

CENSUS BULLETIN.

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AGRICULTURE.

NEW MEXICO.

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Director of the Census.

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

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

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

The farms of New Mexico, June 1, 1900, numbered 12,311 and had a value of \$20,888,814, of which amount \$3,585,105, or 17.1 per cent, represents the value of the buildings, and \$17,323,709, or 82.9 per cent, the value of the land and improvements other than buildings. On the same date the value of farm implements and machinery was \$1,151,610, and of live stock, \$31,727,400. These values, added to that of farms, give \$53,787,824, the "total value of farm property." The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products." The total value

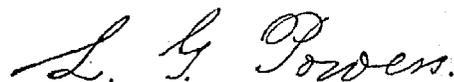
of all such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was \$10,155,215, of which amount \$7,090,648, or 69.8 per cent, represents the value of animal products, and \$3,064,567, or 30.2 per cent, the value of crops, including forest products cut or produced on farms. The "total value of farm products" for 1899 is approximately six times as great as the value reported for 1889.

The "gross farm income" is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. The reported value of products fed in 1899 was \$1,037,450, leaving \$9,117,765 as the gross farm income for that year. The ratio which this latter amount bears to the "total value of farm property" is referred to as the "percentage of gross income upon investment." For New Mexico in 1899 it was 17.0 per cent.

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

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States, which will be published about June 1, 1902. The present publication is designed to present a summarized advance statement for New Mexico.

Very respectfully,



Chief Statistician for Agriculture.



AGRICULTURE IN NEW MEXICO.

GENERAL STATISTICS.

The total land area of New Mexico is 122,460 square miles, or 78,374,400 acres, of which 5,130,878 acres, or 6.5 per cent, are included in farms.

New Mexico forms a part of the great table-land which is the foundation of the Rocky and Sierra Madre mountain ranges. The territory slopes gently southward, spreading into a broad, level, treeless plain, apparently barren, but very productive when irrigated. The principal river is the Rio Grande, which traverses the center of the territory and receives many tributaries. The western part is drained by the affluents of the Colorado River.

The land produces a variety of native grasses, the most common and valuable being the "mesquite." This grows during the rainy season in July and August, ripens in the fall, dries on its stalk, and furnishes a luxuriant and nutritious forage. This cheap food supply and the mildness of the winters render stock raising especially profitable.

NUMBER AND SIZE OF FARMS.

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

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

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900.....	12,811	5,130,878	826,878	4,804,005	416.8	6.4
1890.....	4,458	787,882	268,106	524,776	176.7	38.4
1880.....	5,053	681,181	287,392	893,739	124.9	37.6
1870.....	4,480	833,549	143,007	690,542	186.1	17.2
1860.....	5,086	1,414,909	149,274	1,265,635	278.2	10.6
1850.....	3,760	290,571	166,201	124,370	77.5	67.2

The number of farms June 1, 1900, was more than three times as great as that reported in 1850. The figures in the table show a very irregular increase, and it is probable that the gain of 7,853, or 176.2 per cent, between 1890 and 1900, exaggerates the actual growth in that decade, owing to the fact that in 1890 many small farms and ranges operated by Mexicans were not enumerated. The statement that the Eleventh Census was defective in this respect is confirmed by reference to the Farms and Homes volume of that census, which shows that in 1890 there were 9,518 farm families in New Mexico, or 5,060 more than the number of farms given in the report on agriculture for the same year.

The total acreage of farm land has fluctuated greatly from decade to decade, and is now about eighteen times as great as in 1850, and more than six times as great as in 1890. The variations in the area of improved land have

been less marked, the increase since 1890 being 68,767 acres, or 24.2 per cent. As this increase is much less than that in the total farm area, the per cent of farm land improved shows a decided decrease since 1890. This circumstance together with the increase in the average size of farms bears out the statement that the raising of live stock is rapidly increasing in importance, and that, as a consequence, large additions are being made to the area used for grazing purposes. At the same time the great reduction in the percentage of "improved land" may be, in some degree, due to a stricter interpretation of that term by the Twelfth Census.

FARM PROPERTY AND PRODUCTS.

