	34,832.22
Pennsylvania.....	892,000	3,462,152	104,681.92	183,888.32	48,215.36	44,639.60
South Atlantic division.....	41,000	335,300	12,103.23	20,272.58	11,453.04	21,045.00
Delaware.....	1,500	21,300	1,425.00	487.54	633.40	500.64
Maryland.....	15,000	150,000	2,538.78	0,234.24	4,175.88	7,535.78
District of Columbia.....	12,000	00,000	1,336.25	5,250.00	1,675.00	3,465.00
Virginia.....	5,000	40,000	3,180.00	5,848.80	2,507.04	8,870.40
West Virginia.....	5,000	5,000	700.00	350.00	425.00	875.00
North Carolina.....	2,000	10,000	313.00	620.00	346.66	373.28
South Carolina.....	3,000	3,000	109.00	.....	210.00	415.00
Georgia.....	5,000	36,000	1,300.00	1,222.60	1,450.00	4,094.00
Florida.....	500	10,000	600.00	220.00	125.00	210.00
North Central division.....	1,153,000	5,300,050	244,552.91	457,078.11	177,568.01	188,882.09
Ohio.....	350,000	2,000,000	110,388.02	91,525.77	25,403.52	23,973.00
Indiana.....	61,200	144,450	32,421.00	45,234.00	12,132.73	12,532.01
Illinois.....	313,500	608,500	24,743.00	51,032.10	74,814.40	51,002.10
Michigan.....	83,500	334,000	18,921.00	73,141.00	15,789.85	8,520.34
Wisconsin.....	175,000	408,500	30,112.05	44,389.80	27,394.50	37,359.00
Minnesota.....	3,800	95,000	1,358.00	13,687.38	3,221.20	6,730.14
Iowa.....	37,000	130,000	3,009.74	49,014.66	3,402.60	12,027.89
Missouri.....	90,000	553,000	17,613.72	67,793.80	7,069.74	30,048.09
North Dakota.....	.....	.....	225.00	.....	.....	200.00
South Dakota.....	.....	.....	1,027.36	11,301.00	1,737.86	2,000.00
Nebraska.....	24,000	155,000	3,837.52	9,959.00	1,513.32	2,270.12
Kansas.....	.....	.....	.....	.....	.....	.....
South Central division.....	65,200	581,250	23,854.73	33,285.47	21,215.20	43,814.00
Kentucky.....	40,500	200,000	12,397.45	16,602.51	6,221.20	15,078.00
Tennessee.....	5,000	197,000	0,613.28	6,405.00	3,204.00	0,500.00
Alabama.....	1,500	25,000	1,575.00	3,173.24	810.00	1,540.00
Mississippi.....	2,000	40,000	40.00	60.00	85.00	.....
Louisiana.....	15,000	68,750	2,642.50	3,187.50	7,250.00	17,000.00
Texas.....	3,200	22,000	453.00	3,400.72	3,360.00	1,920.00
Arkansas.....	.....	0,500	133.50	335.50	225.00	316.60
Western division.....	10,000	301,000	8,056.40	15,054.41	21,200.38	16,403.19
Montana.....	.....	1,000	65.00	500.00	1,125.00	1,800.00
Colorado.....	10,000	60,000	1,231.89	9,192.15	7,205.22	4,337.19
New Mexico and Arizona.....	1,000	.....	300.00	500.00	650.00	225.00
Utah.....	.....	.....	25.00	42.00	.....	.....
Washington.....	.....	4,000	98.00	850.00	989.00	550.00
Oregon.....	1,000	20,000	1,037.00	1,520.26	3,490.16	3,600.00
California.....	7,000	288,000	5,000.40	8,550.00	7,500.00	5,850.00

PRODUCTIONS AND SALES.

In this investigation it was found unadvisable to attempt to ascertain the number of plants propagated and sold of each variety, and therefore the inquiries were grouped under three heads: roses, hardy plants and shrubs, and all other plants, and under these heads most of the florists were able to furnish a complete statement of their business. Roses, both the plants and bloom, appear to be in the greatest demand. One firm, making a specialty of rose propagation, reports having sold 1,000,000 plants in 1889. The plants were mostly small ones, grown in 2½-inch pots and sent by mail all over the country.

Some florists make a specialty of the rose for the production of cut flowers. Others grow only carnations or violets, and wholesale their productions to the retail florists in cities. Still others grow a variety of both plants and cut flowers, and wholesale most of the entire product. This is the business of nearly all the large establishments, while the medium ones, of from 1,500 to 5,000 square feet of glass area, do mostly local business, largely at retail, of both plants and flowers. Many of these florists also do a considerable business in the spring season in the arrangement and planting of both public and private grounds. Especially is this the case with florists located near the summer resorts.

STATISTICS OF AGRICULTURE.

Of the plants sold, the demand in the northern and eastern states is greatest for geraniums, coleus, roses, pansies, verbenas, heliotrope, carnations, chrysanthemums, palms, ferns, and fuchsias, nearly in the order named. In the south the demand is for roses, chrysanthemums, geraniums, coleus, palms, and ferns, while California shows the demand to be largest for roses, carnations, chrysanthemums, geraniums, palms, and pansies. There is also a very general and growing demand for aquatic plants, and specialists are giving marked attention to this branch of the business. Regarding cut flower sales, reports show that, while there is a slight variation in the demands of the different markets, the greatest demand everywhere is for roses, followed closely by carnations. These two furnish about 65 per cent in value of all cut flowers sold. Violets, chrysanthemums, lilies, hyacinths, smilax, bouvardia, heliotrope, pansies, and tulips, in the order named, supply 25 per cent more, while the other 10 per cent is made of orchids, tuberoses, mignonette, primroses, camellias, daffodils, and many others cultivated in a small way to supply a special or local demand. As to the relative profits in the business from the different classes of plants, 80 per cent of the reports mention roses as most profitable, carnations second, and violets third, while 20 per cent rank carnations first, roses second, and violets third.

PLANTS PROPAGATED, PLANT SALES, CUT FLOWER SALES, AND PER CENT OF STOCK SOLD AT WHOLESALE AND RETAIL, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Roses propagated.	Hardy plants propagated.	All other plants propagated.	Total value of plant sales.	Total value of cut flower sales.	Per cent of stock sold at wholesale.	Per cent of stock sold at retail.
The United States	40,056,253	38,380,872	152,835,292	\$12,036,477.76	\$14,175,328.01	.....	.....
North Atlantic division	23,030,460	14,510,083	81,258,117	5,972,211.97	8,323,006.03	.....	.....
Maine	188,235	29,250	3,175,290	48,899.00	47,167.80	50	41
New Hampshire	108,906	70,450	740,712	52,049.76	69,364.68	24	70
Vermont	119,074	135,343	1,173,543	33,170.03	21,720.03	17	83
Massachusetts	894,411	1,275,945	9,320,600	504,053.13	1,036,400.22	40	51
Rhode Island	464,610	135,354	1,246,644	132,786.06	133,717.92	28	72
Connecticut	256,560	483,360	3,201,360	292,222.70	228,880.20	40	60
New York	4,156,906	5,662,947	20,187,158	2,228,720.93	3,615,067.64	45	55
New Jersey	5,808,014	4,006,092	12,912,114	897,008.58	1,288,478.56	65	35
Pennsylvania	11,043,744	2,680,832	20,300,006	1,782,399.68	1,881,500.08	40	54
South Atlantic division	950,500	1,393,792	8,944,502	602,646.04	753,313.50	.....	.....
Delaware	68,067	38,000	638,000	33,408.46	13,028.08	22	78
Maryland	254,592	185,400	2,860,484	233,686.30	265,175.74	40	60
District of Columbia	257,715	51,100	917,400	181,718.10	348,833.45	22	78
Virginia	178,800	148,320	1,034,928	87,714.08	79,273.44	37	63
West Virginia	21,850	30,400	266,000	23,275.00	6,010.55	42	58
North Carolina	28,100	818,000	809,872	10,827.52	1,800.00	28	72
South Carolina	40,000	20,000	320,700	24,750.00	14,000.00	15	85
Georgia	69,313	56,342	2,260,190	37,266.58	18,385.64	18	82
Florida	32,000	48,000	536,328	20,000.00	6,800.00	30	70
North Central division	20,791,420	10,063,617	48,484,874	2,961,672.10	4,106,760.33	.....	.....
Ohio	6,802,541	2,267,610	14,284,371	1,051,058.85	580,278.55	38	62
Indiana	2,797,622	438,195	6,401,168	276,909.58	181,047.76	37	63
Illinois	6,395,070	5,954,740	10,772,190	695,796.40	1,882,722.00	42	58
Michigan	1,175,012	899,736	4,099,009	130,872.32	350,432.80	40	54
Wisconsin	1,391,355	611,835	1,772,400	101,052.20	200,711.45	30	70
Minnesota	719,100	56,100	714,000	96,823.50	205,672.80	27	73
Iowa	255,900	1,109,037	1,838,850	125,164.55	197,633.79	37	63
Missouri	1,452,800	180,762	4,403,128	374,123.48	496,967.94	35	65
North Dakota .....	.....	.....	.....	2,000.00	2,000.00	.....	.....
South Dakota .....	.....	.....	.....	45,000	4,300.00	.....	.....
Nebraska	80,290	59,928	2,541,250	97,897.56	64,388.48	24	76
Kansas	222,830	4,515,706	1,508,508	35,773.06	17,604.16	20	74
South Central division	3,890,282	2,699,140	10,158,584	766,397.05	600,004.54	.....	.....
Kentucky	2,040,222	572,184	7,362,090	297,059.31	315,448.02	20	71
Tennessee	877,666	96,000	989,056	135,890.88	153,371.20	09	91
Alabama	64,050	46,662	177,338	28,519.66	13,288.10	10	90
Mississippi	8,064	4,050	5,000	9,000.00	1,800.00	75	25
Louisiana	187,500	336,250	1,108,350	242,777.50	105,555.50	18	82
Texas	80,000	1,616,000	392,400	31,000.00	8,206.72	43	57
Arkansas	26,750	25,000	213,750	21,250.00	2,875.00	08	92
Western division	393,585	3,714,264	3,989,125	1,793,550.00	331,043.61	.....	.....
Montana	12,000	13,800	360,000	1,200.00	3,000.00	38	62
Wyoming	4,500	15,000	0,000	7,500.00	7,500.00	25	75
Colorado	183,348	36,564	1,555,125	120,116.79	137,579.97	21	79
New Mexico .....	.....	.....	.....	75.00	100.00	.....	100
Arizona .....	.....	.....	.....	5,000.00	75.00	.....	67
Utah .....	.....	.....	.....	4,025.00	7,700.00	.....	100
Washington	14,000	29,000	42,000	16,030.00	5,460.00	.....	100
Oregon	95,712	63,000	388,000	29,820.00	20,228.64	.....	68
California	84,025	3,565,390	1,603,000	1,548,883.30	150,000.00	28	72

SEED FARMS.

In early times families preserved seed supplies from their own productions from year to year, in most cases from whatever might be left on the farm, while in other cases a careful selection was made and purer and better seeds obtained, which not only furnished the home supply, but were eagerly sought by friends and neighbors. For many years little was known of seeds as a commercial product, and even at the present time in many rural communities some of the more common farm seeds are freely exchanged among the farmers.

The first regular seed farm of those now in the country, as far as we have any record, was established in connection with the nursery business in Philadelphia in 1784.

The general growth of the country, the great increase of population in cities and villages and consequent establishment of market gardens, the demand for choice seeds and often the inability to procure them induced market gardeners to grow and save seeds, at first for their own uses only, later to supply an increasing demand, until some finally drifted into seed production as a regular business.

This branch of horticulture has not before been made the subject of census inquiry.

There have been reported a total of 596 farms in the United States devoted exclusively to seed production. These farms occupy 169,851 acres of land, of which 96,564 acres were reported as devoted to seed production during 1889, divided as follows: 1,437 acres of asparagus, 12,905 of beans, 919 of beets, 1,268 of cabbage, 569 of carrots, 11 of cauliflower, 71 of celery, 13 of collards, 1 of corn salad, 15,004 of sweet corn, 16,322 of field corn, 1 of cress, 10,219 of cucumbers, 39 of dandelion, 252 of eggplants, 16 of endive, 105 of kale, 19 of kohlrabi, 13 of leek, 486 of lettuce, 5,149 of muskmelons, 3,978 of watermelons, 2 of nasturtium, 13 of okra, 3,560 of onions, 352 of onion sets, 75 of parsley, 374 of parsnips, 7,971 of pease, 365 of pepper, 4,102 of potatoes, 105 of pumpkins, 662 of radishes, 25 of rhubarb, 26 of salsify, 150 of spinach, 4,663 of squashes, 4,356 of tomatoes, 885 of turnips, and 81 of flower seeds. Seed production of less than 1 acre is not included in this acreage; celeriac, corn salad, cress, dandelion, leek, and lettuce show productions, by states, of less than 1 acre.

Aside from these special seed farms which have been under investigation, there are a number of extensive dealers in seeds having test gardens and farms, where side by side new and old varieties are grown for the purpose of comparison. On these farms are also tested all seeds handled by these dealers, whose custom it is to secure their supplies by importation and by contracting with farmers in various sections of this country to grow any particular variety of seed best adapted to each farmer's land or locality. Some of these are among the regular seed farms here enumerated; others grow one or more varieties of seeds each year only as a branch of their other farming operations, and as no special note of their productions was made by the regular census enumerator, and the dealers in some instances have failed to furnish their names, it has been impossible to reach them by special schedule, which has been the medium for collecting this information. Therefore, while this report shows the extent and production of the seed farms proper, the total amount of garden seeds produced in the United States is considerably in excess of the amount here given. One dealer reports supplying farmers annually 1,000 bushels of pease, and 2,000 bushels of beans for planting, and then buying back all the seeds that can be grown from this stock, about 10,000 bushels each of pease and beans. Again, while the greater amount of seed grains, cotton, and tobacco used upon farms is of home production and is freely exchanged for labor or for other products, there are in nearly every county successful farmers who, by a careful selection of seed stock and by better methods, secure greater returns than their neighbors, and are able to dispose of part of their production for seed purposes at advanced rates. These men can not be classed as seed farmers, and would hardly be able to estimate what proportion of their crops is sold for seed purposes annually; but it is safe to assume that such farmers produce one-third of all the small grains, corn, potatoes, tobacco, and cotton seed planted. In addition to these, there are annually sold for seed purposes upward of 1,000,000 bushels of selected grains, both of the standard and newer varieties, very little of which is produced upon regular seed farms. The same is true of grass seeds, which are produced in enormous quantities in New York, Pennsylvania, Ohio, Indiana, Illinois, Kentucky, Michigan, Minnesota, Missouri, Kansas, and Nebraska, largely supplying the demands of the country as well as furnishing a considerable surplus for export.

Of the 596 seed farms in the United States, 258, or nearly one-half, are in the North Atlantic division, the original center of seed production. These farms have an acreage of 47,813, or an average of 185 acres per farm, while in the North Central division there are 157 farms, with an acreage of 87,096, or an average of 555 acres per farm. The seed farms of Massachusetts and Connecticut average 142 acres per farm, while those of Iowa and Nebraska average 695 acres, and are producing seeds on a scale of equal magnitude to the other products of that section of the country. Several of these seed producing farms embrace nearly 3,000 acres each.

The table showing date of establishment as seed farms indicates in a general way the growth and prosperity of the business. So far as reported, there were 2 seed farms in the country previous to 1800 (one of these was established in Philadelphia in 1784, and the other at Enfield, N. H., in 1795), only 3 in 1820, 6 in 1830, 19 in 1840, 34 in 1850, 53 in 1860, 100 in 1870, 207 in 1880, and 200 more were established between 1880 and 1890, leaving 189 unaccounted for as to date of establishment. As the proprietors of the older seed farms take great pride in this matter, it is safe to assume that 90 per cent of the unreported farms have come into existence within 20 years.

STATISTICS OF AGRICULTURE.

The following table shows, by states and territories, the number of seed farms in the United States, number of acres of land in farms, average value per acre, value of implements used, and total value of farms, implements, and buildings:

NUMBER AND VALUE OF SEED FARMS, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Number of seed farms.	Acres of land in farms.	Value of land per acre.	Value of implements.	Total value of farms, implements, and buildings.	STATES AND TERRITORIES.	Number of seed farms.	Acres of land in farms.	Value of land per acre.	Value of implements.	Total value of farms, implements, and buildings.
The United States.	506	6160, 851	.....	\$221, 790. 00	\$18, 325, 935. 86	North Central division..	157	87, 000	.....	\$54, 425. 54	\$7, 005, 663. 42
North Atlantic division..	258	47, 813	.....	121, 212. 61	7, 856, 402. 86	Ohio	32	10, 048	\$95. 00	23, 116. 80	2, 110, 000. 00
Maine	2	110	\$20. 00	80. 00	6, 504. 00	Indiana.....	12	7, 002	80. 00	3, 800. 00	600, 018. 00
New Hampshire.....	5	225	50. 00	925. 00	24, 543. 75	Illinois	21	13, 357	125. 00	3, 230. 14	1, 717, 432. 25
Vermont.....	6	618	87. 50	1, 050. 00	50, 140. 25	Michigan	20	11, 620	40. 71	4, 500. 00	527, 350. 00
Massachusetts.....	25	3, 000	216. 67	13, 750. 00	800, 448. 00	Wisconsin	21	2, 910	50. 00	3, 500. 00	180, 878. 50
Rhode Island	5	605	200. 00	3, 416. 70	141, 137. 53	Minnesota	0	1, 140	32. 50	1, 200. 00	47, 737. 00
Connecticut.....	85	12, 665	96. 00	44, 806. 25	1, 501, 653. 56	Iowa.....	18	11, 152	53. 75	3, 578. 00	633, 923. 67
New York.....	78	18, 252	111. 10	43, 014. 60	2, 170, 070. 72	Missouri.....	2	700	80. 00	400. 00	68, 000. 00
New Jersey.....	34	6, 272	200. 00	4, 800. 00	2, 333, 066. 68	North Dakota.....	1	60	30. 00	75. 00	3, 000. 00
Pennsylvania.....	18	6, 066	118. 75	10, 170. 00	804, 832. 37	Nebraska.....	18	13, 870	63. 20	0, 675. 00	907, 748. 00
South Atlantic division..	89	4, 958	.....	23, 355. 00	409, 698. 64	Kansas.....	6	6, 048	50. 00	1, 300. 00	298, 680. 00
Maryland.....	2	212	125. 00	800. 00	32, 865. 00	South Central division..	57	23, 130	.....	4, 950. 00	1, 015, 200. 00
District of Columbia.....	1	120	200. 00	100. 00	26, 000. 00	Kentucky.....	2	250	100. 00	300. 00	28, 300. 00
Virginia.....	3	249	50. 00	1, 500. 00	15, 000. 00	Tennessee.....	35	21, 560	40. 00	3, 500. 00	937, 500. 00
West Virginia.....	1	50	40. 00	50. 00	4, 000. 00	Mississippi.....	2	80	35. 00	100. 00	4, 900. 00
North Carolina.....	1	180	30. 00	100. 00	7, 400. 00	Texas.....	17	1, 200	25. 00	1, 000. 00	42, 500. 00
South Carolina.....	4	700	100. 00	1, 300. 00	82, 300. 00	Arkansas.....	1	40	30. 00	50. 00	2, 000. 00
Georgia.....	31	2, 927	40. 00	9, 921. 00	177, 000. 00	Western division.....	35	6, 854	.....	17, 703. 75	1, 051, 878. 94
Florida.....	46	700	45. 00	9, 584. 00	62, 933. 64	Colorado.....	1	.....	.....	.....	.....
						Washington.....	2	150	100. 00	100. 00	18, 000. 00
						Oregon.....	17	280	170. 00	1, 700. 00	80, 588. 00
						California.....	15	6, 415	287. 50	15, 993. 75	1, 853, 200. 94

*This amount represents the total acreage in farms, only a portion of which is cultivated for seeds in any one year. The balance is devoted to grass, pasturage, or a rotation of farm crops in preparation for seed production. Some seed farmers, however, lease a considerable area of land or contract to have seeds grown for them by neighboring farmers, and so show a greater acreage of seed production than the total acreage of their farms. This is especially true in the North Atlantic division.