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

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

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. ¹
1900.....	\$53,787,824	\$20,888,814	\$1,151,610	\$81,727,400	\$10,155,215
1890.....	15,679,120	8,140,800	291,140	27,247,180	1,784,820
1880.....	10,780,861	5,514,899	255,162	25,010,800	1,897,974
1870 ²	4,770,410	2,260,139	121,114	2,389,157	4,905,060
1860.....	7,400,049	2,707,986	192,917	4,499,746	-----
1850.....	3,226,511	1,558,922	77,960	1,494,629	-----

¹ For the year preceding that designated.

² Exclusive of the value of animals on ranges.

³ Values for 1870 were reported in depreciated currency. To reduce to specie basis of other figures they must be diminished one-fifth.

⁴ Includes betterments and additions to live stock.

The value of farm property in 1900 was nearly seventeen times as great as in 1850, and over three times as great as in 1890. With the exception of the decade from 1860 to 1870, the increases in the values of the different forms of farm property have been continuous. The remarkable increases in the last decade are due, in part, to a more detailed enumeration in 1900 than in 1890.

In 1880 and in 1890 domestic animals on ranges were not enumerated, hence the values shown in the table are deficient for both these years. The value of animals on ranges in 1890 has been estimated at \$16,798,666, which would make the value of all live stock on farms and ranges \$24,045,846. Assuming this value to be comparable with that reported in 1900, there has been an increase in the last decade of over 30 per cent.

COUNTY STATISTICS.

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

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

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With-buildings.	Total.	Improved.	Land and improvements (except build-ings).	Buildings.	Imple-ments and machinery.	Live stock.		Labor.	Fertili-zers.
The Territory-----	12,311	10,144	5,130,878	326,378	\$17,323,709	\$3,565,105	\$1,151,610	\$31,727,400	\$9,117,765	\$1,951,110	\$2,880
Bernalillo-----	840	755	103,554	18,737	931,680	257,470	84,280	1,375,816	567,004	164,490	-----
Chaves-----	345	284	135,696	19,068	1,700,357	220,810	66,310	3,584,514	931,456	131,290	-----
Colfax-----	410	383	1,203,949	37,898	2,191,821	229,349	62,370	1,680,171	492,921	97,480	-----
Donna Ana-----	571	477	44,720	21,870	774,105	211,507	54,530	522,639	293,422	80,260	-----
Eddy-----	168	128	289,339	8,676	710,260	77,990	25,880	2,370,277	421,385	70,780	350
Grant-----	472	425	95,645	14,903	1,207,175	207,610	88,680	3,547,701	1,019,637	184,480	-----
Guadalupe-----	277	248	64,184	3,711	208,980	94,400	43,450	1,896,213	372,824	133,610	-----
Lincoln-----	345	319	59,792	7,100	400,810	90,440	22,690	885,438	296,162	29,440	-----
Mora-----	933	847	262,219	35,163	1,168,125	253,585	90,390	1,068,767	520,563	97,520	-----
Otero-----	180	171	27,289	3,639	228,650	57,220	15,960	246,544	98,980	10,380	-----
Rio Arriba-----	860	811	74,223	13,152	584,240	154,850	70,760	1,756,431	500,034	159,830	-----
San Juan-----	492	472	43,486	16,157	668,310	167,470	63,540	382,341	331,460	35,030	-----
San Miguel-----	1,207	1,191	1,004,467	23,531	1,746,393	252,017	89,610	2,212,611	529,646	136,130	-----
Santa Fe-----	918	875	658,930	13,610	1,679,024	498,183	56,250	548,557	320,348	66,490	2,530
Sierra-----	160	150	462,151	8,036	612,430	59,220	24,040	1,132,892	153,417	47,320	-----
Socorro-----	991	905	166,795	17,723	701,305	226,330	76,710	2,597,326	534,774	163,700	-----
Taos-----	629	609	47,136	13,639	259,214	106,894	45,960	477,081	352,079	35,320	-----
Union-----	419	374	254,161	9,652	675,330	214,680	52,190	3,721,412	850,640	182,620	-----
Valencia-----	618	523	65,929	11,073	524,690	171,950	60,770	1,415,683	391,638	124,650	-----
Jicarilla Apache ¹ -----	42	-----	6,003	1,695	69,080	-----	6,950	11,802	616	-----	-----
Pueblo ¹ -----	1,077	197	51,838	17,373	246,250	13,130	47,290	194,597	91,084	-----	-----
Zuni ¹ -----	267	-----	4,367	4,367	43,530	-----	-----	98,037	52,675	290	-----

¹Indian reservation.