NUMBER OF EMPLOYÉS, WAGES PAID, AND NUMBER OF ANIMALS USED, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Number of men employed.	Wages paid men per day.	Number of women employed.	Wages paid women per day.	Number of horses and other animals used.	STATES AND TERRITORIES.	Number of men employed.	Wages paid men per day.	Number of women employed.	Wages paid women per day.	Number of horses and other animals used.
The United States.....	13, 500	.....	1, 541	.....	4, 410	North Central division.....	6, 770	.....	527	.....	1, 927
North Atlantic division.....	6, 420	.....	881	.....	1, 971	Ohio.....	1, 524	\$0. 03	64	\$0. 56	460
Maine.....	27	\$1. 25	.....	.....	12	Indiana.....	248	1. 00	.....	.....	72
New Hampshire.....	10	1. 00	.....	.....	5	Illinois.....	1, 103	1. 50	315	0. 88	942
Vermont.....	62	0. 88	1	\$0. 50	28	Michigan.....	1, 025	1. 12	80	0. 50	460
Massachusetts.....	325	1. 46	.....	.....	225	Wisconsin.....	405	1. 50	.....	.....	105
Rhode Island.....	45	1. 84	5	0. 88	15	Minnesota.....	124	1. 00	14	0. 50	80
Connecticut.....	1, 282	1. 25	85	0. 05	510	Iowa.....	354	1. 05	.....	.....	72
New York.....	2, 702	1. 17	624	0. 02	890	Missouri.....	40	1. 00	.....	.....	8
New Jersey.....	209	1. 16	40	1. 00	70	North Dakota.....	2	1. 25	.....	.....	2
Pennsylvania.....	608	1. 20	126	0. 91	216	Nebraska.....	872	1. 00	54	0. 63	290
South Atlantic division.....	432	.....	38	.....	147	Kansas.....	416	1. 00	.....	.....	80
Maryland.....	18	1. 10	.....	.....	7	South Central division.....	547	.....	70	.....	220
District of Columbia.....	5	1. 00	2	0. 75	2	Kentucky.....	15	1. 00	.....	.....	6
Virginia.....	21	1. 00	.....	.....	9	Tennessee.....	475	0. 50	70	0. 35	100
West Virginia.....	.....	.....	.....	.....	.....	Mississippi.....	4	0. 50	.....	.....	.....
North Carolina.....	9	0. 60	.....	.....	4	Texas.....	51	0. 50	.....	.....	31
South Carolina.....	10	0. 60	.....	.....	6	Arkansas.....	2	0. 00	.....	.....	2
Georgia.....	293	0. 72	31	0. 50	92	Western division.....	822	.....	80	.....	145
Florida.....	76	1. 13	.....	.....	27	Colorado.....	.....	.....	.....	.....	.....
						Washington.....	5	1. 25	.....	.....	4
						Oregon.....	17	1. 25	.....	.....	51
						California.....	300	0. 90	30	0. 75	80

HORTICULTURE.

The following table shows, by decades, the date of establishment of 407 out of the 596 seed farms in the country, the date of the others being unknown or unreported:

DATE OF ESTABLISHMENT OF SEED FARMS, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Total number of seed farms reported.	Date unknown or not reported.	Previous to 1800	1800 to 1810	1810 to 1820	1820 to 1830	1830 to 1840	1840 to 1850	1850 to 1860	1860 to 1870	1870 to 1880	1880 to 1890
The United States.....	596	189	2		1	3	13	15	19	47	107	200
North Atlantic division.....	258	50	2		1	3	13	15	18	40	62	54
Maine.....	2	1										1
New Hampshire.....	5	2	a1					1	1			
Vermont.....	6	2									1	3
Massachusetts.....	25	8					1	1	3	4	5	8
Rhode Island.....	5	2						1	1			1
Connecticut.....	85	17			1	1	7	4	10	21	15	9
New York.....	78	15				2	4	6	2	12	10	21
New Jersey.....	34									2	20	12
Pennsylvania.....	18	3	1				1	2	1	1	5	4
South Atlantic division.....	80	35									10	44
Maryland.....	2	1										1
District of Columbia.....	1											1
Virginia.....	3	1										2
West Virginia.....	1											1
North Carolina.....	1											1
South Carolina.....	4											4
Georgia.....	31	8									1	22
Florida.....	46	25									0	12
North Central division.....	157	47							1	7	24	78
Ohio.....	32	12							1	2	3	14
Indiana.....	12	4									3	5
Illinois.....	21	2								3	5	11
Michigan.....	20	4								1	3	12
Wisconsin.....	21	9									3	9
Minnesota.....	6	2									2	2
Iowa.....	18	4								1	3	10
Missouri.....	2	2										
North Dakota.....	1	1										
Nebraska.....	18	5									2	11
Kansas.....	6	2										4
South Central division.....	57	43									6	8
Kentucky.....	2										2	
Tennessee.....	35	27									3	5
Mississippi.....	2	2										
Texas.....	17	13									1	3
Arkansas.....	1	1										
Western division.....	35	14									5	16
Colorado.....	1	1										
Washington.....	2	2										
Oregon.....	17	7									2	8
California.....	15	4									3	8

a Established at Tenfield, Grafton county, N. H., in 1795.

ACREAGE OF SEED PRODUCTION, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Total.	Aspara- gus. (a)	Beans. (b)	Beet.	Cab- bage.	Carrot.	Cauli- flower.	Coloriac.	Celery.	Collard.	Corn salad.	Corn (sweet).	Corn (field).	Cress.
North Atlantic division:														
Maine.....	133		14	1		1						30		(c)
New Hampshire.....	16			1								5		
Vermont.....	312	2												
Massachusetts.....	1,221	6		8	48	18			1			103	130	
Rhode Island.....	356	8		4	9	11			1			90	75	
Connecticut.....	5,127			27	167	64					(c)	1,573	765	
New York.....	14,092	370	4,600	116	274	187	1	(c)	4		(c)	470	624	1
New Jersey.....	4,049	610	12	1	2								50	
Pennsylvania.....	3,237	68	180	34	230	161			2			95	900	
South Atlantic division:														
Maryland.....	144													
District of Columbia.....	7				4		8							
Virginia.....	55	12			2				1				17	
North Carolina.....	40													
South Carolina.....	52	40												
Georgia.....	1,338	45	275	2						11			620	
Florida.....	479	4												
North Central division:														
Ohio.....	12,100	6	1,624	128	184	13			1			3,200	4,432	
Indiana.....	2,751	2	110	30	16	30						1,800	340	
Illinois.....	8,330	27	2,800	75	116	4			1			800	567	
Michigan.....	9,754		2,015	43	42	2						280	160	
Wisconsin.....	2,974			13	13	16						40	672	
Minnesota.....	856		84	4								18		
Iowa.....	2,632	3	71	2	42	7						508	952	
Missouri.....	403			1	2								400	
Nebraska.....	11,538	2		210	60	7						3,780	1,538	
Kansas.....	5,430		180	24	4	1						1,790	700	
South Central division:														
Kentucky.....	40													
Tennessee.....	4,882	27		18	21							260	3,220	
Western division:														
Washington.....	50				28		2							
Oregon.....	10				4									
California.....	3,990	180	230	105		71	5		60	2				

STATES.	Cucum- ber.	Dande- lion.	Egg- plant.	Endive.	Kale.	Kohl- rabi.	Leek.	Let- tuce.	Melon (musk).	Melon (water).	Nastur- tium.	Okra.	Onion.	Onion sets.
North Atlantic division:														
Maine.....	5													
New Hampshire.....		(c)						1					2	
Massachusetts.....	150	3						8	5				150	12
Rhode Island.....	20	(c)							7				38	
Connecticut.....	610							16	195	150			285	7
New York.....	610	16	40		78	2	1	40	370	370	2	1	320	23
New Jersey.....	40		116						2,750	350				25
Pennsylvania.....	503		9			3	1	36	72	80			82	90
South Atlantic division:														
Maryland.....									118					
Virginia.....					12	2		2						
North Carolina.....										40				
South Carolina.....			12											
Georgia.....	8		60			7		6	67			10		
Florida.....			8						217	461				
North Central division:														
Ohio.....	318	8						25	85				312	88
Indiana.....	284	1						12	68					
Illinois.....	630	4	3		2	3	1	60	252	315			168	40
Michigan.....	873	2						12	40	20			10	
Wisconsin.....								60						
Minnesota.....	6													
Iowa.....	472		4					3	30	27		2	10	3
Nebraska.....	3,724							30	558	410			28	9
Kansas.....	1,300							450	000				6	30
South Central division:														
Kentucky.....														40
Tennessee.....										027			32	35
Western division:														
California.....				10	13	2	9	175	82				2,105	

a Nearly all seed asparagus comes from selected stock of market gardens, as a second crop following the marketing of the green produce.
 b The beans here reported include but a very small proportion of limas, seed of that variety now being nearly all from California, where they are grown by the thousands of acres as a staple farm crop, and the warehousemen select a portion of the largest and finest to supply the seed trade.
 c Less than 1 acre.

ACREAGE OF SEED PRODUCTION, BY STATES AND TERRITORIES: 1889—Continued.

STATES.	Parsley.	Pars-nip.	Pease.	Pepper.	Potato. (a)	Pump-kin.	Radish.	Rhu-barb. (b)	Salsify.	Spinach.	Squash.	Tomato.	Turnip.	Flower seed.
North Atlantic division:														
Maine.....		1	20		60								1	
New Hampshire.....					5						2			
Vermont.....			66		244									
Massachusetts.....	2	3	25		875	2	16	2		12	23	12	2	7
Rhode Island.....	3	1		2	35	12	2			1	20	4	7	
Connecticut.....	4	18	40	27	140	6	43	0	2	21	186	160	815	
New York.....	18	6	2,282	234	1,092	14	187	4	8	30	780	134	404	12
New Jersey.....					56								5	2
Pennsylvania.....	12	88		72	288	8		8	1	12	65	81	76	10
South Atlantic division:														
Maryland.....	2											24		
Virginia.....									1			6		
Georgia.....			4		2									4
Florida.....														6
North Central division:														
Ohio.....		41	20		250	2	2	1			160	1,312	2	4
Indiana.....		16			25					5				
Illinois.....	4	142	672	11	840	5	210		2	11	230	212	63	
Michigan.....	2	16	1,440	1	22	4	3		1	13	1,940	2,200		
Wisconsin.....		4	1,800		204					2				
Minnesota.....			720		24									
Iowa.....		8	46		180	10	6	2	2	12	118	16	2	20
Nebraska.....	11	34	180	18		27	18			17	766	69		
Kansas.....	7										370	18		
South Central division:														
Tennessee.....		6	105		160	6		2	1			54	8	
Western division:														
Washington.....			16		4									
Oregon.....					6									
California.....	10	40	475				175		8	0		65		16

a Nearly all seed potatoes of the newer varieties are produced by seed farmers who are potato specialists or under contract by seed dealers, but a very large portion of the seed stock offered for sale comes from selected tubers grown as staple farm crops, the potato farms of Aroostook county, Maine, alone supplying nearly 2,000,000 bushels for seed purposes only to the states in the North and South Atlantic divisions, farms of northern Vermont, New York, Ohio, Michigan, Wisconsin, and Minnesota furnishing the rest of the country. Therefore the acreage here given represents but a very small percentage of the seed potatoes actually grown.

b Nearly all seed rhubarb comes from selected stock of market gardens, as a second crop following the marketing of the green produce.

Chervil and chicory did not appear upon any of the schedule reports, while celeriac, endive, and nasturtium show such a very small area as almost to lead to the belief that they have either been neglected in some of the reports or are grown by some of the contract farmers and not reported by the dealers.

VALUE OF PLANTING STOCK PER ACRE, BY STATES: 1889. (a)

STATES.	Beans.	Beet.	Cab-bage.	Carrot.	Colery.	Collard.	Corn (sweet).	Corn (field).	Cucum-ber.	Dande-lion.	Egg-plant.	Let-tuce.	Melon (musk).	Melon (water).
North Atlantic division:														
Maine.....		\$25.00		\$20.00			\$1.50			\$0.60		\$12.00		
New Hampshire.....		30.00					4.33	\$1.00	\$1.50	0.50		15.00	\$0.00	\$2.00
Massachusetts.....		75.00	\$145.00	20.00	\$35.00		3.00	1.00	1.50	0.50				2.00
Rhode Island.....		50.00	62.50	35.00	35.00		3.00	1.00	1.50					2.25
Connecticut.....		43.33	94.44	32.00			2.81	0.75	1.50			13.00	3.00	2.00
New York.....	\$2.43	57.50	30.00	30.00	37.50		2.00	0.75	1.50		\$3.00	12.50	3.00	2.00
New Jersey.....	2.50	35.00	45.00					0.75	1.50		2.50		2.00	1.50
Pennsylvania.....	2.50	40.00	41.25	27.50	25.00		8.70	1.00	1.70		3.00	0.00	2.00	1.50
South Atlantic division:														
Maryland.....			30.00					0.05				7.00		1.25
Virginia.....					20.00			0.60	0.25		2.00	10.00	1.50	1.00
Georgia.....	3.33	30.00				\$3.33					2.00			1.00
Florida.....														
North Central division:														
Ohio.....	2.00	35.00	35.00	21.50	22.50		2.16	0.50	0.50	0.25		6.40	1.25	1.50
Indiana.....	2.00	32.50	28.00	20.00			1.75	0.50	0.50					1.50
Illinois.....	1.75	30.00	25.00	18.00	20.00		1.50	0.50	0.50					1.25
Michigan.....	2.00	37.00	35.50	24.00			1.80	0.70	0.37				1.25	2.00
Wisconsin.....		37.50	33.00	25.00			1.25	0.75				10.00		
Minnesota.....	1.75	30.00					1.25		0.50					
Iowa.....	1.00	12.00	15.00	20.00			1.10	0.66	1.60			10.00	1.00	1.00
Missouri.....			15.00											
Nebraska.....		10.00	20.00	8.00			0.37	0.16	1.04			8.00	1.03	0.07
Kansas.....	1.00	10.00	18.00	10.00			0.50	0.15	1.50				1.00	0.30
South Central division:														
Tennessee.....		15.00	15.00				0.75	0.35						0.75
Western division:														
Washington.....			25.00											
Oregon.....			25.00											
California.....		50.00	20.00	15.00	15.00									

a Cauliflower, celeriac, corn salad, cress, endive, kale, kohlrabi, leek, nasturtium, parsley, and spinach not reported.

STATISTICS OF AGRICULTURE.

YIELD PER ACRE IN POUNDS OR BUSHELS, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Aspara- gus. (Pounds.)	Beans. (Bushels.)	Beet. (Pounds.)	Cabbage. (Pounds.)	Carrot. (Pounds.)	Caul- flower. (Pounds.)	Cele- riac. (Pounds.)	Celery. (Pounds.)	Collard. (Pounds.)	Corn salad. (Pounds.)	Corn (sweet). (Bushels.)	Corn (hard). (Bushels.)	Cress. (Pounds.)
North Atlantic division:													
Maine.....		25			500								
New Hampshire.....			925		300						33		220
Vermont.....	450												
Massachusetts.....	475		875	357	350			405			34	50	
Rhode Island.....	500		850	350	550			400			37	40	
Connecticut.....			1,085	544	404						44	79	
New York.....	500	10	910	375	500	75	400	250		400	44	75	200
New Jersey.....		13	900		300							60	
Pennsylvania.....	600	12	1,000	410	480			300			40	50	
South Atlantic division:													
District of Columbia.....				450		30							
Virginia.....	550			810									
West Virginia.....	400												
Georgia.....		10	700						366			25	
North Central division:													
Ohio.....	500	15	850	375	350						28	53	
Indiana.....			800	325	300						20	35	
Illinois.....	475		000	305	360						25	34	
Michigan.....			950	410	480						22	35	
Wisconsin.....			825	425	400						29	51	
Minnesota.....		10	850								40		
Iowa.....		9	900	210	350						31	43	
Missouri.....												24	
Nebraska.....	800		525	150	320						18	42	
Kansas.....		12	600	180	300						24	20	
South Central division:													
Tennessee.....	400		550	175							18	23	
Western division:													
Washington.....				600									
California.....		15	1,000	450	650			600					

STATES.	Cucum- ber. (Pounds.)	Dande- lion. (Pounds.)	Egg- plant. (Pounds.)	Kale. (Pounds.)	Kohl-rabi. (Pounds.)	Leek. (Pounds.)	Lettuce. (Pounds.)	Melon (musk). (Pounds.)	Melon (water). (Pounds.)	Nastur- tium. (Pounds.)	Okra. (Pounds.)	Onion. (Pounds.)	Onion sets. (Bushels.)
North Atlantic division:													
Maine.....	300												
New Hampshire.....	300	75					150	150	150			400	
Massachusetts.....	290	120					190	130	180			313	300
Rhode Island.....	300	96						145	200			425	
Connecticut.....	375						170	300	180			383	351
New York.....	250		200	200	200	200	250	250	250	250	200	274	273
New Jersey.....	200							160	330				412
Pennsylvania.....	200		200				150	150	200			250	250
South Atlantic division:													
Georgia.....	160		150				80	110	183		100		
Florida.....									150				
North Central division:													
Ohio.....	300	80					150	124	125				600
Indiana.....	250								130				
Illinois.....	240								120				400
Michigan.....	236								112	100			
Wisconsin.....							150						
Minnesota.....	300												
Iowa.....	148						200	170	152			300	325
Nebraska.....	172						180	203	154			200	240
Kansas.....	200							226	150			350	300
South Central division:													
Kentucky.....													460
Western division:													
California.....							500	270				600	

YIELD PER ACRE IN POUNDS OR BUSHELS, BY STATES AND TERRITORIES: 1889—Continued.

STATES.	Parsley. (Pounds.)	Parsnip. (Pounds.)	Ponse. (Bushels.)	Pepper. (Pounds.)	Potato. (Bushels.)	Pumpkin. (Pounds.)	Radish. (Pounds.)	Rhubarb. (Pounds.)	Salsify. (Pounds.)	Spinach. (Pounds.)	Squash. (Pounds.)	Tomato. (Pounds.)	Turnip. (Pounds.)
North Atlantic division:													
Maine.....		310	25		300								350
New Hampshire.....		350			240					330	400	110	300
Vermont.....			30		230								
Massachusetts.....		480	26		233	300	330			400	546	117	580
Rhode Island.....	500	325		292	175	221	300			500	350	166	500
Connecticut.....		575	24	430	154	250	500		400		400	191	550
New York.....	500	400	28	333	131	292	340	50	225	400	500	200	350
New Jersey.....					163							300	300
Pennsylvania.....		340		200	150	150		40	260		360	212	350
South Atlantic division:													
Maryland.....												350	
Virginia.....									135			225	
Georgia.....			20		122								
North Central division:													
Ohio.....			38		291	100		45			280	150	375
Indiana.....					240								
Illinois.....					200				225		270		
Michigan.....					121	150					242	175	
Wisconsin.....			12		150								
Minnesota.....			20		200								
Iowa.....		320	0		167	300	260	40	230		248	140	275
Nebraska.....		600	10	200		196	400				266	131	
Kansas.....												180	
South Central division:													
Tennessee.....					50			50	137				
Western division:													
Washington.....			23		116								
California.....			30				625		450	550		250	

The yield of endive per acre was not reported. The yield per acre of flower seed is from 10 to 1,000 pounds, according to variety.

WHOLESALE PRICE PER POUND OR PER BUSHEL, BY STATES AND TERRITORIES: 1889.

STATES AND TERRITORIES.	Aspara- gus. (Pound.)	Beans. (Bushel.)	Beet. (Pound.)	Cabbage. (Pound.)	Carrot. (Pound.)	Cauli- flower. (Pound.) (a)	Cele- rinc. (Pound.)	Colery. (Pound.)	Collard. (Pound.)	Corn salad. (Pound.)	Corn (sweet). (Bushel.)	Corn (field). (Bushel.)	Cress. (Pound.)
North Atlantic division:													
Maine.....			\$0.20		\$0.30						\$1.25		
New Hampshire.....			0.20		0.30								
Vermont.....	\$0.15					1.15		\$3.00			2.12½	\$2.00	
Massachusetts (b).....	0.25		0.32½	\$1.87½	0.07½	0.25		1.00			1.02½	1.00	
Rhode Island.....	0.17		0.13½	0.07½	0.25	0.20½					1.31	0.97	
Connecticut.....			0.15½	0.60½	0.25						1.15½	1.00	\$0.10
New York.....	0.15	\$2.33	0.12½	0.01	0.25	\$4.00	\$0.25	0.40		\$0.25	1.15½	1.05	
New Jersey.....		2.00	0.13	0.05							1.50	1.00	
Pennsylvania.....	0.15	2.50	0.15	0.60	0.25			0.65					
South Atlantic division:													
District of Columbia.....				0.50		15.00							0.75
Virginia.....	0.13			0.05									
South Carolina.....	0.13												
Georgia.....	0.13	3.00	0.15					\$0.19½					1.03½
North Central division:													
Ohio.....	0.15	2.50	0.14½	0.65	0.25						1.25	1.05	
Indiana.....		2.25	0.16½	0.65	0.24						1.25	1.00	
Illinois.....	0.15	2.25	0.15	0.64	0.25						1.10	1.00	
Michigan.....		2.40	0.16	0.67	0.25						0.94	0.85	
Wisconsin.....			0.15	0.68	0.25						1.00	0.90	
Minnesota.....		2.25	0.18								1.05		
Iowa.....		2.00	0.16	0.70	0.26						1.14	0.73½	
Nebraska.....	0.20		0.17	0.65	0.25						0.92	0.65	
Kansas.....		1.70	0.16½								1.12½	0.70	
South Central division:													
Tennessee.....	0.15		0.15								1.10	0.60	
Western division:													
Washington.....				0.42½				0.54					
California.....		2.50	0.12		0.25								

a The vast difference in the price of cauliflower seed is owing to the difference in the variety grown rather than to the quality of the seed produced in the different sections.

b An investigation into the great excess in price received by the Massachusetts seed farmers show two causes: first, that one of the largest growers there is also a dealer, and disposes of most of his stock direct to planters, thus obtaining a somewhat higher price than would be possible if sold to the general wholesale trade; second, that many expert and successful gardeners of that state, afraid to risk their crop on seeds of unknown origin, are willing to pay higher prices to their own neighboring seed farmers to grow their extra choice seeds from selected stock.