The average size of farms, outside of the Indian reservations, ranges from 74.9 acres in Taos county to 2,936.5 acres in Colfax county; the average value of farms, from \$582.05 in Taos county to \$5,905.29 in Colfax county; the average value of live stock per farm, from \$597.56 in Santa Fe county to \$14,108.79 in Eddy county; and the average value of the farm products of 1899 not fed to live stock, from \$348.96 in Santa Fe county to \$2,699.87 in Chaves county.

Increases in the number, acreage, and value of farms have taken place in all counties except Valencia and Taos and certain others which have undergone territorial reductions in the decade, but all counties, regardless of such changes, show great increases in the total value of live stock and farm products.

FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. In Table 5 the tenure of farms for 1900 is given by race of farmer. The farms classified in Table 4 as "farms operated by owners" are subdivided in Table 5 into four groups, designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These terms denote, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of

the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

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

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

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. ¹	Cash tenants.	Share tenants.	Owners. ¹	Cash tenants.	Share tenants.
1900-----	12,311	11,157	271	883	90.6	2.2	7.2
1890-----	4,458	4,257	33	168	95.5	0.7	3.8
1880-----	5,053	4,645	22	386	91.9	0.4	7.7

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

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

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.							
RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The Territory—	12,311	10,105	498	71	483	271	883
White—	10,893	8,712	497	57	483	268	876
Colored—	1,418	1,393	1	14		3	7
Chinese—	3	1				1	1
Indian—	1,401	1,382	1	14		1	8
Negro—	14	10				1	3

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.							
The Territory—	100.0	82.1	4.0	0.6	3.9	2.2	7.2
White—	100.0	80.0	4.6	0.5	4.4	2.5	8.0
Colored—	100.0	98.2	0.1	1.0		0.2	0.5

The number of farms operated by owners was 388 less in 1890 than in 1880. In the last decade, however, there was an increase of 6,900, making the number on June 1, 1900, more than double the number reported twenty years before. This apparently large increase, however, is due principally to a much more complete enumeration in 1900 than in 1890 of certain classes of small farms mentioned in the discussion of Table 1. Cash tenants increased in number in both decades. The number of share tenants decreased between 1880 and 1890, but increased rapidly in the last ten years.

Of the farms of the territory, 88.5 per cent are operated by white farmers and 11.5 per cent by colored farmers. Of the farms of white farmers, 85.1 per cent are operated by owners or part owners; for farms of colored farmers, practically all of whom are Indians, the corresponding per cent is 99.3.

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

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

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

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

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The Territory—	12,311	416.8	5,180,878	100.0	\$53,767,824	100.0
White farmers—	10,893	463.6	5,049,808	98.4	52,935,618	98.5
Colored farmers ¹ —	1,418	57.2	81,070	1.6	832,211	1.5
Owners—	10,105	168.0	1,647,303	32.1	26,492,859	49.3
Part owners—	498	1,531.7	762,766	14.9	5,184,857	9.6
Owners and tenants—	71	159.6	11,834	0.2	143,988	0.3
Managers—	483	4,725.9	2,282,612	44.5	19,496,343	36.3
Cash tenants—	271	1,233.1	354,178	6.8	1,037,641	1.9
Share tenants—	883	105.0	92,685	1.8	1,407,186	2.6

¹ Comprising 3 Chinese, 1,401 Indians, and 14 negroes.

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

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implementations and machinery.	Live stock.		
The Territory—	\$1,407	\$290	\$93	\$2,577	\$741	17.0
White farmers—	1,556	326	100	2,878	826	17.0
Colored farmers ¹ —	266	12	40	209	87	14.8
Owners—	824	239	83	1,476	496	18.0
Part owners—	3,855	651	198	5,707	1,660	15.0
Owners and tenants—	920	375	103	700	423	20.4
Managers—	11,651	1,114	392	27,268	7,327	18.2
Cash tenants—	2,160	602	96	1,071	424	11.1
Share tenants—	910	143	56	485	231	14.5

¹ Comprising 3 Chinese, 1,401 Indians, and 14 negroes.

The average values and the per cent of gross income are very much lower for colored than for white farmers. Of the groups by tenure, farms operated by managers, part owners, and cash tenants have by far the greatest average acreage and the highest average values of property and products. This is due to the fact that most of the live-stock farms using large areas of public range and leased land are included in these groups. When such farms are leased, a cash rental is generally preferred by both landlord and tenant. The average size and values of farms operated by owners are materially reduced by the many small farms found in this group.

The total value of the farm property of the 14 negro farmers was \$30,340, and of their products, \$3,450. They operated an area of 18,418 acres. The 3 Chinese used an area of 20 acres, the values of property and products being \$5,810 and \$6,330, respectively.

FARMS CLASSIFIED BY AREA.

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

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

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The Territory—	12,311	416.8	5,180,878	100.0	\$53,767,824	100.0
Under 3 acres—	701	1.0	700	(¹)	2,957,719	5.5
3 to 9 acres—	2,190	5.7	12,520	0.2	1,851,313	2.5
10 to 19 acres—	2,165	13.2	28,647	0.6	1,975,533	3.7
20 to 49 acres—	2,197	80.0	65,950	1.3	8,174,600	5.9
50 to 99 acres—	959	68.7	65,875	1.3	1,972,577	3.7
100 to 174 acres—	2,696	158.4	418,440	8.1	9,315,214	17.3
175 to 259 acres—	288	210.2	60,535	1.2	1,624,922	3.0
260 to 499 acres—	481	352.1	169,374	3.3	4,401,228	8.2
500 to 999 acres—	308	709.1	218,411	4.2	5,481,885	10.1
1,000 acres and over—	825	12,601.8	4,095,420	79.8	21,562,788	40.1

¹ Less than one-tenth of 1 per cent.

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

AREA.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.					
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.	Gross income (products of 1899 not fed to live stock).	
The Territory.....	\$1,407	\$200	\$93	\$2,577	\$741	17.0
Under 3 acres	74	118	29	3,993	911	21.6
3 to 9 acres	212	138	36	231	119	19.2
10 to 19 acres	300	149	49	414	201	22.0
20 to 49 acres	600	181	75	599	263	13.2
50 to 99 acres	937	259	93	768	373	18.1
100 to 174 acres	1,002	280	109	2,084	624	18.1
175 to 259 acres	1,937	644	192	2,919	1,018	18.0
260 to 499 acres	2,580	673	207	5,490	1,444	15.8
500 to 999 acres	4,656	912	260	11,778	2,861	16.2
1,000 acres and over	24,627	2,304	503	33,916	10,160	15.3

The group of farms of largest area contains less than 3 per cent of the total number of farms, but comprises nearly four-fifths of the total farm acreage, and over two-fifths of the total value of farm property.

For farms containing over 3 acres, the average values given in Table 9 rise in unbroken series as the farms increase in size. For farms under 3 acres, the average values for live stock and gross income are relatively high, as a large proportion of these are stock farms using ranges or the public domain. This group includes also a number of city dairies, the incomes from which are determined, not so much by the acreage of land used, as by the amount of capital invested and the expenditures for labor.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, \$912.40; 3 to 9 acres, \$20.70; 10 to 19 acres, \$15.17; 20 to 49 acres, \$8.76; 50 to 99 acres, \$5.43; 100 to 174 acres, \$4.07; 175 to 259 acres, \$4.84; 260 to 499 acres, \$4.10; 500 to 999 acres, \$4.03; and 1,000 acres and over, \$0.81. The low average for the group of farms containing from 100 to 174 acres is doubtless due to the fact that this group contains a large number of recently entered homesteads of 160 acres each.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

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

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

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The Territory.....	12,311	416.8	5,130,378	100.0	\$53,767,824	100.0
Hay and grain	4,871	81.9	399,136	7.8	6,637,622	12.4
Vegetables	430	67.5	29,029	0.6	694,860	1.3
Fruit	342	102.8	35,161	0.7	1,069,789	2.0
Live stock	4,084	1,087.3	4,358,724	84.9	41,188,574	76.6
Dairy produce	682	177.1	120,768	2.3	1,790,607	3.3
Miscellaneous ¹	1,902	93.9	188,055	3.7	2,386,472	4.4

¹ Including 4 sugar farms, 1 nursery farm, and 4 florists' establishments.