STATISTICS OF AGRICULTURE.

WHOLESALE PRICE PER POUND OR PER BUSHEL, BY STATES AND TERRITORIES: 1889—Continued.

STATES.	Cucum-ber. (Pound.)	Dandel-ion. (Pound.)	Egg-plant. (Pound.)	Endive. (Pound.)	Kale. (Pound.)	Kohl-rabi. (Pound.)	Leek. (Pound.)	Lettuce. (Pound.)	Melon (musk). (Pound.)	Melon (water). (Pound.)	Nastur-tium. (Pound.)	Okra. (Pound.)	Onion. (Pound.)	Onion sets. (Bushel.)
North Atlantic division:														
New Hampshire.....	\$0.31	\$1.50						\$0.65	\$0.30	\$0.25			\$1.25	
Massachusetts.....	0.65							0.50	0.50	0.25			2.08½	\$2.00
Rhode Island.....	0.22	3.25						0.30	0.30	0.20			0.60	
Connecticut.....	0.23	2.00						0.50	0.25	0.20			0.75½	1.67½
New York.....	0.20		\$2.50		\$0.25	\$0.25	\$0.25	0.35	0.25	0.20	\$0.30	\$0.30	0.66½	1.75
New Jersey.....	0.20		1.50										0.66½	3.00
Pennsylvania.....	0.25		1.25					0.60	0.25	0.20			0.65	2.00
South Atlantic division:														
South Carolina.....			1.75											
Georgia.....	0.50		1.75					0.50	0.20	0.37½		0.30		
Florida.....										0.23½				
North Central division:														
Ohio.....	0.20	2.00						0.50	0.20		0.20		0.58	1.60
Indiana.....	0.20										0.19		0.60	
Illinois.....	0.20										0.19½		0.70	1.60
Michigan.....	0.16½										0.20			
Wisconsin.....								0.50						
Minnesota.....	0.18													
Iowa.....	0.21½							0.48	0.21		0.20		0.60	1.80
Nebraska.....	0.15½							0.50	0.20½		0.17½		0.65	2.00
Kansas.....	0.20								0.15		0.15		0.60	2.00
South Central division:														
Kentucky.....														1.60
Tennessee.....											0.15			
Western division:														
California.....				\$0.30	0.30	0.37½	0.30	0.31	0.60				0.50	

STATES.	Parsley. (Pound.)	Parsnip. (Pound.)	Pease. (Bushel.)	Pepper. (Pound.)	Potato. (Bushel.)	Pump-kin. (Pound.)	Radish. (Pound.)	Rhu-barb. (Pound.)	Salsify. (Pound.)	Spinach. (Pound.)	Squash. (Pound.)	Tomato. (Pound.)	Turnip. (Pound.)
North Atlantic division:													
Maine.....			\$2.50		\$0.50								\$0.15
New Hampshire.....		\$0.25			0.50					\$0.12	\$0.25	\$1.50	0.17
Vermont.....			4.25		0.50								
Massachusetts.....		0.60	3.00		0.80	\$0.15	\$0.50			3.00	0.66½	2.25	0.15
Rhode Island.....	\$0.15			\$1.15	0.60	0.17½	0.20			0.15	0.22	1.00	0.13½
Connecticut.....		0.10½	2.75	1.25	0.85½	0.15	0.16		\$0.50		0.25	0.78½	0.14½
New York.....	0.15	0.15	2.11½	1.00	0.99½	0.20	0.16	\$1.00	0.45	0.10	0.20	0.75	0.13½
New Jersey.....					0.70							0.75	0.12
Pennsylvania.....		0.16		1.25	1.00	0.17		1.00	0.48		0.20	1.05	0.15
South Atlantic division:													
Virginia.....									0.47			0.75	
Georgia.....			3.00		1.00								
North Central division:													
Ohio.....			3.00		1.11½	0.17	0.14	1.00			0.20	0.85	0.13½
Indiana.....					1.00		0.15						
Illinois.....	0.15				0.75		0.14½		0.45			0.85	
Michigan.....	0.15				0.75	0.18					0.17	0.65	
Wisconsin.....			2.75		1.00								
Minnesota.....			2.75		0.65								
Iowa.....	0.15		3.50		0.63½	0.15	0.15	1.00	0.43		0.23½	0.70	0.13½
Nebraska.....	0.15		3.00	0.75		0.15	0.15				0.18½	0.71½	
Kansas.....											0.19	0.70	
South Central division:													
Tennessee.....					0.75			1.00	0.48			0.75	0.12½
Western division:													
Washington.....			3.00		0.60								
California.....	0.14	0.12½	1.32½				0.19		0.47½	0.13		0.65	

New or scarce varieties of vegetables often sell at three and four times the prices given in the preceding table, and some expert growers who have a special trade obtain prices far in excess of them. In the tables of this report the prices given are averages based on returns sent in by a majority of the seed growers in each state. The great bulk of the crop was delivered to contractors or sold to dealers, who largely supply the wholesale trade; consequently prices in most instances average somewhat below the market rates in the commercial centers.

The returns show a selling price of flower seeds ranging from 3 cents to \$50 per pound. It is therefore impossible to make an average price where there is such a vast difference, and the various species and varieties are not given.

Prior to 1850 all the seed farms of the country were in the northeastern states of the Union, Connecticut and New York for more than half a century producing more seeds than all other states combined. While these two states still lead the entire country in the number of seed farms, the general westward tendency of all that pertains to agriculture has stimulated seed growing on a very extensive scale in the central west and on the Pacific coast.

TROPIC AND SEMITROPIC FRUITS AND NUTS.

The semitropic fruits and nuts of the United States comprise almonds, bananas, citrons, cocoanuts, dates, figs, guavas, kaki, lemons, limes, madeira nuts, olives, oranges, pineapples, pomelos, pomegranates, and pecans.

The production of fruits and nuts under consideration is confined largely to the states of California and Florida, but figs, oranges, kaki, and pecans were found growing to a considerable extent in all states bordering on the Gulf of Mexico. Louisiana and Arizona have each a considerable acreage in oranges. The trees of Arizona are nearly all young and of recent planting.

The acreage of oranges exceeds that of all the other products. A comparison of the tables of bearing and nonbearing trees will show three times as many nonbearing as bearing orange trees in the census year.

For a few years previous to the hard freeze of 1886, which did great injury to the orange groves of Florida, there was an enormous planting of orange trees, while since that time there has been very little. Most of the nonbearing trees reported have been planted 5 or more years, while the reverse is true of California. Most of the orange trees in that state reported as nonbearing have been planted since 1886, and very many of them during the census year.

The time of ripening of the fruit in the different "belts" varies. Florida and Louisiana begin harvesting their crops the last of October or early in November, northern California and Arizona in December and January, while southern California comes in February and March and continues well into the summer.

A few trees of pomegranate, kaki, guava, pecan, pomelo, lemon, lime, fig, date, and banana were found growing for the family supply about farm and town homes within the semitropic belt, which may be roughly said to extend as far north as Charleston on the Atlantic coast and to the thirty-first parallel of latitude along the Gulf coast, southwest Arizona, and in California as far north as the fortieth parallel, in full sight of Mount Shasta, with its perpetual snow and ice. It must not be understood that all semitropic fruits and nuts can be grown in all the country as far north as indicated, yet the kaki, fig, and pecan can be grown to a considerable extent outside of the limits indicated. Figs and almonds are grown to some extent in Oregon and Washington, olives on the Virgin river in southern Nevada, and pecans in all the southern states. Pecans are found native along river bottoms north of the fortieth parallel of latitude. A few madeira nuts are also reported as growing on river bottom lands in Arkansas.

In addition to the home supply of fruits and nuts mentioned there were found growing 13,515 acres of almond trees, 677 of banana, 169 of citron, 9,864 of cocoanut, 4,477 of fig, 550 of guava, 1,361 of kaki, 7,255 of lemon, 494 of lime, 12,180 of madeira nut, 7,097 of olive, 184,003 of orange, 2,189 of pineapple, 171 of pomelo, and 27,419 of pecan trees, representing 658,566 bearing and 800,010 nonbearing almond trees, 577,782 bearing banana plants, 4,237 bearing and 14,110 nonbearing citron trees, 123,227 bearing and 1,199,549 nonbearing cocoanut trees, 138,186 bearing and 285,201 nonbearing fig trees, 32,943 bearing and 120,529 nonbearing guava trees, 53,390 bearing and 124,522 nonbearing kaki trees, 167,663 bearing and 498,784 nonbearing lemon trees, 19,096 bearing and 44,255 nonbearing lime trees, 188,409 bearing and 411,248 nonbearing madeira nut trees, 278,380 bearing and 331,022 nonbearing olive trees, 3,885,890 bearing and 9,705,246 nonbearing orange trees, 21,750,000 pineapple plants, 3,279 bearing and 12,867 nonbearing pomelo trees, and 214,938 bearing and 657,980 nonbearing pecan trees.

Excluding pineapples and bananas, which are all counted as bearing plants, as they commence fruiting within a year of planting, it will be noted that the average number of all nonbearing trees is about double that of the bearing trees, the value of whose product in 1889 was \$14,116,226.59, divided as follows: almond \$1,525,109.80, banana \$280,653.75, cocoanut \$251,217.41, fig \$307,271.76, lemon \$988,099.92, lime \$62,496.90, madeira nut \$1,256,958, olive \$386,368.32, orange \$6,602,099.06, pineapple \$812,159.17, pomelo \$27,216, and pecan \$1,616,576.50.

NUMBER OF ACRES OF BEARING AND NONBEARING TREES IN CALIFORNIA, BY COUNTIES: 1889.

COUNTIES.	Total.	Almond.	Banana.	Citron.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Madeira nut.	Olive.	Orange.	Pecan.	Pine-apple.	Pomelo.
The State.....	78, 614	13, 428	21	76	3, 640	144	372	3, 248	84	12, 100	7, 072	38, 367	17	20	16
Alameda	1, 710	1, 220			17				3	17	443	10			
Amador	52	31			8		2				6	6			
Butte	2, 969	800			90		1	2	(a)	23	475	1, 670			(a)
Calaveras	45	12			3						80				
Colusa	1, 201	690			135		16	11		57	140	143	3		
Contra Costa	642	842			48		1			1	48	2			
Eldorado	99	95			4										
Fresno	1, 854	243			688			72		253	608	90			
Kern	301	74			120		12			36	27	32			
Lake	177	90			18		2	2		9	44	12			
Los Angeles.....	15, 686	373	9	5	65	20	5	1, 110	7	839	1, 948	11, 298	1		
Marin	25	20			5										
Mariposa	86	8			8					1	12	7			
Mendocino	65	17			14		7				27				
Merced	223	117			26		5	13			29	33			

a Less than 1 acre.

STATISTICS OF AGRICULTURE.

NUMBER OF ACRES OF BEARING AND NONBEARING TREES IN CALIFORNIA, BY COUNTIES: 1889—Continued.

COUNTIES.	Total.	Almond.	Banana.	Citron.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Madeira nut.	Olive.	Orange.	Pecan.	Pine-apple.	Pomelo.
Monterey.....	217	47			5		2			169	4				
Napa.....	338	88			17		35			5	175	18			
Nevada.....	25	10			3					7	5				
Orange.....	7,953	48	1	29	263	12	7	406	22	2,096	59	4,415			
Placer.....	938	217			168		58	3	3	1	217	265	6		
Sacramento.....	333	150			19		2			20	30	112			
San Benito.....	135	100			10		7				18				
San Bernardino.....	10,523	15	3	2	175	23	19	370	14	180	231	15,483			5
San Diego.....	4,881	8	6	37	87	76	63	877	8	293	180	3,268		29	9
San Joaquin.....	2,005	1,068			106		5			100	106	16	4		
San Luis Obispo.....	584	133			101		(a)	1		205	140	4			
San Mateo.....	130	122			5		3								
Santa Barbara.....	3,412	16			10			214		2,772	171	169			
Santa Clara.....	3,065	2,018			137		38			303	400	19			
Santa Cruz.....	323	145			0						169				
Shasta.....	101	165			16						10				
Solano.....	1,470	1,408			47					4		13			
Sonoma.....	1,681	597			93		31	5		163	749	43			
Stanislaus.....	93	24			12		(a)	1		3	21	20			
Sutter.....	539	441			28			1		30	25	14			
Tehama.....	498	230			140			3		32	50	13			
Tulare.....	855	104			550			4	1	21	145	21			
Tuolumne.....	31	16			3		10				5				
Ventura.....	5,110	79	2	3	130	13	30	141	26	3,000	280	701	1		2
Yolo.....	833	389			118		10	(a)	(a)	28	19	268	1		
Yuba.....	1,028	500			130		1	6	(a)	24	24	342	1		

NUMBER OF ACRES OF BEARING AND NONBEARING TREES IN FLORIDA, BY COUNTIES: 1889.

COUNTIES.	Total.	Banana.	Citron.	Cocoanut.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Orange.	Pecan.	Pineapple.	Pomelo.
The State.....	168,750	656	93	9,861	487	405	981	4,002	409	144,769	4,769	2,160	155
Alachua.....	13,322				17	3	72	24	18	13,150	36		2
Baker.....	25				3		1			17	4		
Bradford.....	1,989				17	4	21	5		1,936	2		4
Brevard.....	5,093	116	6	0	2	54	1	639	21	3,721		521	
Calhoun.....	84				2		2			49	40		
Citrus.....	4,564	35	10		127	21	107	507	51	2,941	760	5	
Clay.....	770				7		1	2		761			
Columbia.....	290				4		1			255	30		
Dade.....	9,881	130	1	0,813	1	87	1	28	56	33		231	(a)
De Soto.....	2,411	5			2		2	78	10	2,300		10	4
Duval.....	1,408				19		37	(a)		1,400	12		
Escambia.....	77				3		1			13	60		
Franklin.....	18				1		1			8	8		
Gadsden.....	19				2		1				16		
Hamilton.....	23				1		2				20		
Hernando.....	8,208	2	1		2	1	12	28	0	3,140	(a)	1	0
Hillsboro.....	6,477	22	33	0	3	6	5	206	0	6,150	3	32	5
Holmes.....	31				2		1			28			
Jackson.....	21				4		2			2	13		
Jefferson.....	45				3		2				40		
Lafayette.....	85				2		1			22	60		
Lake.....	15,078	27	27		31	38	78	210	7	14,608	4	21	18
Lee.....	495	23	2	108	1	24	1	67	29	188	0	32	11
Leon.....	45				2		1			2	40		
Levy.....	1,494				8		42			1,428	18		3
Liberty.....	75				1		1				13		
Madison.....	34				2		2				30		
Manatee.....	511	12	3	3	1	12	4	35	1	454	1	6	9
Marion.....	17,542	3	1		18	2	21	626	2	16,829	2	8	30
Monroe.....	1,530	18		425		3			22			1,002	
Nassau.....	165				1		2			100	2		
Orange.....	20,843	57	8		39	67	180	518	91	19,800	10	30	28
Osceola.....	793	5			1	3	4	33	2	721	2	10	3
Pasco.....	6,144	17			8	15	1			6,100	3		
Polk.....	8,475	137			10	6	61	392	20	7,706	3	140	
Putnam.....	10,601	(a)	1		5	2	10	20	(a)	10,542	6	(a)	0
St. John.....	1,724				2		18	18	10	1,658	0		0
Santa Rosa.....	3,040				2		2				3,046		
Sumter.....	11,247	26			14	34	4	360	22	10,741	17		
Suwannee.....	35				2		8			2	28		
Taylor.....	21				1		2			8	10		
Volusia.....	18,854	21			116	23	257	168	82	17,098	180	30	14
Wakulla.....	83				1		1			1	80		
Walton.....	62				1		1				60		
Washington.....	0				1		(a)				8		

a Less than 1 acre.

NUMBER OF ACRES OF BEARING AND NONBEARING TREES IN GEORGIA, MISSISSIPPI, LOUISIANA, TEXAS, AND ARIZONA: 1889.

STATES.	Total.	Almond.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Madeira nut.	Olive.	Orange.	Pecan.
Georgia.....	132		17								111
Mississippi.....	12,538		8		2					2	12,520
Louisiana.....	8,435		74		1					9	8,000
Texas.....	2,080		71		5			77		284	2,002
Arizona.....	872	87	180	1		5	1	3	25	570	

NUMBER OF BEARING TREES IN CALIFORNIA, BY COUNTIES: 1889.

COUNTIES.	Total.	Almond.	Banna. (a)	Citron.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Madeira nut.	Olive.	Orange.	Pecan.	Pine-apple. (a)	Pomelo.
The State.....	2,652,021	658,566	5,250	1,757	109,535	11,405	10,101	82,611	2,007	181,018	278,380	1,153,881	270	145,000	144
Alameda.....	135,110	102,708			1,130				253	630	20,688	680			
Amador.....	3,015	1,919			304		154				206	252			
Butte.....	47,808	22,080			1,080		35	44	2	269	10,430	13,018			4
Calaveras.....	521	483			3						30				
Colusa.....	70,884	40,939			7,780		1,437	634		1,833	8,414	767	80		
Contra Costa.....	21,644	10,771			898		20			10	808	38			
Eldorado.....	3,648	3,530			118										
Fresno.....	73,240	12,370			27,892			2,919		5,725	20,695	3,733			
Kern.....	5,054	1,508			1,917		303			826	438	532			
Lake.....	2,507	1,470			234		40	26		65	572	160			
Los Angeles.....	615,309	10,046	2,250	255	2,043	4,728	317	45,380	858	10,040	78,208	472,065	10		
Marin.....	259	216			43										
Mariposa.....	2,421	618			516					86	774	447			
Mendocino.....	4,433	1,202			847		660				1,634				
Merced.....	9,023	5,169			915		274	457			1,020	1,183			
Monterey.....	676	226			19		12			404	15				
Napa.....	14,059	4,107			623		2,027			104	6,504	685			
Nevada.....	288	148			35					46	50				
Orange.....	212,098	1,836	250	1,108	8,010	2,125	332	12,367	842	45,631	1,797	137,509			
Placer.....	23,658	7,812			4,830		2,503	86	108	16	6,225	1,908	80		
Sacramento.....	10,508	7,564			763		125			450	1,203	493			
San Benito.....	9,608	7,404			590		643				1,061				
San Bernardino.....	477,191	117	750	16	1,080	832	184	2,302	100	625	1,467	463,670			40
San Diego.....	180,296	77	1,500	355	605	3,370	750	6,701	77	1,251	1,375	25,083		145,000	80
San Joaquin.....	72,830	63,876			3,233		238			1,700	3,233	409	57		
San Luis Obispo.....	5,081	1,798			1,087		4	11		1,230	1,507	44			
San Mateo.....	6,916	6,505			212		198								
Santa Barbara.....	93,734	4,479			460			0,043		72,604	8,925	8,114			
Santa Clara.....	169,575	125,318			0,774		2,028			10,847	22,747	961			
Santa Cruz.....	1,171	593			29						549				
Shasta.....	10,010	14,233			1,099						687				
Solano.....	37,757	30,465			971					46		275			
Sonoma.....	138,046	68,396			7,244		3,762	300		7,087	58,340	3,427			
Stanislaus.....	3,828	1,162			493		90	39		65	925	1,114			
Sutter.....	23,716	20,893			1,056			98		630	945	154			
Tehama.....	11,143	5,029			2,870			62		330	1,673	273			
Tulare.....	14,685	2,197			9,403			67	21	107	2,439	361			
Tuolumno.....	2,893	1,370			199		1,032				332				
Ventura.....	25,166	5,070	500	22	747	434		4,810	188	11,802	1,609	4,138	3		14
Yolo.....	28,845	20,071			5,065		689	21	27	270	815	087	20		
Yuba.....	33,853	22,400			4,632		56	214	22	477	855	5,180	17		

NUMBER OF BEARING TREES IN FLORIDA, BY COUNTIES: 1889.

COUNTIES.	Total.	Banana. (a)	Citron.	Cocconut.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Orange.	Pecan.	Pineapple. (a)	Pomelo.
The State.....	25,317,536	572,532	2,480	123,227	20,109	21,448	36,729	85,052	17,080	2,725,272	103,403	21,005,000	3,135
Alachua.....	295,098				718	180	3,040	817	613	290,032	545		44
Baker.....	294				10		7			291	19		
Bradford.....	17,203				277	97	341	60		16,466	12		84
Brevard.....	5,337,097	03,008	65	80	27	1,812	14	0,011	227	26,103		5,210,000	
Calhoun.....	3,505				179					1,807	1,280		
Citrus.....	176,785	31,080	352		5,547	1,309	4,073	2,075	1,795	67,103	11,891	50,000	
Clay.....	13,030				229		32	52		12,717			
Columbia.....	2,563				90		22			2,210	241		
Dade.....	2,554,970	115,440	50	118,130	51	6,930	61	1,144	2,288	874		2,310,000	20
De Soto.....	133,796	4,000			47		47	1,405	183	28,000		100,000	40
Duval.....	45,044				1,000		2,000	10		42,683	251		
Escambia.....	2,817				201		80			607	1,920		
Franklin.....	220				24		24			102	70		
Gadsden.....	780				179		80				512		
Hamilton.....	389				88		70				275		
Hernando.....	20,077	1,776	8		21	16	127	230	77	17,878	2	10,000	83
Hillsboro.....	444,820	19,530	615	46	91	274	153	5,084	150	98,307	33	220,000	80
Jackson.....	758				284		71			74	329		
Jefferson.....	1,727				208						1,289		
Lafayette.....	3,215				179		89			1,027	1,920		

a Total acreage of bananas and pineapples reported as bearing, as they mostly come into fruiting within a year of the time of planting.

STATISTICS OF AGRICULTURE.

NUMBER OF BEARING TREES IN FLORIDA, BY COUNTIES: 1889—Continued.

COUNTIES.	Total.	Banana.	Citron.	Cocon- nut.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Orange.	Pecan.	Pineapple.	Pomelo.
Lake	510,000	23,970	740		1,068	1,053	2,036	6,070	194	262,828	143	210,000	324
Lee	343,871	20,424	28	370	14	401	14	741	319	1,347	44	320,000	70
Leon	200				22		11			11	156		
Levy	23,154				87		1,217			21,618	187		45
Liberty	2,705				80					607	1,020		
Madison	1,318				179		170				060		
Manatee	77,716	10,656	30	19	25	450	101	709	20	5,570	0	60,000	118
Marion	436,505	2,664	30		681	113	794	10,085	61	332,547	27	80,000	503
Monroe	10,641,577	15,984		4,626		105			772			10,620,000	
Nassau	4,900				80		170			4,067	64		
Orange	978,913	50,016	309		2,609	4,800	8,039	20,664	3,525	407,080	172	390,000	703
Osceola	180,191	4,440			38	169	151	1,006	61	14,209	27	160,000	
Pasco	70,565	15,080			47	385	17			54,817	18		155
Poll	1,589,459	121,650			153	137	652	4,826	246	61,498	16	1,400,000	
Putnam	345,575	444	49		906	183	980	987	25	337,181	132	5,000	288
St. John	63,086				128		1,147	925	5,187	55,194	205		300
Santa Rosa	70,545				129		64				70,352		
Sumter	164,935	23,088			807	1,112	88	6,871	389	122,063	117		
Tallahassee	323				40		60			21	292		
Taylor	442				35		70			145	102		
Volusia	749,330	18,048			4,280	1,267	9,483	4,096	952	346,939	2,498	360,000	270
Wakulla	2,785				39		89			47	2,530		
Walton	3,143				134		184				2,830		
Washington	17				4		2				11		

NUMBER OF BEARING TREES IN GEORGIA, MISSISSIPPI, LOUISIANA, AND TEXAS: 1889.

STATES.	Total.	Fig.	Kaki	Madeira nut.	Orange.	Pecan.
Georgia	6,852	1,852	234		122	4,644
Mississippi	20,133	84	13		66	28,970
Louisiana	68,019	4,061		4,391	6,477	51,000
Texas	26,575	2,555	313		72	29,035

NUMBER OF NONBEARING TREES IN CALIFORNIA, BY COUNTIES: 1889. (a)

COUNTIES.	Total.	Almond.	Citron.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Madeira nut.	Olive.	Orange.	Pecan.	Pomelo.
The State	4,247,789	791,658	6,451	203,421	60,505	90,848	190,760	7,182	396,254	328,907	2,223,710	404	1,500
Alameda	38,230	29,052		823				71	180	8,410	194		
Amador	2,445	1,429		294		114				220	188		
Butte	227,278	64,320		5,700		90	128	7	787	30,414	125,752		11
Calaveras	2,578	808		101						1,000			
Colusa	46,307	24,681		3,830		707	312		903	4,142	11,702	40	
Contra Costa	77,906	71,165		9,230		105			38	9,230	138		
Eldorado	6,956	6,730		226									
Fresno	82,116	13,868		31,270			5,273		6,410	23,003	4,187		
Kern	21,732	6,484		8,373		1,305			1,402	1,884	2,284		
Lake	14,413	8,250		1,314		228	146		307	3,212	896		
Los Angeles	714,821	21,238	285	2,947	5,272	353	50,500	308	21,232	88,320	524,150	21	
Marin	2,331	1,944		887									
Mariposa	807	216		172						258			
Mendocino	1,807	544		357		278			12	689	140		
Merced	13,035	7,467		1,321		396	601			1,474	1,710		
Monterey	14,514	4,850		411		256			8,066	320			
Napa	18,471	5,397		830		2,663			130	8,540	800		
Nevada	1,816	932		223					200	371			
Orange	386,318	3,348	2,023	14,608	3,875	606	22,540	1,534	83,577	3,277	250,621		
Placer	64,832	15,024		9,628		5,179	172	216	32	12,437	21,384	100	
Sacramento	20,865	8,036		871		143			510	1,377	6,328		
San Benito	4,448	3,396		270		295				487			
San Bernardino	999,495	1,503	200	13,901	10,068	2,362	20,518	1,405	8,015	18,007	612,698		500
San Diego	408,094	787	3,641	6,817	84,624	7,602	68,721	787	12,813	14,105	257,221		890
San Joaquin	132,578	116,208		6,883		432			3,100	5,833	900	103	
San Luis Obispo	39,721	12,500		7,599		30	75						
San Mateo	7,093	6,671		218		204			8,610	10,533	308		
Santa Barbara	86,372	3,729		391			8,361						
Santa Clara	125,339	92,620		5,608		2,164			60,452	6,681	6,758		
Santa Cruz	29,797	15,067		745					8,017	10,813	711		
Shasta	4,037	3,587		277						173			
Solano	110,469	115,883		3,071					140		869		
Sonoma	14,434	6,080		754			40			737	6,074	337	
Stanislaus	4,709	1,430		569		87	47			79	1,130	1,408	
Sutter	31,206	26,735		1,352			48			810	1,265	1,050	
Tehama	85,558	18,911		9,170			196			1,072	5,333	871	
Tulare	60,390	9,035		38,671			277		87	811	10,631	1,487	
Tuolumne	868	398		50									
Ventura	288,664	7,062	302	10,433		308				98			
Yolo	30,709	21,041		5,083	6,066	3,751	11,316	2,620	165,000	22,471	57,814	37	202
Yuba	65,371	31,600		6,548		671	23	27	674	819	2,352	20	

a The nonbearing trees of California have nearly all been planted within the past 4 years.

NUMBER OF NONBEARING TREES IN FLORIDA, BY COUNTIES: 1889. (a)

COUNTIES.	Total.	Citron.	Cocconut.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Orange.	Pecan.	Pomelo.
The State.....	9,200,764	7,650	1,199,540	47,225	59,809	92,099	301,584	39,905	7,408,543	125,973	11,208
Alachua.....	649,432			1,500	411	6,008	1,775	1,331	630,468	1,189	96
Baker.....	1,524			286		127			929	182	
Bradford.....	125,035			2,061	703	2,473	474		119,054	81	240
Brevard.....	310,327	583	1,176	241	9,488	120	62,101	2,041	234,577		
Calhoun.....	1,751			89		89			933	910	
Citrus.....	197,915	728		11,471	2,831	9,065	6,151	3,713	138,767	24,580	
Clay.....	41,479			730		102	164		40,483		
Columbia.....	17,382			440		112			15,025	1,109	
Dale.....	1,148,957	59	1,130,809	83	10,817	83	1,880	3,760	1,436		33
De Soto.....	141,524			221		221	6,959	892	133,000		231
Duval.....	60,182			1,500		3,000	40		55,917	325	
Escambia.....	1,409			101		45			909	060	
Franklin.....	922			110		110			458	314	
Gadsden.....	390			89		45				250	
Hamilton.....	973			96		102				685	
Hernando.....	208,043	100		247	184	1,481	2,785	895	202,842	22	387
Hillsboro.....	355,437	2,740	758	311	926	617	17,164	493	332,133	111	270
Holmes.....	1,746			208		134				1,344	
Jackson.....	678			252		93			60	205	
Jefferson.....	863			134		89				640	
Lafayette.....	1,607			89		45			513	900	
Lake.....	797,518	2,107		3,088	8,847	7,700	17,673	562	759,732	40	336
Lee.....	41,093	242	14,102	120	4,300	120	6,495	2,313	11,813	828	991
Leon.....	2,202			246		123			129	1,764	
Levy.....	63,910			315		4,411			78,342	977	165
Liberty.....	1,359			45		45			903	900	
Madison.....	658			89		89				480	
Manatee.....	31,030	339	883	109	1,950	435	3,071	88	24,110	30	513
Marion.....	599,953	78		1,731	287	2,020	48,523	155	845,483	99	1,507
Monroe.....	54,333		52,324		405			1,604			
Nassau.....	2,499			45		80			2,333	32	
Orange.....	962,630	555		4,828	8,594	15,985	35,880	6,303	888,920	308	1,257
Osceola.....	40,285			96	431	385	2,558	166	36,381	69	210
Pasco.....	379,381			1,025	2,615	117			372,153	120	8,345
Polk.....	520,971			1,187	1,063	7,242	37,510	1,914	477,927	123	
Putnam.....	404,203	50		364	217	1,164	1,173	29	400,750	156	342
St. John.....	99,598			140		1,265	1,019	5,721	90,800	227	330
Santa Rosa.....	70,005			139		70				75,859	
Sumter.....	674,339			1,569	5,688	448	85,141	1,087	628,907	609	
Suwannee.....	1,331			223		342			119	1,142	
Taylor.....	1,000			99		198			415	288	
Volusia.....	975,411			11,264	3,333	24,954	13,148	2,504	912,934	6,574	710
Wakulla.....	1,393			45		45			23	1,280	
Washington.....	668			130		65				373	

a A very large percentage of the nonbearing trees in Florida (except cocconut) have been planted 5 years or over, and will soon be of suitable size and age to be classed as bearing trees.

NUMBER OF NONBEARING TREES IN GEORGIA, MISSISSIPPI, LOUISIANA, TEXAS, AND ARIZONA: 1889.

STATES.	Total.	Almond.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Madeira nut.	Olive.	Orange.	Pecan.
Georgia.....	1,009		273		34					18	684
Mississippi.....	310,817		900		139					708	309,076
Louisiana.....	212,491		13,709					14,859		21,923	162,006
Texas.....	67,908		6,633		802					184	66,449
Arizona.....	74,485	8,952	13,140	125		440	108	135	2,025	50,100	

STATISTICS OF AGRICULTURE.

ACREAGE OF BEARING ORANGE TREES, YIELD, SELLING PRICE, AND VALUE, BY COUNTIES: 1889.

CALIFORNIA.

COUNTIES.	Acreage bearing orange trees.	Total number of boxes.	Average selling price per box in county. (a)	Total value.	COUNTIES.	Acreage bearing orange trees.	Total number of boxes.	Average selling price per box in county. (a)	Total value.
The State	13,006	1,245,047	\$1.82	\$2,271,616.30	Sacramento	6	417	\$1.50	\$625.50
Alameda	8	533	1.00	532.80	San Bernardino	5,337	610,080	1.07	1,221,360.00
Amador	3	217	1.50	325.50	San Diego	285	37,050	1.86	68,913.00
Butte	150	12,500	1.75	21,875.00	San Joaquin	6	433	1.50	649.50
Colusa	9	660	1.25	825.00	San Luis Obispo	1	37	2.40	88.80
Contra Costa	(b)	36	1.25	45.00	Santa Barbara	92	6,133	1.60	9,812.80
Fresno	42	3,300	1.25	4,125.00	Santa Clara	11	767	1.40	1,073.80
Kern	6	367	1.25	458.75	Solano	8	217	1.35	292.05
Lake	2	137	1.25	171.25	Sonoma	39	2,000	1.35	2,700.00
Los Angeles	5,343	452,259	1.77	800,551.53	Stanislaus	13	883	1.55	1,362.65
Mariposa	5	317	1.60	507.20	Sutter	2	133	1.35	179.55
Merced	13	1,035	1.40	1,449.00	Tehama	3	210	1.35	283.50
Napa	8	500	1.35	675.00	Tulare	4	283	1.85	523.55
Orange	1,564	93,840	1.22	114,484.80	Yuba	47	3,854	1.58	6,080.32
Placer	22	1,467	2.00	2,934.00		14	667	1.40	1,353.80
						59	4,425	1.65	7,301.25

FLORIDA.

The State	38,935	3,140,740	1.37	4,298,014.13	Lake	3,753	215,287	1.39	299,248.98
Alachua	4,143	306,347	1.28	597,324.16	Lee	19	4,583	1.25	5,728.75
Baker	4	333	1.20	1,119.00	Leon	(b)	11	1.00	11.00
Bradford	235	19,583	1.87	26,428.71	Levy	309	17,819	1.08	19,244.52
Brevard	373	78,168	2.75	215,017.00	Liberty	9	720	1.05	756.00
Calhoun	27	2,600	1.20	3,120.00	Manatee	80	4,000	1.15	4,600.00
Citrus	959	64,892	1.31	85,008.52	Marion	4,751	402,251	1.41	567,173.91
Clay	182	10,617	1.45	15,394.65	Nassau	67	2,233	1.00	2,233.00
Columbia	32	5,300	1.20	6,360.00	Orange	7,101	613,053	1.28	781,707.84
Dade	12	440	1.75	770.00	Osceola	204	10,320	1.00	10,320.00
De Soto	490	73,533	1.25	91,916.25	Pasco	784	57,040	1.20	68,448.00
Duval	610	45,417	1.30	59,042.10	Polk	878	70,633	1.26	88,871.58
Escambia	9	845	1.25	1,056.25	Putnam	4,817	324,345	1.54	499,491.30
Franklin	2	60	1.15	69.00	St. John	788	32,308	1.17	37,809.36
Hernando	248	16,400	3.13	18,450.00	Sumter	1,757	140,560	1.10	154,616.00
Hillsboro	1,405	138,515	1.04	144,055.00	Suwannee	(b)	10	1.00	10.00
Jackson	1	53	1.00	53.00	Taylor	2	83	1.00	83.00
Lafayette	15	950	1.00	950.00	Volusia	4,956	301,624	1.45	507,700.80
					Wakulla	1	17	1.10	18.70

a The selling price per box in the various counties is made up from the average of prices reported by producers from all sections of the county, some selling the fruit on the trees, others picked and delivered in the orchard, and still others at railroad station or packing houses in town.
 b Less than 1 acre.

ACREAGE OF BEARING TREES, YIELD, SELLING PRICE, AND VALUE OF NUTS AND CITRUS FRUITS, OTHER THAN ORANGES, FOR FLORIDA AND CALIFORNIA: 1889.

CALIFORNIA.

NUTS AND CITRUS FRUITS.	Acreage.	Yield per acre.	Total yield.	Selling price.	Value. (a)			
Almond	6,008	Pounds	2,501	Pounds	15,251,008	Per pound	\$0.10	\$1,525,100.80
Fig (b)	1,274	Pounds	8,784	Pounds	11,199,816	Per pound	0.02 1/2	299,421.76
Lemon	961	Boxes	818	Boxes	395,508	Per box	1.70	672,363.60
Madeira nut	3,834	Pounds	3,600	Pounds	13,602,400	Per pound	0.09	1,224,216.00
Olive	3,237	Pounds	2,984	Pounds	9,659,208	Per pound	0.04	386,368.32

FLORIDA.

Banana	656	Bunches	450	Bunches	295,425	Per bunch	0.05	280,653.75
Cocconut	920	Number	7,111	Number	6,542,120	Per hundred	3.84	251,217.44
Lemon	788	Boxes	821	Boxes	252,048	Per box	1.78	448,585.44
Lime	168	Boxes	293	Boxes	46,294	Per box	1.95	90,273.30
Pineapple	2,100	Number	4,839	Number	10,452,490	Per hundred	7.77	812,159.17
Pomelo	45	Barrels	224	Barrels	10,080	Per barrel	2.70	27,216.00
Pecan	2,155	Pounds	2,988	Pounds	6,439,140	Per pound	0.12 1/2	804,892.50

a The values here given represent all products grown, and not alone those placed upon the market. This applies especially to almonds, figs, pecans, cocoanuts, olives, and bananas, which are largely used for home and local consumption, and not accounted for in the marketed fruit.
 b Yield of figs and selling price per pound are for the fruit in its green state, as taken from the tree.

ACREAGE OF BEARING TREES, YIELD, SELLING PRICE, AND VALUE OF NUTS AND ALL CITRUS FRUITS IN GEORGIA, MISSISSIPPI, LOUISIANA, AND TEXAS: 1889.

GEORGIA.

BEARING TREES.	Acres.	Yield per acre.		Total yield.		Selling price.		Value. (a)
Fig (b)	14	Pounds.....	5,000	Pounds.....	70,000	Per pound.....	\$0.02½	\$1,750.00
Pecan.....	97	Pounds.....	1,800	Pounds.....	174,600	Per pound.....	0.10	17,460.00

MISSISSIPPI.

Fig (b)	1	Pounds.....	5,000	Pounds.....	5,000	Per pound.....	0.02½	125.00
Pecan.....	1,073	Pounds.....	2,000	Pounds.....	2,146,000	Per pound.....	0.10	214,600.00

LOUISIANA.

Fig (b)	80	Pounds.....	5,500	Pounds.....	105,000	Per pound.....	0.02½	4,125.00
Madeira nut	91	Pounds.....	1,800	Pounds.....	163,800	Per pound.....	0.09	14,742.00
Orange.....	45,400	Number.....	23,750	Number.....	2,208,750	Per hundred.....	1.47	\$2,468.63
Pecan.....	2,000	Pounds.....	2,200	Pounds.....	4,400,000	Per pound.....	0.10	440,000.00

TEXAS.

Fig (b)	10	Pounds.....	6,000	Pounds.....	114,000	Per pound.....	0.02½	2,850.00
Pecan.....	593	Pounds.....	2,480	Pounds.....	1,396,240	Per pound.....	0.10	139,624.00

a The values here given represent all products grown, and not alone those placed upon the market.
 b Yield of figs and selling price per pound are for the fruit in its green state, as taken from the tree.

NUMBER OF ACRES OF LAND RECOMMENDED AS SUITABLE FOR PLANTING WITH THE VARIOUS SEMITROPIC FRUITS AND NUTS IN CALIFORNIA, BY COUNTIES: 1889.