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

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.					
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.	Gross income (products of 1899 not fed to live stock).	
The Territory.....	\$1,407	\$290	\$93	\$2,577	\$741	17.0
Hay and grain	889	179	68	227	254	18.6
Vegetables	742	195	73	603	269	16.7
Fruit	1,935	762	100	341	562	17.6
Live stock	2,398	418	137	7,132	1,756	17.4
Dairy produce	1,159	356	105	1,006	295	11.2
Miscellaneous ¹	753	212	65	227	107	8.5

¹ Including 4 sugar farms, 1 nursery farm, and 4 florists' establishments.

For the several classes of farms the average values per acre of products not fed to live stock are as follows: Farms whose operators derived their principal income from flowers and plants, \$481.82; nursery products, \$197.41; fruit, \$5.36; vegetables, \$3.99; hay and grain, \$3.10; dairy produce, \$1.66; live stock, \$1.35; sugar, \$1.54; and miscellaneous products, \$1.03.

In computing these averages the total area of the farms of each group is used, and not the acreage devoted to the crop from which the principal income is derived.

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

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

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

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The Territory—	12,311	416.8	5,180,878	100.0	\$53,767,824	100.0
\$0.....	734	145.9	197,110	2.1	1,333,910	2.5
\$1 to \$49.....	1,997	42.1	84,118	1.6	1,332,140	1.9
\$50 to \$99.....	1,612	67.0	138,074	2.1	1,337,030	2.5
\$100 to \$249.....	2,846	106.3	362,478	6.9	3,468,710	6.5
\$250 to \$499.....	1,909	133.8	255,446	5.0	4,058,910	7.5
\$500 to \$999.....	1,434	510.2	731,574	14.2	6,079,000	11.3
\$1,000 to \$2,499.....	1,109	456.9	606,696	9.9	8,820,320	16.4
\$2,500 and over.....	670	4,580.4	3,035,362	59.2	27,631,204	51.4

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

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—				Gross income (products of 1899) not fed to live stock.	Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.					
	Land and improvements (except buildings).	Buildings.	Implementations and machinery.	Live stock.		
The Territory—	\$1,407	\$290	\$98	\$2,577	\$741	17.0
\$0.....	518	147	40	1,120	7	1.5
\$1 to \$49.....	268	75	35	139	41	4.9
\$50 to \$99.....	408	119	45	257	111	9.1
\$100 to \$249.....	565	166	55	433	254	12.0
\$250 to \$499.....	808	256	90	672	522	12.3
\$500 to \$999.....	1,588	374	132	2,146	1,219	15.3
\$1,000 to \$2,499.....	2,471	594	185	4,703	9,167	22.2
\$2,500 and over.....	11,819	1,481	383	28,108		

For many farms in the first group, the absence of any reported income is due to the inability of the enumerators to secure complete reports, owing to changes in ownership or tenancy which occurred shortly prior to the date of enumeration. Frequently the person in charge June 1, 1900, could not give definite information concerning the products of the preceding year. The same statement is true of some of the farms with reported incomes of less than \$100, and to this extent the reports fall short of giving a complete exhibit of farm income in 1899.

Some of the farms reporting no income were doubtless homesteads taken up in the spring of 1900, and the high average value of live stock indicates that some were cattle ranches which reported no sales in 1899. Many of the farms of the first group report products fed to live stock.

LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and the supply of meat

products. Horses and mules are classified by age, and neat cattle and sheep, by age and sex. The new classification permits a close comparison with the figures of previous census reports.

Table 14 presents a summary of live-stock statistics.