COUNTIES.	Total.	Almond.	Banna.	Citron.	Fig.	Guava.	Kaki.	Lemon.	Limo.	Madeira nut.	Olive.	Orange.	Pecan.	Pine-apple.	Pomelo.
The State.....	11,265,403	2,417,340	44,269	142,763	1,708,674	220,750	1,347,834	206,728	276,018	1,185,121	2,038,891	765,351	627,050	600	262,900
Alameda.....	85,645	37,280			5,667		20,000	250		2,525	17,200	1,717	1,000		
Amador.....	112,503	30,000			40,000		15,000	1,000	1,000		20,000	2,000	1,500		2,000
Butte.....	593,833	170,333		500	180,000	500	19,000	4,000	500	20,000	125,000	40,000	5,000		20,000
Calaveras.....	45,400	5,000			2,000		25,000	1,200	1,000		7,000	1,500	1,200		1,500
Colusa.....	341,393	120,500			32,143		35,000	500		25,000	55,000	8,500	50,500		5,000
Contra Costa.....	69,000	20,000			5,500		1,100	300		4,000	30,000	3,000	5,000		1,000
El Dorado.....	52,500	5,000			10,000		8,000	1,000			20,000	2,000	5,000		1,500
Fresno.....	104,000	19,200			19,200		20,000	1,200	1,000	1,200	25,000	4,200	10,000		3,000
Kern.....	339,903	100,000		2,000	50,000	5,000	40,000	5,000	5,000		100,000	10,000	5,000		8,000
Lake.....	38,300	10,000			5,000		10,000	800			10,000	500	2,000		500
Los Angeles.....	850,417	20,000	2,000	55,000	100,000	75,375	20,000	90,375	137,000	35,000	64,000	230,607	10,000		5,000
Mariposa.....	11,000	3,000			1,000		2,000			2,000	3,000	1,607	2,500		1,000
Mariipa.....	23,387	4,387			2,333		3,000	1,000		3,000	3,500	1,607	2,500		1,000
Merced.....	418,200	403,200			5,000		10,000								
Merced.....	221,000	50,000			50,000		60,000	5,000	5,000		25,000	8,000	12,000		6,000
Monterey.....	34,900	6,000			8,000		1,400			2,000	2,500		15,000		
Napa.....	263,593	50,000			50,000		50,000			50,000		1,500	2,000		
Navajo.....	22,000	5,000			4,000		8,000				10,000				
Orange.....	129,937	10,500	100	4,013	18,929	10,000	10,000	9,040	4,000	9,200	20,667	15,375	6,000		5,000
Placer.....	123,133	10,500		500	35,333		6,000	200	650	7,100	3,000	50,500	350		10,000
Sacramento.....	98,500	10,000			20,666		30,000			15,000	10,000	2,000	10,000		1,500
San Benito.....	35,500	5,000			2,000		3,000	1,000		8,000	12,000	1,500	2,000		1,000
San Bernardino.....	405,724	30,000	500	3,000	37,500	5,500	20,667	30,333	1,066	42,500	20,167	101,891	10,000		17,000
San Diego.....	1,093,872	37,000	41,300	68,250	52,793	100,375	21,000	34,278	87,500	45,000	362,857	84,444	52,500	600	100,000
San Joaquin.....	77,500	8,000			12,000		5,000	5,000		2,500	10,000	5,000	20,000		5,000
San Luis Obispo.....	948,242	300,000			350,000		15,007	825	500	74,000	101,000	10,250	76,000		20,000
San Mateo.....	22,000	5,000			10,000		5,000			50,000	10,000	6,000	8,000		5,000
Santa Barbara.....	146,000	25,000		4,000	10,000	5,000	12,000	6,000	500	252,000	200,000	1,700	5,000		1,000
Santa Clara.....	1,373,300	136,000			177,600		500,000	500		10,000	0,000		1,200		
Santa Cruz.....	35,200	15,000			1,000		2,000								
Shasta.....	27,000	7,500			7,500		5,000			1,000	5,000	2,000	5,000		
Solano.....	17,000	3,000			1,000		5,000			6,000	23,500	840	5,000		1,500
Sonoma.....	72,100	18,750			10,000		8,000	70		8,000	12,000	3,000	5,000		1,500
Stanislaus.....	63,000	15,000			8,000		15,000	2,000	1,500		50,500	37,000	4,000		1,000
Sutter.....	464,417	100,000			89,750	5,000	60,000	5,500	1,000	116,667					
Tehama.....	257,750	15,000			12,750		15,000	10,000		15,000	150,000	25,000	5,000		10,000
Tulare.....	216,000	40,000		5,000	30,000	5,000	50,000	0,000	5,000		40,000	8,000	20,000		7,000
Tulahoma.....	12,000	4,000			2,000		2,000				2,600		2,000		
Yuba.....	378,486	15,000	300	500	90,000	8,000	20,000	42,857	12,800	86,420	63,000	15,050	7,000		21,000
Yuba.....	1,093,617	132,700			180,707		180,000	600		200,000	290,000	1,400	150,250		1,400
Yuba.....	620,300	400,000			40,000		50,000	800		100,000	20,000	12,000	5,000		1,000

STATISTICS OF AGRICULTURE.

VALUE PER ACRE OF LAND RECOMMENDED AS SUITABLE FOR PLANTING WITH THE VARIOUS SEMITROPIC FRUITS AND NUTS IN CALIFORNIA, BY COUNTIES: 1889. (a)

COUNTIES.	Almond.	Banana.	Citron.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Madeira nut.	Olive.	Orange.	Pecan.	Pine-apple.	Pomele.
Alameda	\$158.00			\$237.50		\$210.00	\$200.00		\$200.00	\$92.00	\$200.00	\$150.00		
Amador	15.00			15.00		15.00	30.00	\$30.00		15.00	30.00	15.00		\$30.00
Butte	23.75		\$50.00	23.75	\$50.00	12.50	35.00	200.00	12.50	26.67	50.67	50.00		50.00
Calaveras	10.00			15.00		10.00	15.00	10.00		10.00	15.00	10.00		15.00
Colusa	77.78			50.00		50.00	50.00		20.00	27.50	112.50	40.00		50.00
Contra Costa	75.00			87.50		75.00	100.00		100.00	40.00	100.00	75.00		100.00
Eldorado	9.00			9.00		10.00	25.00			10.00	25.00	9.00		
Fresno	100.00			60.00		50.00	20.00		20.00	25.00	20.00	20.00		20.00
Kern	10.00		15.00	15.00	10.00	10.00	20.00	20.00		12.00	25.00	10.00		20.00
Lake	25.00			30.00		30.00	50.00		25.00	30.00	50.00	25.00		40.00
Los Angeles	95.00	\$80.00	117.50	110.50	125.07	120.00	173.33	143.34	111.43	55.83	180.00	50.00		175.00
Marin	100.00			100.00		100.00			150.00	75.00				
Mariposa	6.25			6.25		6.00	6.00		5.00	7.00	6.50	5.00		
Mendocino	5.00			5.00		6.00								
Merced	10.00			20.00		20.00	40.00	40.00		12.00	40.00	8.00		40.00
Monterey	13.00			100.00		50.00			62.50	25.00		20.00		
Napa	150.00			150.00		150.00			150.00		150.00	100.00		
Navajo	10.00			20.00		15.00				10.00				
Orange	80.50		125.00	130.91	125.00	150.00	143.36	175.00	152.92	132.50	108.08	150.00		85.00
Placer	70.62		75.00	45.00		100.00	95.00	95.00	75.00	93.33	125.00	80.00		125.00
Sacramento	62.50			50.00		50.00			50.00	50.00	50.00	50.00		50.00
San Benito	25.00			25.00		20.00	40.00		30.00	20.00	50.00	15.00		50.00
San Bernardino	168.75	300.00	175.00	108.25	225.00	170.71	227.85	262.00	180.00	171.43	248.88	150.00		243.75
San Diego	45.84	65.82	71.87	57.50	65.56	32.75	86.55	76.27	65.45	39.33	81.22	75.00	\$175.00	36.66
San Joaquin	50.00			60.00		65.00	75.00	75.00	60.00	40.00	75.00	45.00		75.00
San Luis Obispo	18.30			21.25		30.00	125.00	150.00	42.50	19.00	100.00	25.00		12.00
San Mateo	30.00			25.00		25.00			30.00					
Santa Barbara	40.00		40.00	40.00	40.00	50.00	65.00	45.00	40.00	40.00	75.00	35.00		75.00
Santa Clara	120.00			100.00		70.00	100.00	100.00	70.00	91.67	100.00	70.00		100.00
Santa Cruz	40.00			40.00		35.00			35.00	25.00		30.00		
Shasta	26.25			26.25		25.00				25.00	25.00	20.00		
Solano	175.00			166.67		150.00			100.00			75.00		
Sonoma	58.86			108.83		47.50	100.00		98.66	41.00	120.00	150.00		
Stanislaus	40.00			40.00		40.00	50.00	50.00	40.00	30.00	50.00	40.00		50.00
Sutter	58.75			50.00	40.00	40.00	100.00	100.00	50.00	50.00	100.00	50.00		100.00
Tehama	38.33			41.67		40.00	50.00		40.00	35.00	50.00	25.00		50.00
Tulare	40.40		50.00	48.00	50.00	40.00	50.00	50.00		35.00	50.00	35.00		50.00
Tuolumne	30.00			30.00		30.00				20.00		20.00		
Ventura	95.00	100.00	50.00	100.00	125.00	100.00	139.20	125.00	127.50	137.50	151.43	87.50		125.00
Yolo	74.13			50.00		55.00	90.00	80.00	100.00	50.00	120.00	75.00		120.00
Yuba	27.50			25.00		30.00	40.00	40.00	30.00	20.00	40.00	20.00		40.00

a These land values represent a fair average price for the undeveloped lands in each county estimated to be suitable for planting in the various fruits and nuts named; however, there are in most counties many acres that can be bought at one-half or even one-third these prices, while choice selections will cost considerably more.

NUMBER OF ACRES OF LAND RECOMMENDED AS SUITABLE FOR PLANTING WITH THE VARIOUS SEMITROPIC FRUITS AND NUTS IN FLORIDA, BY COUNTIES: 1889.

COUNTIES.	Total.	Banana.	Citron.	Coconut.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Olive.	Orange.	Pecan.	Pine-apple.	Pomele.
The State	13,445,380	402,215	1,010,459	192,007	1,215,225	1,854,550	1,483,535	1,009,920	926,520	854,225	1,495,504	1,018,810	865,484	1,086,800
Alachua	1,402,851	30,150	282,000		150,025	20,000	188,875	2,831	4,000	302,000	132,800	151,000		191,007
Baker	14,000				2,000		2,000					10,000		
Bradford	40,500				10,000		4,500				10,000	12,000		10,000
Brevard	205,789	5,722		3,200	10,000	31,250	13,500	98,000	37,500	5,000	20,107	2,150	20,800	13,500
Calhoun	7,500				1,000		1,500					5,000		
Citrus	115,050	1,000	2,500		1,500	1,000	1,225	12,000	12,000	1,225	40,000	2,500	1,000	40,000
Clay	59,290				1,200		45,000				6,000	1,000		6,000
Columbia	19,000				1,000		3,000					15,000		
Dade	1,665,492	2,800	36,667	84,000	11,000	830,667	12,500	55,000	90,000	2,000	33,625	400	451,250	50,033
De Soto	41,200	1,200	5,000		1,500		3,000	500			10,000	5,000	5,000	10,000
Duval	21,000				2,000		1,000				5,000	8,000		5,000
Escambia	18,000				500		2,500					15,000		
Franklin	13,800				600		1,200					12,000		
Gadsden	20,800				800		2,000					18,000		
Hamilton	12,500				1,000		1,500					10,000		
Hernando	518,475	4,000	6,000		10,000	10,000	55,000	17,500	15,000	20,000	132,875	120,000	100	128,000
Hillsboro	493,924	35,100	100,000	100	7,000	20,250	7,000	53,334	100,000	8,000	74,840	20,000	1,000	67,300
Holmes	9,000				2,000		2,000					5,000		
Jackson	10,000				1,500		2,500					6,000		
Jefferson	12,800				1,800		4,000					7,000		
Lafayette	15,200				200		5,000					10,000		
Lake	369,472	5,000	67,500		3,667	13,166	13,167	21,500	16,882	10,000	180,000	10,000	7,500	15,000
Lee	1,063,768	1,500	105,000	18,483	11,250	255,000	38,750	103,333	150,500	75,000	70,500	2,000	102,500	130,000
Leon	7,500				2,500		4,000					1,000		
Levy	620,000				200,000		200,000				13,000	200,000		13,000
Liberty	48,000				3,000		15,000					30,000		
Madison	32,500				4,000		3,500					25,000		
Manatee	803,511	50,000	67,667	46,334	1,250	207,500	77,000	79,333	86,827	37,500	43,334	3,350	55,750	40,168
Marion	174,953	1,000	12,000		10,000	20,500	33,333	6,000	1,000	0,000	28,620	5,000	1,500	40,000
Monroe	199,016	10		40,000								150,000		

NUMBER OF ACRES OF LAND RECOMMENDED AS SUITABLE FOR PLANTING WITH THE VARIOUS SEMITROPIC FRUITS AND NUTS IN FLORIDA, BY COUNTIES: 1889—Continued.

COUNTIES.	Total.	Banana.	Citron.	Cocoanut.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Olive.	Orange.	Pecan.	Pine-apple.	Pomelo.
Nassau	11,000				3,000		3,000							
Orange	2,043,936	115,000	237,025		290,000	245,000	186,428	172,800	171,000	270,000	261,722	5,000	25,334	66,687
Osceola	82,250	7,500	8,000		4,000	7,500	10,000	6,500	6,500	6,000	6,500	8,000	11,250	6,500
Pasco	920,000	2,000			140,000	140,000	140,000	200,000	140,000	4,000	75,000	5,000	10,000	70,000
Folk	1,001,001	96,667	40,000		35,000	17,000	110,000	162,500	27,007	12,000	191,667	200,000	10,000	100,000
Putnam	485,833	0,000	3,000		72,333	4,000	151,000	38,000	38,000	25,500	53,000	15,500		70,500
St. John	42,000				7,000		10,000	5,000	5,000		5,000	5,000		5,000
Santa Rosa	10,000				4,000		3,000					3,000		
Sumter	13,000				5,000		4,000					4,000		
Suwannee	5,500				2,500		1,000					2,000		
Taylor	13,200				2,000		1,200					10,000		
Volusia	726,457	22,500	37,500		217,500	16,717	165,857	35,288	25,250	70,000	65,454	25,750	12,500	62,148
Wakulla	20,500				8,000		2,500					15,000		
Walton	7,200				3,000		3,000					1,200		
Washington	24,000				4,000		10,000					10,000		

VALUE PER ACRE OF LAND RECOMMENDED AS SUITABLE FOR PLANTING WITH THE VARIOUS SEMITROPIC FRUITS AND NUTS IN FLORIDA, BY COUNTIES: 1889. (a)

COUNTIES.	Banana.	Citron.	Cocoanut.	Fig.	Guava.	Kaki.	Lemon.	Lime.	Olive.	Orange.	Pecan.	Pineapple.	Pomelo.
Alachua	\$8.00	\$10.00		\$13.40	\$10.00	\$9.57	\$17.34	\$15.00	\$15.75	\$13.20	\$10.80		\$13.75
Baker				10.00		8.00							
Bradford				80.00		10.00				15.00	10.00		15.00
Brevard	65.64	50.00	\$113.75	2.50	65.30	20.50	91.92	60.43	75.00	100.30	14.00	\$68.10	75.00
Calhoun				5.00		4.00					5.00		
Citrus	10.00	5.00		10.00	5.00	6.00	10.00	10.00	10.00	12.00	8.00	12.00	12.00
Clay				15.00		5.00				5.00	5.00		5.00
Columbia				8.00		4.00					6.00		
Dade	95.83	16.25	80.00	93.38	45.00	25.00	17.50	15.00	50.00	42.50	40.00	13.00	46.67
De Soto				3.00		3.00	6.00			8.00	3.00	6.00	0.00
Duval				18.00		9.00				25.00	20.00		25.00
Escambia				5.00		4.00					4.00		
Franklin				4.00		4.00					8.00		
Gadsden				5.00		4.50					5.00		
Hamilton				5.00		5.00					5.00		
Hernando	15.00	20.00		15.00	15.00	15.67	20.00	27.50	10.00	31.43	7.50	50.00	20.00
Hillsboro	15.28	21.00	0.00	22.50	14.34	18.34	21.67	23.75	20.00	18.34	20.00	21.00	20.50
Holmes				8.00		5.00					6.00		
Jackson				4.00		4.00					4.00		
Jefferson				4.00		3.50					3.00		
Lafayette				2.50		2.50					2.50		
Lake	27.90	11.02		15.85	8.50	11.00	21.37	21.36	15.00	23.38	13.75	22.63	25.10
Lee	15.00	8.75	21.67	12.50	14.89	7.50	8.42	8.70	12.50	12.00	7.08	10.63	10.00
Leon				8.00		7.00					7.00		
Levy				6.25		7.50				7.50	10.00		10.00
Liberty				5.00		5.00					5.00		
Madison				5.00		5.00					5.00		
Manatee	22.02	18.30	12.12	23.34	5.18	17.33	22.75	21.00	20.00	22.91	24.00	17.70	22.50
Marion	15.00	40.00		13.33	43.75	14.50	20.83	15.00	15.00	25.00	20.62	20.00	21.25
Monroe	20.00		25.00									15.00	
Nassau				5.00		10.00					10.00		
Orange	20.54	30.00		36.78	25.28	16.43	20.37	15.00	17.00	24.21	10.00	21.67	8.70
Osceola	15.00	7.00		8.00	16.00	7.00	8.50	8.50	8.50	8.50	8.00	8.50	8.50
Pasco	10.50			6.75	7.15	6.75	7.50	7.50	5.00	7.64	50.00	10.00	7.50
Folk	9.33	9.50		10.50	12.06	16.38	11.50	11.91	20.00	16.30	21.25	11.13	15.00
Putnam	22.50	15.00		20.00	18.13	25.50	30.00	28.75	20.00	34.12	26.50		26.17
St. John				10.00		10.00	15.00	15.00		30.00	10.00		30.00
Santa Rosa				4.00		5.00					3.50		
Sumter				10.00		8.00					1.25		
Suwannee				3.00		2.00					3.00		
Taylor				3.00		2.50					3.00		
Volusia	96.75	44.00		18.08	52.25	29.20	43.91	43.00	14.00	36.83	6.75	32.50	31.88
Wakulla				3.00		3.00					3.50		
Walton				3.50		3.00					3.00		
Washington				8.00		3.00					3.00		

a These land values represent a fair average price for all undeveloped lands in each county estimated to be suitable for planting in the various fruits and nuts named; however, there are in most counties many acres that can be bought at one-half or even one-third these prices, while choice selections will cost considerably more.

LAND SUITABLE FOR PLANTING.

It was decided early in the investigation not only to ascertain the present acreage and production of the various semitropic fruits and nuts, but also to show the acreage and number of young trees not yet in bearing, and to show, if possible, the acreage of land there might be susceptible of development and planting in any one or all of the fruits and nuts named. No personal survey of the land could be made by special agents, but upon the schedules sent to every cultivator were three questions: "Estimated acres of land in township suitable to be planted in any of these fruits", "Estimated acres of land in county suitable to be planted in any of these fruits", and "Value of land suitable for planting". Necessarily, answers to the questions of acreage must be largely matters of estimate and good judgment founded upon a knowledge of the business and the surrounding country. Many answers to these questions were received, and while a few appeared to be merely wild guesses, a large majority from each county were so nearly alike as to give an average which closely approximates the truth; at least the totals here given represent the best possible knowledge to be obtained, that of intelligent residents upon the spot. In considering these tables the fact must not be lost sight of that much of the land suitable for one fruit or nut is also suitable for one or more of the others. Therefore the total acreage here given really represents more than the acreage available, the same land having been estimated in many instances for two or more fruits or nuts. The table indicates where and at about what price lands may be found suitable for planting a particular fruit or nut. There is an estimated total of 2,417,349 acres suitable for almond planting, 446,481 for banana, 1,153,222 for citron, 192,067 for cocoanut, 3,013,899 for fig, 2,075,300 for guava, 2,831,369 for kaki, 1,276,648 for lemon, 1,203,142 for lime, 1,185,121 for madeira nut, 2,893,116 for olive, 2,260,855 for orange, 866,084 for pineapple, 1,349,766 for pomelo, and 1,546,460 for pecan in Florida and California alone, to which must be added many thousand acres in the Gulf states suitable for fig, kaki, and pecan, and still more in Arizona suitable for citrus fruits, of which no safe estimate could be made.

For pineapples lands are recommended in 16 counties of Florida. Fine ones are produced in the interior section of the southern half of the state, but thus far they have not proved a safe or sure crop, except on the coast. Beginning at a point on the Indian river about midway of Brevard county, down the whole length of Dade county and along the keys in Monroe county, and then up the Gulf coast in Lee and Manatee counties, there are thousands of acres suitable for the culture of this fruit. Lands suitable for cocoanut planting cover much the same range of territory, except that they begin at Lake Worth, in Dade county, and do not extend quite so far north in Manatee county as does the pineapple district. The range for the culture of the orange, lemon, lime, and pomelo is much greater, extending almost to the northern limit of the state; yet past experience has taught that Alachua and Putnam counties mark the limit, above which it is not safe to go, except possibly in a few favored localities. The fig, kaki, and pecan can be grown almost anywhere in the state, as well as in southern Georgia, Alabama, Mississippi, Louisiana, and Texas. Experiments made in Arizona indicate that there are thousands of acres suitable for the culture of almonds, figs, oranges, lemons, and other semitropic fruits and nuts.

In California there appears to be some land in San Diego county suitable for the culture of pineapples, while the almond, fig, kaki, olive, orange, and pecan can be grown in some portion of nearly every county in the state except at the extreme north or on the eastern slope of the Sierra mountains. There are two so-called "orange belts" in the state, northern and southern, situated nearly 400 miles apart, and yet outside of these "belts", all along the foothills of the mountains, from the extreme south up to the far north, in full sight of Mount Shasta, are found favored localities where the orange may be grown.

While the madeira nut (or English walnut) can be grown in many counties of the state, it thrives best and comes to its fullest development on the rich lands in the moist atmosphere near the seacoast in the southern counties of the state, Santa Barbara, Ventura, and Orange counties being the most favored localities known at the present time.

TRUCK FARMING.

The production of fruits and vegetables for market has been prosecuted with great success in earlier days as a branch of general farming, and more recently as a specialty, known as market gardening. The business is usually carried on with a few highly enriched and thoroughly cultivated acres of ground and a rotation of crops, so grown that there may be a daily supply throughout a considerable portion of the year. The farms are usually within a reasonable driving distance of cities and towns, and the products are generally sold to the retailer, and in many cases, especially in the smaller towns, directly to the consumer.

Truck farming, although it also consists in the production of green vegetables for market, is distinguished from market gardening by the fact that, while the market gardener lives near a market and delivers his products with his own teams, usually producing a general variety of vegetables, the truck farmer lives remote from market, is dependent upon transportation companies and commission men for the delivery and sale of his products, and usually devotes himself to such specialties as are best suited to his soil and climate.

Previous to 1860 truck farming was unknown except to a very limited extent along the steamboat and railway lines leading out 50 miles or so from a few of the larger northern cities. Long Island, New Jersey, Delaware, and southern Illinois appear to have been at that time the leading truck centers of the country.

The rapid growth of cities and towns, however, and their constant demand for a greater quantity and variety of vegetables throughout the whole year, the changed conditions in the south after the close of the war, and the extending of railways all combined to extend the business, until a very considerable portion of the vegetables consumed in cities and towns are produced from 500 to 1,500 miles away. By drawing upon the various sections of the country nearly all the standard vegetables are obtainable throughout the year. Late in the fall and early in the spring Florida and the lower Mississippi valley supply the eastern and central cities and California those of the far west and mountain section, until the advancing season, at the rate of about 13 miles a day, starts the growth and consequent supply up along the Atlantic coast and the great Mississippi valley, when the full season of midsummer in the north continues the supply until autumn frosts once more compel a return to the south, where a fresh crop awaits the demand of the market. While throughout the year California sends products to her own large cities and those of the Rocky Mountain region, and as far east as Chicago, the greenhouses of New England in early winter and spring supply the more tender vegetables that do not well withstand transportation or are profitable enough to pay for the extra expense of their culture under glass. New potatoes, cabbage, cauliflower, garlic, and tomatoes have thus far been about the only products received at St. Louis, Kansas city, and Chicago from California, and these only in limited quantities in seasons when there has been a partial failure in the lower Mississippi valley and in Florida.

Many of the parties engaged in the business of truck farming keep little or no record of their business, and are not able from memory to furnish all the information asked for. There has been a cheerful co-operation on the part of planters, marketmen, and transportation companies in gathering facts and figures.

Nearly 75 per cent of the truck produced in the United States comes from a belt of country along the Atlantic coast lying east of a line drawn from Augusta, Me., to Macon, Ga., from southern Georgia, Alabama, and Florida, along the north and south lines of railroad in the Mississippi valley from the Gulf to Chicago, St. Louis, and Kansas city, and from the celery districts of Michigan and Ohio. As more or less truck is produced in all the states, it has been thought best, for the purposes of this report, to divide the country into districts, as follows:

- First. New England district: the field crops supplying Boston and other New England cities, and the greenhouse products supplying all the large cities of the east.
- Second. New York and Philadelphia district: New York state, Long Island, New Jersey, and Pennsylvania, which contribute largely to the New York and Philadelphia markets.
- Third. Peninsular district: Delaware and the eastern shore counties of Maryland and Virginia, which supply all the northern and some of the central western markets.
- Fourth. Norfolk district: eight southeastern counties of Virginia and eight northeastern counties of North Carolina, which largely supply northeastern and central western markets.
- Fifth. Baltimore district: western Maryland, West Virginia, and that part of Virginia not in the peninsular and Norfolk districts, largely tributary to Baltimore, Washington, and northern cities, as well as local canning factories.
- Sixth. South Atlantic district: North Carolina, South Carolina, Georgia, and Florida, supplying northern markets, east and west.
- Seventh. Mississippi Valley district: Alabama, Mississippi, Louisiana, Tennessee, and Kentucky, tributary to north central and northwestern cities.
- Eighth. Southwest district: Texas, Arkansas, Missouri, and Kansas, largely tributary to St. Louis and Kansas city.
- Ninth. Central district: Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, and Nebraska.
- Tenth. Northwest district: Minnesota, North Dakota, and South Dakota.
- Eleventh. Mountain district: Idaho, Wyoming, Utah, Nevada, Colorado, New Mexico, and Arizona.
- Twelfth. Pacific Coast district: California, Oregon, and Washington.

On the truck farms in the United States in 1889, by the labor, during more or less of the year, of 216,765 men, 9,254 women, and 14,874 children, aided by 75,866 horses and mules, working \$8,971,206.70 worth of implements, upon 534,440 acres of land, valued at \$70,156,293.59, there was produced truck valued at \$76,517,155 on the farms after paying freights and commissions.

The following table shows the total acreage of leading vegetables grown upon truck farms in the United States in 1889:

VEGETABLES.	Acres.	VEGETABLES.	Acres.
Total	534,440	Celery	15,381
Asparagus	37,970	Cucumbers	4,721
Beans (string or snap)	12,607	Watermelons	114,381
Cabbage	77,094	Other melons	28,477
Kale	2,962	Pease	56,162
Spinach	20,195	Sweet potatoes	28,621
Irish potatoes	28,046	Tomatoes	22,802
Beets	2,420	Miscellaneous vegetables	82,601

STATISTICS OF AGRICULTURE.

The business being largely dependent on ready transportation, the leading trucking centers are along the lines of easy communication with the various large centers, which are nearly always distributing points for this class of produce. The South Atlantic states and southwest Michigan have been greatly aided in their development by the facilities in the way of water transportation they have enjoyed. From Norfolk, Va., there are lines of ocean steamers to Philadelphia, New York, Providence, and Boston, which dispatch from 15 to 18 steamers per week loaded with truck during the height of the season; besides, there are daily lines to Baltimore, Washington, and Richmond, that carry large quantities of truck among their miscellaneous cargoes.

Charleston, Savannah, and Jacksonville also have a large fleet of steamers that 2 to 4 times a week land truck at New York and Boston, while from southwest Michigan ports steamers of small size daily land truck in Chicago. In the 8 southeastern counties of Virginia (not including Accomac and Northampton, which are in the peninsular district) and the 8 northeastern counties of North Carolina, in what is known as the Norfolk district, there are numerous bays, rivers, and creeks of tide water upon which either small steamers, sailing vessels, or flatboats are used to transport truck direct from the farm to the steamer docks at Portsmouth, Norfolk, or Old Point Comfort. An estimate made by producers and shippers in 1879 placed the value of the vegetable and berry crop for that year at \$1,751,645, while for the census year ended June 1, 1890, the value of the vegetable crop alone, as indicated by reports received at this office from truckers, was \$5,773,467.25.

The season of 1889 was, in nearly all sections of the country, an unfavorable one for the truck farmer, yet vegetables were shipped from Norfolk as follows: (a)

SHIPMENT OF VEGETABLES FROM NORFOLK, VA.: 1889.

VEGETABLES.	Barrels.	VEGETABLES.	Boxes.
Beets	2,000	Asparagus (a)	2,800
Cabbage	347,130	String beans	80,935
Kale	177,707	Cucumbers	46,280
Onions	4,800	Onions	9,600
Radishes	4,208	Radishes	8,417
Squashes	1,750	Squashes	3,500
Turnips	2,000	Tomatoes	350,000
Irish potatoes	325,000		
Sweet potatoes	255,000		
Spinach	122,820		

a Containing 2 and 3 dozen 2-pound bunches.

In addition, there were shipped from the same point 863,152 melons, and 180,949 packages of miscellaneous vegetables, making a total of 2,789,557 pieces shipped from Norfolk during 1889. The following statement shows the shipment of vegetables from Mobile, Ala., during the years 1888, 1889, and 1890:

SHIPMENT OF VEGETABLES FROM MOBILE, ALA.

VEGETABLES.	1890	1889	1888
Cabbage (crates)	58,309	66,950	40,592
Potatoes (barrels)	78,924	40,508	66,287
Beans (boxes)	40,178	24,049	33,487
Pease (boxes)	1,278	8,923	5,928
Cucumbers (barrels)			132
Tomatoes (boxes)	2,095	7,590	6,578
Watermelons	10,881	3,305	4,470
Various packages	785	1,409	264

The total values of these shipments for the years named in the table were as follows: 1890, \$458,065; 1889, \$371,113; 1888, \$393,295. For shipments from Mobile county 33.3 per cent should be added, not included above, making a grand total for the three years of \$1,629,964 for this small section.

a A comparison of this table with the acreage of the leading varieties of vegetables reported from this district would indicate in some instances (especially in the case of Irish potatoes) a yield per acre somewhat above the average, which is accounted for by the fact that there are many small plots of less than a quarter of an acre that were not taken into account by the enumerators, but contribute to swell the total shipments, and a small amount of these shipments was produced just outside the limits of the district showing acreage.

SHIPMENTS OF CABBAGE AND POTATOES FROM MOBILE, ALA., FROM 1880 TO 1890, INCLUSIVE.

YEARS.	Cabbage. (Crates.)	Value.	Potatoes. (Barrels.)	Value.
Total	305,302	\$854,500	438,453	\$1,029,001
1880.....	1,242	6,210	90,874	61,748
1881.....	10,224	33,228	16,131	44,361
1882.....	22,110	99,595	30,769	138,460
1883.....	27,452	82,356	33,577	75,534
1884.....	10,212	43,401	34,704	60,048
1885.....	18,201	40,952	38,363	57,544
1886.....	17,715	38,087	32,930	65,860
1887.....	26,286	85,430	20,386	117,564
1888.....	46,592	110,480	66,287	140,146
1889.....	66,950	133,900	46,508	111,619
1890.....	58,309	174,927	78,024	138,117

At this point are also grown many varieties of vegetables; such as onions, turnips, radishes, beets, celery, eggplants, lettuce, cantaloupes, muskmelons, and pumpkins.

Of the vegetables grown by truck farmers, the leading classes are as follows: watermelons, cabbage, pease, asparagus, melons other than watermelons, sweet potatoes, tomatoes, spinach, Irish potatoes, celery, and string beans, ranking in acreage in the order named. Beets, cucumbers, cauliflower, carrots, eggplant, kale, lettuce, lima beans, parsnips, radishes, rhubarb, squashes, sweet corn, and turnips are also grown as truck farm crops, but only to a limited extent as compared with the first named, these and other vegetables not here mentioned being grown mostly by market gardeners rather than by truck farmers. (a)

In each class there are a few leading varieties that prove most satisfactory all over the country, while others are sectional in their habits, either on account of soil or climatic conditions. Old and well tried varieties are continually being discarded for various causes and new ones are constantly coming to the front. The more progressive truck farmers have therefore little test plots, where old and new varieties are tested side by side and the results noted.

The agricultural experiment stations in some states have also taken up the matter of seed and variety tests. The following table gives the acreage of leading vegetables grown, by districts:

NUMBER OF ACRES OF LEADING VEGETABLES GROWN, BY DISTRICTS: 1889.

DISTRICTS.	Aspar- agus.	Beets.	Snap or string beans.	Celery.	Cab- bago.	Cucum- bers.	Kale.	Water- melons.	Other melons.	Pease.	Irish pota- toes.	Sweet pota- toes.	Spinach.	Tomat- oes.	Miscel- lano- ous.	Aggre- gate.
Total	37,970	2,420	12,007	15,381	77,094	4,721	2,962	114,381	28,477	56,162	28,046	28,621	20,195	22,802	82,601	534,440
New England.....	242	83	65	448	1,580	272	.....	210	645	1,470	427	.....	310	305	774	6,838
New York and Philadel- phia.....	6,592	864	2,710	4,058	41,054	870	110	7,320	7,223	9,446	2,361	4,600	3,262	6,000	10,015	108,135
Peninsular	2,640	67	615	97	3,275	313	590	2,469	1,160	3,224	1,295	4,800	2,123	416	2,565	25,714
Norfolk.....	1,973	116	1,093	130	9,790	285	878	2,974	1,784	5,858	3,305	3,187	5,065	525	7,507	45,875
Baltimore.....	2,270	134	585	198	4,165	360	201	620	475	5,170	2,860	3,150	1,980	3,780	11,173	37,181
South Atlantic	14,000	766	3,465	.....	3,309	1,265	690	55,726	1,102	12,399	5,850	3,133	1,838	2,086	4,322	111,441
Mississippi valley	2,323	144	1,370	46	2,310	354	240	6,009	1,343	5,379	4,071	1,100	1,590	3,170	5,599	36,130
Southwest.....	1,719	60	1,875	313	2,730	894	170	8,098	2,238	3,281	3,002	3,725	1,378	2,018	3,888	36,880
Central	5,864	180	318	9,812	6,103	108	23	28,771	12,210	7,655	2,845	4,556	1,744	1,362	25,457	107,414
Northwest.....	135	.....	.....	160	400	.....	.....	.....	.....	60	.....	.....	.....	60	278	1,083
Mountain.....	12	.....	.....	18	400	.....	.....	390	18	90	340	.....	.....	.....	1,969	3,833
Pacific coast.....	110	.....	.....	110	1,370	.....	.....	1,734	279	1,224	590	100	.....	290	8,454	14,367

a The fact must not be lost sight of that in making up this report no account has been taken of sweet or Irish potatoes or onions grown as great staple farm crops, or of any vegetables grown in market gardens.

The following table gives the number of acres planted, value of land, number of persons employed, and value of implements used:

ACRES PLANTED, VALUE OF LAND PER ACRE, TOTAL VALUE OF LAND, NUMBER OF MEN, WOMEN, AND CHILDREN EMPLOYED, ANIMALS EMPLOYED, AND VALUE OF IMPLEMENTS, BY DISTRICTS: 1889.

DISTRICTS.	Acres planted.	Value of land per acre.	Total land value.	Men employed.	Women employed.	Children employed.	Horses and other animals employed.	Value of implements used.
Total	534,440	.....	\$70,156,293.50	210,765	9,254	14,874	75,806	\$8,971,206.70
New England.....	6,838	\$317.91	2,173,868.58	7,718	.....	185	3,468	355,361.20
New York and Philadelphia.....	108,135	226.11	24,459,404.85	68,964	.....	1,378	26,232	3,506,594.25
Peninsular.....	25,714	98.75	2,530,257.50	10,748	760	890	3,641	499,936.00
Norfolk.....	45,375	135.50	6,143,812.50	17,815	2,258	2,416	5,700	870,316.00
Baltimore.....	37,181	97.50	3,625,147.50	13,210	1,450	1,690	5,265	773,094.00
South Atlantic.....	111,441	45.25	5,042,705.25	31,650	2,716	3,050	6,686	374,563.60
Mississippi valley.....	36,180	62.51	2,261,611.80	13,920	886	1,375	2,005	287,487.50
Southwest.....	36,890	57.86	2,134,397.54	11,170	834	1,020	2,731	117,215.00
Central.....	107,414	159.91	17,176,572.74	33,695	350	1,970	10,456	1,782,624.00
Northwest.....	1,033	104.51	113,184.33	1,465	.....	.....	240	22,380.00
Mountain.....	3,833	98.50	377,550.50	1,445	.....	.....	535	44,245.50
Pacific coast.....	14,357	286.50	4,113,280.50	4,965	.....	.....	1,767	269,385.25

LABOR.

Except in a few instances transient help must be used largely, especially in gathering the crop. In the truck section about Norfolk, Va., there are employed 6,000 men and boys throughout the year, and for 6 weeks in the height of the shipping season 22,489 men, women, boys, and girls are kept at work, some coming from Richmond and other interior cities of the state and some from North Carolina. While many of them work by the day or week, much of the truck is gathered by piecework: so much per row, dozen, bushel, box, or barrel.

On every truck farm of any considerable size some men are employed throughout the year who are more or less experts as propagators, cultivators, or packers. These men are paid from \$300 to \$600 per year and board at the north and west and on the Pacific coast, and about \$100 more where a house is furnished them and they board themselves.

The following table shows the number of men, women, and children employed part or all of the year in each trucking district:

NUMBER EMPLOYED, BY DISTRICTS: 1889.

DISTRICTS.	Men.	Women.	Children.
Total	210,765	9,254	14,874
New England.....	7,718	.....	185
New York and Philadelphia.....	68,964	.....	1,378
Peninsular.....	10,748	760	890
Norfolk.....	17,815	2,258	2,416
Baltimore.....	13,210	1,450	1,690
South Atlantic.....	31,650	2,716	3,050
Mississippi valley.....	13,920	886	1,375
Southwest.....	11,170	834	1,020
Central.....	33,695	350	1,970
Northwest.....	1,465	.....	.....
Mountain.....	1,445	.....	.....
Pacific coast.....	4,965	.....	.....

The following table shows the average wages, without board, paid men, women, and children in the various districts; also the piece price paid for harvesting a few of the leading vegetables, returns received on this latter point being somewhat meager. Very little piecework is done except in the south.

AVERAGE DAY AND PIECE WAGES PAID, BY DISTRICTS: 1889.

DISTRICTS.	Men, per day.	Women, per day.	Boys and girls, per day.	Picking string beans, per bushel.	Cutting and trimming cabbage, per barrel.	Gathering kale, per barrel.	Picking pease, per bushel.	Digging and assorting potatoes, per barrel.	Picking tomatoes, per bushel.
New England.....	\$1.25	.....	\$0.85	\$0.10	.....	.....	\$0.15	.....	.....
New York and Philadelphia.....	1.19	.....	0.50	0.12	.....	\$0.05	0.15	.....	.....
Peninsular.....	0.75	\$0.50	0.35	0.12	\$0.00	0.05	0.20	\$0.12	\$0.04
Norfolk.....	0.75	0.50	0.35	0.10	0.06	0.05	0.20	0.10	0.04
Baltimore.....	0.77	0.50	0.25	0.15	0.06	0.05	0.20	0.10	0.03
South Atlantic.....	0.85	0.65	0.35	0.12	0.06	0.05	0.20	0.12	0.04
Mississippi valley.....	0.75	0.50	0.25	0.12	0.07	.....	0.18	0.12	0.04
Southwest.....	1.01	0.50	0.25	0.10	0.07	.....	0.20	0.12	0.04
Central.....	1.10	0.62	0.50	.....	.....	.....	0.15	.....	.....
Northwest.....	1.15	.....	.....	.....	.....	.....	.....	.....	.....
Mountain.....	1.40	.....	.....	.....	.....	.....	.....	.....	.....
Pacific coast.....	1.35	.....	.....	.....	.....	.....	.....	.....	.....

The figures in the following table are based upon reports received from leading truck farmers in the various districts. Wages are somewhat higher in Florida than in other southern states, thus raising the average for the South Atlantic district considerably above that of the other districts employing negro labor.

COST OF LABOR PER ACRE ON LEADING VEGETABLES, BY DISTRICTS: 1889.

DISTRICTS.	Asparagus.	Beets.	String or snap beans.	Celery.	Cabbage.	Cucumbers.	Kale.	Watermelons.	Other melons.	Pease.	Irish potatoes.	Sweet potatoes.	Spinach.	Tomatoes.
New England.....	\$34.27	\$75.00	\$42.00	\$53.00	\$36.25	\$137.50	.....	\$24.00	\$37.50	\$29.37	\$16.00	.....	\$37.00	\$75.00
New York and Philadelphia.....	36.46	18.50	35.00	44.62	26.28	16.00	\$23.15	14.29	26.60	26.47	16.25	\$10.00	14.29	30.00
Peninsular.....	21.60	20.25	11.25	16.90	18.60	14.50	21.75	12.50	19.75	10.00	13.00	11.00	15.50	26.50
Norfolk.....	18.33	22.50	12.50	17.50	19.70	15.00	23.50	13.33	11.85	10.18	12.00	13.00	15.72	27.15
Baltimore.....	19.00	22.75	13.25	16.75	20.59	15.50	24.75	16.40	12.50	11.25	13.75	12.75	16.75	31.25
South Atlantic.....	21.25	12.50	8.07	.....	15.95	6.50	24.00	7.10	7.91	10.25	16.40	10.00	13.25	22.50
Mississippi valley.....	16.00	21.50	21.00	17.00	17.23	18.50	19.00	9.40	17.75	16.00	14.75	12.00	15.50	29.00
Southwest.....	13.91	22.00	20.00	51.66	13.82	30.00	20.00	9.59	8.25	15.06	12.50	15.00	6.32	36.60
Central.....	31.11	23.25	25.00	52.71	23.20	16.00	21.00	12.30	15.92	18.67	13.50	12.50	15.55	40.00
Northwest.....	32.00	.....	.....	80.00	15.55	.....	.....	.....	.....	18.00	.....	.....	.....	50.00
Mountain.....	35.00	.....	.....	35.00	24.00	.....	.....	13.70	17.10	19.90	16.75	.....	.....	.....
Pacific coast.....	33.00	.....	.....	37.00	19.50	.....	.....	12.60	14.90	16.45	14.10	13.00	.....	31.60

The increased cost of labor on beets in New England is accounted for by the fact that some of the planters first start the plants in greenhouses in early spring, then transplant them into 2½-inch pots, and finally into the open field as soon as the weather will permit, all of which greatly adds to the cost. The fact that cucumbers are largely grown under glass in this district adds greatly to their cost. The increased cost of labor for some other vegetables in the New England district is similarly accounted for.