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

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Num-ber.	Value.	Average value.	
Calves.....	Under 1.....	188,702	\$1,989,648	\$10.54	019
Stoers.....	1 and under 2.....	89,367	1,492,875	16.70	816
Stoers.....	2 and under 3.....	32,867	720,012	21.91	128
Stoers.....	3 and over.....	19,646	547,876	27.89	331
Bulls.....	1 and over.....	27,532	1,097,114	39.85	116
Helpers.....	1 and under 2.....	114,045	1,766,334	15.49	361
Cows kept for milk.....	2 and over.....	16,776	610,048	36.41	1,845
Cows and helpers not kept for milk.....	2 and over.....	502,365	9,564,024	19.00	1,415
Colts.....	Under 1.....	16,666	99,127	5.95	519
Horses.....	1 and under 2.....	16,550	177,468	10.72	514
Horses.....	2 and over.....	97,937	1,043,884	10.85	8,092
Mule colts.....	Under 1.....	561	8,040	14.33	17
Mules.....	1 and under 2.....	632	15,307	24.22	13
Mules.....	2 and over.....	4,118	159,785	38.80	607
Asses and burros.....	All ages.....	15,902	64,528	4.06	1,507
Lambs.....	Under 1.....	1,566,744	2,379,603	1.51	1,000
Sheep (ewes).....	1 and over.....	2,356,876	6,825,816	2.40	1,781
Sheep (rams and wethers).....	1 and over.....	482,567	1,444,136	2.99	273
Swine.....	All ages.....	20,426	81,644	4.00	1,440
Goats.....	All ages.....	224,186	472,901	2.11	12,216
Fowls: ¹					
Chickens ²		156,358			
Turkeys.....		3,505			
Geese.....		830	62,419		
Ducks.....		1,527			
Bees (swarms of).....		6,164	20,802	3.37	
Value of all live stock.....			31,727,400		

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

² Including Guinea fowls.

The total value of live stock on farms and ranges, June 1, 1900, was \$31,727,400, of which 55.1 per cent represents the value of neat cattle aside from dairy cows; 38.5 per cent, that of sheep; 7.0 per cent, that of horses; 1.6 per cent, that of dairy cows; 1.5 per cent, that of goats; and 1.3 per cent, that of all other live stock.

The low average value of horses is due to the fact that a large per cent of all horses in the territory are Mexican or Indian ponies. The reports show three times as many asses and burros as mules, and nearly one-sixth as many asses and burros as horses two years old and over. The greatest number of these animals is found in the mountainous northern and north central counties.

Thirteen goats are reported to one milch cow, and the total value of goats is nearly equal to that of milch cows. In this territory the goat is a very useful animal, living on scant food picked from among the rocks, and furnishing meat, milk, and mohair.

No reports were secured of the value of live stock not on farms and ranges, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, however, the total value of domestic animals not on farms would be \$355,601. The value of goats kept in towns and cities for dairy and other purposes constitutes 7.7 per cent of the value of all live stock not

on farms. Exclusive of poultry and bees not on farms, the total value of all live stock in the territory is approximately \$82,083,000.

CHANGES IN LIVE STOCK KEPT ON FARMS AND RANGES.

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

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

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. ¹	Swine.
1900.....	13,775	975,084	131,153	21,213	3,333,743	20,426
1890 ²	13,507	559,604	38,130	8,367	1,218,970	10,471
1880 ²	2,955	153,746	14,547	9,063	2,088,831	7,857
1870.....	2,117	41,117	5,033	5,141	619,438	11,237
1860.....	34,369	54,360	10,066	11,291	830,116	10,313
1850.....	19,635	22,342	5,079	8,654	377,271	7,314

¹ Lambs not included.

² Excluding animals on ranges.

The live-stock enumeration in 1880 and 1890 did not include domestic animals on ranges, hence the figures presented in the table for those years are not strictly comparable with the figures for 1900. The numbers of animals on ranges in 1890 were estimated by special agents to be as follows: All neat cattle, 1,054,022; horses, 54,192; mules and asses, 14,265; sheep, 1,225,524; swine, 785. In the following comparisons between the number of animals reported in 1900 and the number reported in 1890, these estimates are disregarded.