SEEDS AND PLANTS.

For the ordinary farm crops the seeds and plants are very largely of home or local production, while on the truck farm so much more time and attention have to be given to the details of growing and marketing that little attention is given to seed growing. Consequently the seed trade finds among truck farmers its largest and best customers.

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The following table shows the cost of seeds and plants per acre for the various crops, the difference being caused largely by the lack of uniformity in prices and by difference in quantity of seed used. Few reports on this subject were received from truckers in some of the districts.

COST OF SEEDS AND PLANTS PER ACRE, BY DISTRICTS: 1889.

DISTRICTS.	Asparagus plants. (a)	Asparagus seed. (a)	String or snap beans.	Beet seed.	Cabbage plants.	Cabbage seed.	Celery plants	Celery seed.	Cucumber seed.
New England.....	\$19.00	\$1.00	\$2.50	\$2.00	\$15.00	\$1.03	\$15.00	\$0.90	\$0.50
New York and Philadelphia...	15.27	1.00	2.60	1.31	10.50	1.06	16.50	1.00	0.50
Peninsular.....	21.00	0.50	3.00	3.00	10.60	0.65	12.75	1.00	0.00
Norfolk.....	19.00	0.62	3.00	2.50	11.00	0.75	15.00	1.00	0.50
Baltimore.....	24.00	0.75	3.00	3.00	12.50	0.50	10.00	1.00	0.00
South Atlantic.....	16.40	1.00	3.32	3.75	5.75	1.00	.....	.....	0.00
Mississippi valley.....	16.00	1.00	4.00	2.50	7.45	1.25	12.50	0.85	1.00
Southwest.....	16.87	0.75	3.00	2.50	11.12	1.44	12.00	1.00	1.00
Central.....	15.53	0.75	3.00	2.50	9.83	0.81	9.85	0.89	0.00
Northwest.....	17.50	1.00	.....	.....	6.00	0.90	13.33	0.75	.....
Mountain.....	20.00	1.25	.....	.....	8.00	1.00	12.50	.....	.....
Pacific coast.....	14.00	0.85	.....	.....	6.00	0.75	12.00	0.85	.....

DISTRICTS.	Water-melon seed.	Other melon seed.	Kale seed.	Peano.	Irish potatoes.	Sweet potatoes.	Spinach seed.	Tomato plants.	Tomato seed.
New England.....	\$2.00	\$3.00	.....	\$6.00	\$6.50	.....	\$1.55	\$14.00	\$0.40
New York and Philadelphia...	1.20	1.43	\$2.50	7.75	10.33	\$7.50	1.73	10.00	0.75
Peninsular.....	0.75	1.10	3.00	5.40	8.50	5.00	1.34	9.00	0.65
Norfolk.....	0.75	1.00	2.60	6.50	8.00	6.00	1.50	10.00	0.50
Baltimore.....	0.75	1.00	2.50	6.00	9.00	5.75	1.40	12.00	0.50
South Atlantic.....	0.85	1.32	2.50	7.40	12.00	8.00	1.40	13.00	0.95
Mississippi valley.....	0.90	1.33	2.50	7.00	12.00	7.25	1.55	16.33	1.25
Southwest.....	0.86	1.26	2.50	7.77	13.00	5.83	1.75	15.00	1.05
Central.....	0.98	1.18	2.50	6.63	6.00	5.50	1.62	16.25	1.00
Northwest.....	.....	.....	.....	7.50	.....	.....	.....	16.00	1.00
Mountain.....	1.25	1.75	.....	8.00	7.00	.....	.....	.....	.....
Pacific coast.....	1.00	1.25	.....	7.50	6.00	5.00	.....	8.00	0.75

a Cost of seeds or plants for asparagus is not an annual expense, for when a field is once established it is permanent.

FERTILIZERS.

As the largest and finest vegetables can only be grown upon land in a very high state of cultivation, and maturity is also hastened by liberal feeding, the question of fertilization is one to which the truck farmer pays close attention, especially at the east and south, where the soil is not as fertile as at the west and on the Pacific coast. Market gardeners near cities and towns use nearly the entire supply of stable manure, and as stock feeding is not carried on to any considerable extent in connection with truck farming, commercial fertilizers are necessarily the main dependence of the truck farmer, especially at the south. In the intelligent use of these, farmers have been greatly aided by the agricultural experiment stations established in the various states. Special fertilizers are now compounded for feeding the various crops. Potatoes and other root crops are supplied with a fertilizer rich in potash and phosphorus and with only a moderate supply of nitrogen, while foliage crops, notably, cabbage, celery, and spinach, are given a fertilizer very rich in nitrogen and containing a smaller proportion of the other essential elements of plant food.

The principal raw materials used in the manufacture of special fertilizers are as follows:

* First. Containing nitrogen as the chief valuable ingredient: nitrate of soda, sulphate of ammonia, dried blood, cotton seed meal, castor pomace, dried fish, dried flesh.

Second. Containing phosphoric acid as the chief valuable ingredient: dissolved boneblack, phosphatic guano, acid phosphata (rock), dissolved raw bone, ground raw bone.

Third. Containing potash as the chief valuable ingredient: high grade sulphate of potash, muriate of potash, kainit (cotton hull ashes).

Fourth. Containing nitrogen and phosphoric acid: bone manure, tankage, dry ground fish scrap.

On many large truck farms there are mills and machinery for the home mixing of fertilizers, the raw materials being bought in car load lots, and any required mixture made to supply the demands of various soils and crops. More than 80 per cent of the commercial fertilizers used are purchased by truckers all mixed and ready for immediate use. An application of 1,500 pounds per acre on each of the 407,130 acres of truck farms of the east and south of a fertilizer costing on an average \$30 per ton absorbed \$9,160,425 of truck farm money in 1889.

In the New England and New York and Philadelphia districts very liberal manuring is practiced, while at the south but a comparatively small quantity of manure is used. In the central west, whatever food has to be furnished the soil and plants is mostly supplied by stable manure. The Mountain and Pacific Coast districts report using so little manure that it has not been possible to arrive at any average of cost; in fact, it can almost be said that for the present they require little or no manure on most of the lands to produce satisfactory crops, especially when there is an abundance of water for irrigation.

The cost per acre of fertilizers for the leading vegetables is given in the following table, the figures being based upon reports received from leading truck farmers in the various districts:

FERTILIZER COST PER ACRE FOR LEADING VEGETABLES, BY DISTRICTS: 1889.

DISTRICTS.	Asparagus.	Beets.	Snap or string beans.	Celery.	Cabbage.	Cucumbers.	Kale.	Water-melons.	Other melons.	Pears.	Irish potatoes.	Sweet potatoes.	Spinach.	Tomatoes.
New England.....	\$52.78	\$40.00	\$30.00	\$92.89	\$67.85	\$30.00	.....	\$21.00	\$23.00	\$40.00	\$50.00	.....	\$65.17	\$60.00
New York and Philadelphia.....	31.64	40.00	14.00	42.50	31.25	28.00	\$30.00	24.42	23.50	27.18	24.50	\$15.50	31.50	45.00
Peninsular.....	19.20	30.00	12.50	65.33	31.00	28.00	26.33	13.70	15.00	9.05	30.12	9.33	24.05	17.50
Norfolk.....	20.50	26.50	11.75	47.50	30.00	28.50	27.50	13.50	14.00	10.50	32.00	8.75	25.50	21.00
Baltimore.....	23.50	28.00	12.00	48.00	32.50	26.90	25.50	14.10	14.75	11.25	20.50	9.50	24.75	20.00
South Atlantic.....	25.00	10.00	7.25	.....	22.75	10.00	23.00	7.20	8.75	11.25	27.00	15.00	15.00	21.00
Mississippi valley.....	25.50	13.00	14.33	20.00	35.72	28.33	22.00	9.87	9.31	18.87	16.45	9.00	12.00	21.20
Southwest.....	27.06	12.00	8.00	20.00	22.94	16.00	20.00	10.12	4.88	10.00	19.00	10.00	13.00	25.00
Central.....	29.50	10.00	7.50	15.28	19.89	9.75	15.00	9.15	8.88	14.72	13.00	17.50	25.83	14.50
Northwest.....	20.00	.....	.....	89.00	28.00	.....	.....	.....	.....	10.00	.....	.....	18.00	17.00

While some truckers plant a great number of acres, but by lack of sufficient fertilization and thorough culture secure only moderate crops, which return very little, if any, profit, a large majority practice what is known as "intensive" farming, which results (except in bad seasons) in very heavy crop returns, the net proceeds of which, however, vary greatly with each season and the market. The larger markets being often oversupplied with certain vegetables, or on their arrival being found in bad condition, the consignment may sell for only enough to pay freight and cartage, and in some instances not even enough for that, while another variety of vegetables sent to the same market on the same days will return high prices, netting a fine profit.

VITICULTURE.

STATISTICS OF GRAPE GROWING AND WINE PRODUCTION IN THE UNITED STATES.

BY H. GARDNER.

Viticulture as an industry is comparatively in its infancy in this country. For more than 100 years efforts were made to grow the European varieties of grapes in the open air, always, however, resulting in failure, except in California. The result of turning attention to the improvement of native vines is the development of many choice and valuable varieties. These improved varieties of native grapes have been planted and cultivated in various parts of the country east of the Rocky mountains, while in California the foreign varieties have found a congenial home. Viticulture was introduced in California by the Franciscan fathers before it came into the possession of the United States.

In the state of New York, in what is known as the Lake Keuka district, a grower of grapes shipped his first crop, amounting to 50 pounds, to the New York city market about 1845, by way of the New York and Erie canal. The grapes were delivered in good condition, and the commission houses handling them wrote encouragingly to the shipper, advising further shipments. The next year the grower was able to ship some 200 or 300 pounds. It is estimated that during 1890 there have been shipped from this same district and carried by the different railroad and express companies to New York, Boston, Philadelphia, and other distributing markets about 20,000 tons or 40,000,000 pounds of grapes, and probably one-quarter as much in addition was sold to wine manufacturers.

The Hudson River district, in the same state, is estimated to have shipped to the New York and other markets during the same time between 13,000 and 15,000 tons or 28,000,000 pounds of grapes, while the Chautauqua district of New York, where the industry has been growing and prospering only through the past decade, furnished as its 1890 crop for the different markets of the country probably about 30,000,000 pounds of table grapes, making a grand total of 98,000,000 pounds as the estimated product of what is known as the New York State district. This does not include the large amount of grapes used in the district for wine, the figures and report upon which will be found elsewhere in this report.

The product of California for the season of 1889 was 14,626,000 gallons of wine and 1,372,195 boxes of raisins.

The area in which the industry may be found has been separated into 5 divisions, some of which are again subdivided into districts. These divisions are as follows:

First. The Eastern division, comprising about 51,000 acres in cultivation in the states of New York and Pennsylvania, includes the Keuka district, Canandaigua district, Ontario and Wayne district, Seneca district, Chautauqua County (N. Y.) and Erie County (Pa.) district, and the Hudson River district.

Second. The Middle division, with 42,633 acres in the states of Illinois, Indiana, and Ohio, the latter including the Islands district and the Euclid district.

Third. The Western division, with 17,306 acres in the states of Kansas and Missouri.

Fourth. The Southern division, with 17,092 acres in Georgia, North Carolina, Tennessee, and Virginia.

Fifth. The Pacific division, with 213,230 acres in California, including its several districts, and Arizona and New Mexico.

Outside of these 5 divisions all other states and territories show upward of 60,000 acres in cultivation.

For the purposes of this investigation, the products of viticulture have been classed under three distinct heads, namely, grapes for table use, grapes for raisins, and grapes for wine.

STATISTICS OF AGRICULTURE.

The following table shows the area and production of vineyards, value of plant, including land and labor employed, by states and territories:

AREA AND PRODUCTION OF VINEYARDS, VALUE OF PLANT, INCLUDING LAND AND LABOR EMPLOYED, BY STATES AND TERRITORIES.

STATES AND TERRITORIES.	Area in bearing vines. (Acres.)	Area in non-bearing vines. (Acres.)	Average yield of grapes per acre. (Tons.)	Market value of grapes per ton. (Dollars.)	Grapes sold for table use. (Tons.)	Grapes sold to wineries. (Tons.)	Wine made. (Gallons.)	Market value of wine per gallon. (Dollars.)	Raisins produced (20 pounds to box). (Boxes.)	Market value of raisins per box. (Dollars.)	Total value of plant, including land. (Dollars.)	Total laborers employed (all kinds). (Number.)
Total.....	307,575	93,686			267,271	304,868	24,306,905		1,372,195		155,661,150	200,780
Arizona.....	1,000	1,500	3.00	16.50	2,850	150	25,000	1.00			75,000	1,250
California.....	155,272	45,272	1.77	17.66	38,785	6235,526	14,626,000	0.19	1,372,195	1.00	86,640,350	120,422
Georgia.....	1,938	2,154	1.33	96.00	1,938	646	107,666	1.15			1,227,600	2,046
Illinois.....	3,750	990	2.00	54.00	6,000	1,500	250,000	1.00			1,422,000	2,370
Indiana.....	3,850	1,000	1.75	67.00	5,390	1,847	224,500	1.00			1,455,000	2,425
Kansas.....	4,542	1,000	2.00	58.00	8,294	790	130,990	0.80			1,662,600	2,771
Missouri.....	10,000	1,764	3.00	60.00	22,500	7,500	1,250,000	0.50			4,605,600	5,882
New Mexico.....	1,180	0,000	3.00	45.00	1,779	1,779	206,500	0.86			3,055,800	5,093
New York (c).....	43,350	7,650	1.75	70.00	60,687	15,172	2,528,250	0.50			20,400,000	25,500
North Carolina.....	4,000	1,200	1.75	60.00	4,687	2,333	388,833	1.00			1,560,000	2,000
Ohio.....	28,087	4,656	1.80	57.00	38,947	11,009	1,034,833	0.50			13,217,200	16,521
Tennessee.....	1,500	600	2.50	80.00	2,500	1,250	208,333	1.00			630,000	1,050
Virginia.....	4,100	1,000	2.00	60.00	5,434	2,768	461,000	1.00			1,710,000	2,850
Other states and territories.....	45,000	15,000	2.00	60.00	67,500	22,500	1,875,000	1.00			18,000,000	30,000

a It should be noted that while the average number of laborers employed in viticulture is shown to be 1 person to 2 acres, the average for those directly employed in growing the grapes is but 1 person to 3 acres, the others being engaged in the curing of raisins, manufacture of wine, transportation of products, etc.

b This includes for California 41,166 tons made into raisins and 23,252 tons used for dried grapes and purposes other than table fruit.

c Includes 1,000 acres in Erie county, Pa., known as part of the Chautauqua district of New York.

The following table shows the area and production of vineyards, capital invested, and labor employed in the United States, by divisions and districts:

AREA AND PRODUCTION OF VINEYARDS, VALUE OF PLANT, INCLUDING LAND AND LABOR EMPLOYED, BY DIVISIONS AND DISTRICTS.

DIVISIONS AND DISTRICTS.	Area in bearing vines. (Acres.)	Area in non-bearing vines. (Acres.)	Average yield of grapes per acre. (Tons.)	Market value of grapes per ton. (Dollars.)	Grapes sold for table use. (Tons.)	Grapes sold to wineries. (Tons.)	Wine made. (Gallons.)	Market value of wine per gallon. (Dollars.)	Raisins produced (20 pounds to box). (Boxes.)	Market value of raisins per box. (Dollars.)	Total value of plant, including land. (Dollars.)	Total laborers employed (all kinds). (Number.)
Total.....	307,575	93,686			267,271	304,868	24,306,905		1,372,195		155,661,150	200,780
Eastern division.....	43,350	7,650			60,687	15,172	2,528,250				20,400,000	25,500
New York and Pennsylvania:												
Conka district.....	12,325	2,175	1.75	70.00	17,254	4,313	718,833	0.50			5,800,000	7,250
Canandaigua district.....	2,720	480	1.75	70.00	3,810	954	159,000	0.50			1,280,000	1,600
Ontario and Wayne district.....	1,920	180	1.75	70.00	1,428	357	59,500	0.50			480,000	600
Seneca district.....	4,250	750	1.75	70.00	5,940	1,487	247,834	0.50			2,000,000	2,500
Chautauqua county (N. Y.) and Erie county (Pa.) district.....	9,180	1,620	1.75	70.00	12,852	3,213	535,000	0.50			4,320,000	5,400
Hudson River district.....	11,050	1,950	1.75	70.00	15,460	3,867	644,500	0.50			5,200,000	6,500
Other counties.....	2,805	495	1.75	70.00	3,925	981	168,583	0.50			1,320,000	1,650
Middle division.....	35,087	6,946			50,337	14,456	2,409,333				16,094,200	21,316
Illinois.....	3,750	990	2.00	54.00	6,000	1,500	250,000	1.00			1,422,000	2,370
Indiana.....	3,850	1,000	1.75	67.00	5,390	1,847	224,500	1.00			1,455,000	2,425
Ohio:												
Lake Erie islands.....	3,160	550	1.80	57.00	4,564	1,140	190,000	0.56			1,491,200	1,864
Erie county.....	1,275	225	1.80	57.00	1,836	469	70,500	0.56			600,000	750
Cuyahoga county.....	4,250	750	1.80	57.00	5,850	1,800	300,000	0.56			2,000,000	2,500
Other counties.....	13,398	3,422	1.80	57.00	26,697	8,210	1,368,333	0.56			9,126,000	11,407
Western division.....	14,542	2,764			30,794	8,290	1,380,990				6,268,200	8,653
Kansas.....	4,542	1,000	2.00	58.00	8,294	790	130,990	0.80			1,662,600	2,771
Missouri.....	10,000	1,764	3.00	60.00	22,500	7,500	1,250,000	0.50			4,605,600	5,882
Southern division.....	11,538	5,554			14,539	6,095	1,165,832				5,127,600	8,540
Georgia.....	1,938	2,154	1.33	96.00	1,938	646	107,666	1.15			1,227,600	2,046
North Carolina.....	4,000	1,200	1.75	60.00	4,687	2,333	388,833	1.00			1,560,000	2,000
Tennessee.....	1,500	600	2.50	80.00	2,500	1,250	208,333	1.00			630,000	1,050
Virginia.....	4,100	1,000	2.00	60.00	5,434	2,768	461,000	1.00			1,710,000	2,850

a This does not include for California 41,166 tons made into raisins and 23,252 tons used for dried grapes and purposes other than table fruit.

AREA AND PRODUCTION OF VINEYARDS, VALUE OF PLANT, INCLUDING LAND AND LABOR EMPLOYED, BY DIVISIONS AND DISTRICTS—Continued.

DIVISIONS AND DISTRICTS.	Area in bearing vines. (Acres.)	Area in non-bearing vines. (Acres.)	Average yield of grapes per acre. (Tons.)	Market value of grapes per ton. (Dollars.)	Grapes sold for table use. (Tons.)	Grapes sold to wineries. (Tons.)	Wine made. (Gallons.)	Market value of wine per gallon. (Dollars.)	Raisins produced (20 pounds to box). (Boxes.)	Market value of raisins per box. (Dollars.)	Total value of plant, including land. (Dollars.)	Total laborers employed (all kinds). (Number.)
Pacific division.....	157,458	55,772	.....	.....	43,414	173,037	14,047,500	.....	1,372,195	.....	80,771,150	106,765
Arizona.....	1,000	1,500	3.00	16.50	2,950	150	25,000	1.00	.....	.....	75,000	1,250
California:												
Alameda county.....	0,500	1,625	1.50	17.66	600	9,150	1,000,000	0.19	.....	.....	4,062,500	4,000
Amador county.....	1,000	250	1.50	17.66	100	1,400	80,000	0.19	.....	.....	500,000	610
Butte county.....	800	100	1.94	17.66	1,000	200	32,000	0.19	11,800	1.00	300,000	456
Calaveras county.....	1,440	300	1.51	17.66	400	1,700	115,200	0.19	800	1.00	720,000	900
Colusa county.....	500	120	2.13	17.66	1,000	42	40,500	0.19	.....	.....	221,200	300
Contra Costa county.....	4,000	1,000	1.50	17.66	700	5,300	320,000	0.19	.....	.....	2,000,000	2,500
Eldorado county.....	1,600	400	1.50	17.66	600	1,800	128,000	0.19	.....	.....	700,000	1,000
Fresno county.....	10,000	3,750	1.75	17.66	300	9,000	1,200,000	0.19	626,505	1.00	7,000,000	9,000
Inyo county.....	95	24	1.44	17.66	30	107	7,000	0.19	.....	.....	41,850	60
Keen county.....	750	187	1.50	17.66	150	975	60,000	0.19	.....	.....	237,950	470
Lake county.....	1,185	216	1.50	17.66	900	877	78,800	0.19	.....	.....	500,850	700
Los Angeles county.....	18,120	4,530	1.51	17.66	1,000	25,820	1,342,800	0.19	20,000	1.00	11,325,000	11,500
Marin county.....	520	130	1.50	17.66	100	680	41,000	0.19	.....	.....	227,500	300
Mariposa county.....	500	125	1.50	17.66	100	650	40,000	0.19	.....	.....	218,750	300
Mendocino county.....	208	27	1.50	17.66	.....	312	8,700	0.19	.....	.....	82,250	150
Merced county.....	2,014	128	2.38	17.66	400	2,021	41,200	0.19	58,400	1.00	850,800	1,100
Monterey county.....	500	50	2.00	17.66	1,000	.....	10,000	0.19	.....	.....	101,500	300
Napa county.....	16,611	4,152	1.50	17.66	530	24,386	3,000,000	0.19	.....	.....	10,381,500	10,300
Nevada county.....	235	59	1.50	17.66	40	312	18,800	0.19	.....	.....	102,900	150
Placer county.....	2,021	555	1.72	17.66	3,020	311	177,700	0.19	19,400	1.00	1,270,000	1,000
Sacramento county.....	6,465	1,010	1.54	17.66	3,050	6,647	872,850	0.19	9,000	1.00	3,232,400	4,050
San Benito county.....	110	27	1.50	17.66	35	130	8,800	0.19	.....	.....	47,950	70
San Bernardino county.....	0,562	4,125	1.98	17.66	1,700	6,000	279,000	0.19	375,000	1.00	4,790,450	6,850
San Diego county.....	6,000	7,500	1.50	17.66	1,220	3,280	30,000	0.19	150,000	1.00	4,725,000	6,750
San Joaquin county.....	2,000	500	1.75	17.66	1,810	1,100	160,000	0.19	17,200	1.00	1,000,000	1,250
San Luis Obispo county.....	652	138	1.50	17.66	1,000	38	5,000	0.19	.....	.....	270,500	400
San Mateo county.....	750	187	1.63	17.66	160	1,065	60,000	0.19	.....	.....	927,950	470
Santa Barbara county.....	1,125	281	1.82	17.66	2,000	50	7,500	0.19	.....	.....	492,100	700
Santa Clara county.....	10,000	2,500	1.50	17.66	1,500	13,500	2,200,000	0.19	.....	.....	6,250,000	6,250
Santa Cruz county.....	1,500	375	1.50	17.66	640	1,610	284,000	0.19	.....	.....	650,250	950
Shasta county.....	500	125	1.84	17.66	200	550	25,000	0.19	5,800	1.00	218,750	300
Sierra county.....	250	62	1.50	17.66	.....	375	12,500	0.19	.....	.....	105,000	150
Siskiyou county.....	4	1	.....	17.66	.....	.....	200	0.19	.....	.....	800	2
Solano county.....	3,500	875	1.50	17.66	700	4,550	280,000	0.19	.....	.....	1,750,000	2,200
Sonoma county.....	21,688	5,421	1.50	17.66	2,150	30,374	1,750,300	0.19	.....	.....	13,552,000	13,550
Stanislaus county.....	408	124	1.50	17.66	.....	747	30,000	0.19	.....	.....	217,700	300
Sutter county.....	430	207	2.00	17.66	190	455	35,400	0.19	20,200	1.00	222,950	350
Tehama county.....	4,072	1,243	1.50	17.66	850	6,008	397,800	0.19	.....	.....	2,430,000	3,100
Trinity county.....	220	5	1.82	17.66	400	2	250	0.19	.....	.....	78,750	110
Tulare county.....	4,500	875	2.00	17.66	6,700	2,000	15,000	0.19	10,000	1.00	1,881,250	2,700
Tuolumne county.....	800	222	1.50	17.66	.....	1,335	71,200	0.19	.....	.....	288,200	550
Ventura county.....	800	200	1.50	17.66	160	1,040	8,000	0.19	.....	.....	350,000	500
Yolo county.....	3,401	798	1.91	17.66	1,000	3,030	255,200	0.19	48,000	1.00	1,720,000	2,150
Yuba county.....	165	41	1.50	17.66	.....	247	13,200	0.19	.....	.....	70,000	100
New Mexico.....	1,138	9,000	3.00	45.00	1,779	1,779	200,500	0.86	.....	.....	3,055,800	5,093
Other states and territories.....	45,000	15,000	2.00	60.00	67,500	22,500	1,875,000	1.00	.....	.....	18,000,000	80,000

^a This does not include for California 41,106 tons made into raisins and 23,252 tons used for dried grapes and purposes other than table fruit.

EASTERN DIVISION.

Viticulture in the Eastern division is mainly confined to a few counties in New Jersey; the Hudson River district of New York, comprising about 13,000 acres, situated in the counties of Orange, Ulster, Rockland, Putnam, and Westchester; the Keuka district, of 14,500 acres, on Lake Keuka, including Yates and Steuben counties; Canandaigua district, of 3,200 acres, comprising parts of Ontario and Yates counties bordering on Canandaigua lake; the Ontario and Wayne district, of 1,200 acres, including portions of counties of the same names; the Seneca district, with 5,000 acres, found in portions of Seneca and Schuyler counties; the Chautauqua district, of 10,800 acres, near the shores of Lake Erie, in Chautauqua county, N. Y., and Erie county, Pa., in addition to which Niagara and other counties of New York have vineyards aggregating 3,300 acres.

Four-fifths of the grapes grown in the Eastern division are used for table purposes, the crop of 1890 amounting in round numbers to 98,000,000 pounds or 49,000 tons, and requiring nearly 5,000 cars for its transportation to market. The varieties most largely grown and generally in favor are the Concord, Catawba, and Delaware, while other market varieties are Moore's Early, Niagara, Diana, Worden, Isabella, Wyoming, and Brighton.

This division supplies the eastern markets with table grapes from early in September until the following March or April. The favorite packages are 5 and 10 pound baskets, those put up in the most attractive manner returning the best prices. Sales are mainly made through commission merchants, although some localities have of late organized "exchanges", through which they make their own shipments and sell in a more direct manner, effecting a saving in the expense of handling and transportation. In this division, as well as in all others east of

the Rocky mountains, the fungoid diseases have of late years worked great injury, and the year 1889 was a particularly disastrous one. Not only did these diseases retard the work and discourage many of the growers, but frost destroyed the buds generally in the month of May. It was also an unusually rainy season, developing mildew and the black, brown, and gray rot, and causing a loss of at least 50 per cent.

There are in the Eastern division, in the Keuka district in New York, 8 wine cellars, each with a capacity of from 20,000 to 300,000 gallons. Two of these carry a stock of 300,000 bottles of champagne each. There are other wine cellars in this locality making champagne in a smaller way by fermentation in the bottle.

MIDDLE DIVISION.

This division comprises the states of Illinois, Indiana, and Ohio.

In Ohio the industry is mainly found on the islands in Lake Erie and in the tier of counties bordering on the lake. To some extent, however, it exists in almost every portion of the state. The islands and the lake counties were visited in the month of September. There are in this district, in all, 10,228 acres. The islands furnish to the markets about one-half of their product for table grapes, the remainder being sent to the wine cellars. Erie county furnishes four-fifths of its product for table grapes and one-fifth for wine. In Cuyahoga county, embracing what is known as the Euclid district, nearly all the product is shipped to various western markets, and while this investigation was being made (about October 1, 1890) at Euclid, Cuyahoga county, the special agent saw 9 car loads of grapes started on their way to Denver, Colo., in one shipment. There were shipped from Euclid, in all, the same season 600 tons or 1,200,000 pounds; from Dover, Cuyahoga county, 900 tons of table grapes or 1,800,000 pounds; from Nottingham, 106 tons or 212,000 pounds. There were also shipped from Vermilion, Erie county, 95 tons, mostly for wine, and from Ceylon station, Erie county, 55 tons for wine and about 25 tons of table grapes, while the Lake Erie islands furnished 4,564 tons for table grapes, and the balance of their product (1,140 tons) for wine. There are a number of large cellars on the islands and peninsula, at Kelleys island, Middle Bass, Marblehead, Toledo, and Sandusky. A small amount of champagne is made in this locality.

In the states of Illinois and Indiana, with 4,740 and 4,850 acres, respectively, and in counties of Ohio not before mentioned, with 22,815 acres, viticulture has hardly held its own during the last decade. Fungoid diseases have found the vines an easy prey in these states, and the vineyards in many localities have been practically abandoned. There are some vineyards in the Mississippi valley and in favored localities where both wine and table grapes are grown for local markets, as growers become familiar with the use of spraying apparatus and fungicides.

WESTERN DIVISION.

This division, consisting of Missouri and Kansas, has made but little progress during the past 10 years.

The vineyards in Missouri, except in a few localities, have been devastated or ruined. For the purposes of this investigation Hermann, in Gasconade county, Mo., was visited, but no devastation was seen in the vineyards. One of the largest and best vineyards in the state is located here, and contains 80 acres. A well known and reliable authority reports to this office that the ravages of the black rot did not become ruinous until 1875, when the disease developed over a large portion of the southern half of the state and resulted in great damage. Since that year black rot has been of annual recurrence, marked by more or less disastrous consequences. In some years the loss would be no less than half the crop, or even more, while in other seasons it would be but a small percentage, confined chiefly to varieties most subject to the disease. The same authority further says: "The growth of viticulture in many sections of our state has received a check. A large number of the vineyards have been abandoned. The planting of new vineyards has been reduced in some localities. Spraying the vines, as recommended by the Department of Agriculture, with the bordeaux mixture and eau celeste has been experimented with by many growers, and when applied early, thoroughly, and often enough, has given encouraging results."

In Kansas, in this division, there have been small plantings of vines in various parts of the state, aggregating some 5,542 acres of young and old vines, raising some table grapes and making some wine for its home market.

SOUTHERN DIVISION.

This division includes the states of Georgia, North Carolina, Tennessee, and Virginia, of which Georgia has 1,938 acres of bearing vines and 2,154 acres of new vineyards; North Carolina, 4,000 acres of bearing vines and 1,200 acres of new vineyards; Tennessee, 1,500 acres of bearing vines and 600 acres of new vineyards, and Virginia, 4,100 acres of bearing vines and 1,600 acres of new vineyards.

Georgia, in 1889, produced 107,666 gallons of wine and 3,876,000 pounds of table grapes. The latter ripen early, reaching the northern markets a month earlier than those grown in Ohio or New York, and consequently bring much higher prices than the northern and western grapes. A variety that is meeting with much success in the southern states is the Niagara, a white grape, very hardy, and ripening early. The reports show that 2,154 acres were planted within the last 2 years.

North Carolina's 4,000 acres of bearing vines in 1889 produced 388,833 gallons of wine and 9,334,000 pounds of table grapes.

Tennessee, with 1,500 acres, produced 208,333 gallons of wine and furnished 5,000,000 pounds of table grapes.

Virginia had 4,100 acres of bearing vines, which produced 461,000 gallons of wine and 10,868,000 pounds of table grapes. Virginia during the past decade has held her own, although growers have had to fight the various enemies, such as mildew and black rot.

There are in this division 11,538 acres of bearing vines and 5,554 acres of new vineyards, which produced 1,165,832 gallons of wine and 29,078,000 pounds of table grapes in 1889.

This investigation has shown an extension of vineyards during the past 2 or 3 years in the state of Florida. The Elvira and Niagara have been planted somewhat extensively, and part of the Niagara product reaches the northern markets as early as the latter part of July or the first of August, bringing higher prices in consequence, selling from 25 to 30 cents per pound. The varieties mentioned are white grapes, very hardy.

PACIFIC DIVISION.

This division embraces Arizona, New Mexico, and California.

Viticulture in Arizona and New Mexico is comparatively new. Not only do the native varieties of grapes grow in these territories, but the European, or vinifera, also flourish here. The Muscat varieties, grown so successfully in California for raisins, grow equally well in these territories; also varieties that produce a fine sherry wine. A prominent vine grower and wine maker of southern California, after experimenting in Arizona, reports that the sheries produced there have the true sherry flavor and are made by the natural process, that is, without it being necessary to "bake" them. So far, the fine sheries produced in this country have come from that territory. There were in 1889 in Arizona 1,000 acres of bearing vines and 1,500 acres of new vineyards. The product was 2,850 tons or 5,700,000 pounds of table grapes, of which 150 tons or 300,000 pounds were sold to wineries.

In New Mexico in 1889 there were 1,186 acres of bearing vines and 9,000 acres of new vineyards, which produced 296,500 gallons of wine and 1,779 tons or 3,558,000 pounds of table grapes. The information received from New Mexico shows a great advance in viticulture since irrigation has proven practicable. La Mesilla valley has about 10,000 acres of vines of new plantings. The Mission variety is grown almost exclusively in this locality, although the Muscat of Alexandria and the Muscatel are grown by some. The varieties that grow successfully in New Mexico for raisins are the Muscat of Alexandria, Muscatel de Gordo Blanco, and Sultana, and for wine the Zinfandel, Mataro, Cabernet, Sauvignon, Cabernet Franc, Mission, Petite Pino, and Chasselas Fontainebleau.

There are 53 counties in California, nearly all producing grapes in a greater or less degree, the larger proportion of them producing wine for home consumption or export. There is an established demand for this wine to the amount of 1,000,000 gallons per month from this country alone, making 12,000,000 gallons annually, and an exportation to foreign countries of 311,920 gallons in 1889, valued at \$217,093.

California may be divided into 3 grape growing districts: the coast, which includes Sonoma, Lake, Napa, Alameda, Santa Clara, and Santa Cruz counties; the Sierra Nevada Foothill and Sacramento Valley district, which includes Placer, Eldorado, Calaveras, Tuolumne, Yuba, Yolo, Butte, Sacramento, and Tehama counties, and the southern district, which includes San Joaquin, Merced, Fresno, Tulare, Kern, Ventura, Santa Barbara, San Bernardino, Los Angeles, and San Diego counties.

In the first district the finer grades of white and red dry wines are made. The choice varieties of the French and German types seem to come nearer to reproducing themselves here than elsewhere. In this district are successfully grown the finest varieties of French champagne grapes, which yield a handsome profit to the producers. There is one cellar in this district with a capacity of 800,000 bottles, producing champagne by natural fermentation in the bottle. While wine is the leading viticultural product, fine table grapes are also produced in this district.

Some good, wholesome dry wines are produced in the second district, but they are of a different character from the German and French types. Grapes for table use and raisins are extensively grown, a large portion of the new plantings being for raisins.

In the Sacramento and San Joaquin valleys, and in the southern district, some excellent dry wines are produced, but these valleys excel in their port, muscatel, angelica, and other heavy sweet wines.

For the purposes of this report it is only necessary to treat of the principal counties in each district where the heaviest viticultural products are found.

In Napa county, in the first district, there are 20,763 acres. Phylloxera has destroyed many acres of vines in this county, but the acreage has been kept up to about the same point by replanting on resistant stock and the planting of new vineyards farther up on the foothills, where a choice variety of grapes is grown and phylloxera is not such a scourge. There are 142 wine cellars in Napa, many of them of modern construction, containing all the appliances for the manufacture and handling of wines. There were 3,000,000 gallons of wine made in this county in 1889.

Sonoma county, in this district, in 1889 had 21,683 acres of bearing vineyards. The same conditions exist here relative to the quality of grapes and wines produced as in Napa. The ravages of phylloxera were felt in Sonoma at an earlier day than in Napa, appearing about 1874, and a great many vineyards were destroyed. It is

now generally believed that the destruction caused by the phylloxera can be stayed by growing the native resistant stock and grafting upon that the foreign vinifera.

In Sonoma county in 1889 there were produced about 1,756,300 gallons of wine and 250,000 gallons of brandy. The quality of the dry white wines was marked.

Santa Clara county, in this district, contains some 12,500 acres of bearing vineyards. This and Santa Cruz county in 1889 produced 2,544,000 gallons of wine. As yet the phylloxera has troubled the vineyards but little in comparison with the counties before mentioned. There is said to be a deep gravelly bed underlying this whole surface, in which the growers say the phylloxera does not work with success.

Alameda county, in the first district, has 6,500 acres of bearing vines, and produces a type of wine resembling the white and red wines of France, and in this part of the district, known as the "Livermore district", a high grade of saunterne and claret is produced. The geological formation of the valleys and slopes of the Mount Diablo range more nearly reproduce the soil conditions that characterize the department of the Gironde, in France, than any other section on the coast. In this district there were produced in 1889 some 60,000 gallons of wine. This is comparatively a new wine district, and has grown up within the last decade. The first systematic planting of high grade grapes began in 1832.

There is in the second district a great viticultural interest, embracing table grapes, raisins, sweet and dry wines, and brandies, excelling in the latter. Sacramento, Placer, Eldorado, Tehama, Yuba, Butte, and Yolo counties produce large quantities of table grapes, and quite a quantity of raisins is shipped from some of these counties. Tehama has a large vineyard of 3,800 acres. There were in the distillery on this vineyard in April, 1890, 300,000 gallons of brandy and 1,000,000 gallons of wine. Another large vineyard contains 1,500 acres, and is situated at Folsom, Sacramento county. The winery belonging to the vineyard has a capacity of 600,000 gallons. Many table grapes are shipped from this vineyard to the eastern markets. The sales in this direction have largely increased during the past two seasons.

The third district is composed of San Joaquin, Merced, Fresno, Tulare, Kern, Ventura, Santa Barbara, Los Angeles, San Bernardino, Orange, and San Diego counties. Near Stockton, in San Joaquin county, is located one of the largest vineyards and wineries. Fine brandies are made in this district; also sherries, ports, and some excellent clarets. Fresno county contains at this time some 25,000 acres of bearing vines and 15,000 acres of new plantings, the larger portion of which is grown for raisins. There are, however, a great many gallons of wine and brandy made in this county. The wines are mostly sweet, and of excellent quality. The raisin pack in 1889 was 626,595 boxes; the wine produced, 1,200,000 gallons. More than half the raisin grapes grown in California are produced in Fresno county.

San Bernardino county, in this district, is also principally devoted to the growing of raisin grapes. There are 9,562 acres of bearing and 4,125 acres of nonbearing vines, and the raisin pack for 1889 amounted to 375,000 boxes. Two wineries in San Bernardino county produced 279,000 gallons of wine in 1889. There were shipped from this district 1,700 tons of table grapes.

Los Angeles county has 18,120 acres of bearing vines. A new and mysterious disease attacked the vines of the southern portion of this district about 1885, and ruined more than one-half of the acreage. The most expert scientists have been consulted by the State Board of Viticulture in California, and the Department of Agriculture appointed an expert to investigate and report upon the matter. There were produced in 1889 in Los Angeles county 25,820 tons or 51,640,000 pounds of grapes for wine and 1,000 tons or 2,000,000 pounds of grapes for table purposes. The wines in this county are justly celebrated, and were the first shipped from California to the eastern markets. This county excels in its sherries, ports, and brandies. There were 20,000 boxes of raisins packed in 1889, the new disease having reduced the product about one-half. The product of Orange, a county lately formed from portions of Los Angeles county, is included in the above figures.

In San Diego county there is an acreage of 6,000 bearing and 7,500 nonbearing vines. Of the latter, 6,000 were just coming into bearing in 1889, and did not add much to the product. While this shows a fair increase in the growth of the industry during the last 4 years, the increase is accounted for by the fact that the disease that was so injurious in Los Angeles did not affect San Diego county. It is in the El Cajon valley of San Diego county that the most progress has been made in viticulture. There are 27,000 acres adapted to fruit growing, and 3,000 acres of bearing raisin vineyards in El Cajon. The raisins from this valley are among the finest produced in California. The product of the El Cajon valley in 1889 was 75,000 boxes and in the balance of San Diego county the pack was 75,000 boxes, in all, 150,000 boxes. Another successful branch of viticulture in this district is the shipment of table grapes to the eastern markets. Many of the elevated localities are so free from frost that grapes can be left on the vines until January.

The census investigation of viticulture indicates that outside of the regular districts already mentioned there are probably 45,000 acres of bearing and 15,000 acres of nonbearing vines, an aggregate of small vineyards from one-fourth of an acre upward, grown to supply a home demand for fruit and a like demand for wine. This class of vineyards is to be found in every state and territory of the Union, producing, in 1889, 67,500 tons of table grapes and 22,500 tons of wine grapes, or 1,875,000 gallons of wine. These small plantings are more or less experimental.