The last half century, taken by decades, shows many fluctuations in the numbers of all domestic animals. The last decade shows increases in every class except dairy cows, and the decrease in their number is probably more apparent than real, the term "dairy cows" having been restricted in 1900 to cows kept for dairying purposes at the time of enumeration. As a result of this limitation many cows which were milked at some time in the year were probably classified as "cows and heifers not kept for milk" and included under the head "other neat cattle." The probability that this occurred is confirmed by the large increase shown in dairy products.

The census of 1900 shows 57.7 per cent more dairy cows than were reported in 1850; forty-three times as many "other neat cattle;" twenty-five times as many horses; twice as many mules; nearly nine times as many sheep; and almost three times as many swine.

Although in 1900 the enumerators were instructed to report no fowls less than 3 months old, while the reports of 1890 include those of all ages, four times as many turkeys and nearly four times as many geese were reported as in 1890. The number of chickens has increased 158.9 per cent during the decade and the number of ducks 38.3 per cent.

ANIMAL PRODUCTS.

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

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

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	15,299,199	\$1,954,171
Mohair and goat hair.....	Pounds.....	113,545	29,917
Milk.....	Gallons.....	13,009,657	2,439,423
Butter.....	Pounds.....	313,003	
Cheese.....	Pounds.....	88,571	157,175
Eggs.....	Dozens.....	839,890	
Poultry.....			90,152
Honey.....	Pounds.....	139,998	13,838
Wax.....	Pounds.....	2,450	
Animals sold.....			3,740,678
Animals slaughtered.....			606,296
Total value.....			7,090,648

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

² Comprises the value of milk sold and consumed and of butter and cheese made.

The value of animal products in 1899 was \$7,090,648, or 69.8 per cent of the value of all farm products, and 77.8 per cent of the gross farm income. Of the total value, 61.3 per cent represents the value of animals sold and slaughtered on farms and ranges; 28.0 per cent, the value of wool, mohair, and goat hair; 7.0 per cent, the value of dairy products; 3.5 per cent, the value of poultry and eggs; and 0.2 per cent, the value of honey and wax.

ANIMALS SOLD AND SLAUGHTERED.

The value of animals sold and slaughtered in 1899 constitutes 47.7 per cent of the gross farm income. Of the total number of farms in the territory reporting live stock, 3,962, or 34.0 per cent, report animals slaughtered, the average value per farm being \$152.78. Sales of live animals were reported by 2,991 farmers, or 25.6 per cent of the total number, the average receipts per farm being \$1,250.64. In obtaining these reports, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

DAIRY PRODUCE.

More than four times as much milk and nearly four times as much butter were reported in 1900 as in 1890, while the quantity of cheese made on farms increased nearly fourfold in the same time.

Of the \$499,423 given in Table 16 as the value of dairy products, 63.0 per cent represents the value of such products consumed on farms, and 37.0 per cent, the amount received from sales. Of the latter amount, \$147,730 was received from the sale of 633,638 gallons of milk; \$29,030, from 116,816 pounds of butter; \$5,106, from 38,164 pounds of cheese; and \$3,037, from 3,246 gallons of cream.

POULTRY AND EGGS.

The total value of the products of the poultry industry in 1899 was \$247,327, of which 63.5 per cent represents the value of eggs produced, and 36.5 per cent, the value of

fowls raised. Three times as many eggs were produced in 1899 as ten years before.

WOOL, MOHAIR, AND GOAT HAIR.

In no branch of agriculture has greater progress been made in the last decade than in wool growing. Nearly four times as much wool was reported in 1900 as in 1890 and the average weight of fleeces increased from 2.4 pounds to 4.2 pounds. Many of the sheep are shorn twice a year, which accounts for the comparatively light weight of the fleeces. The operators of 99 farms reported mohair or goat hair in 1899. Most of the clip of 113,545 pounds was reported from the southern part of the territory, Sierra and Socorro counties having more than half of the total amount. The average weight per fleece was 2.0 pounds.

HONEY AND WAX.

The quantity of honey produced in 1899 was 139,998 pounds, or over six times the quantity obtained in 1889. The quantity of wax produced in 1899 was 2,450 pounds, or twenty-five times the product of 1889.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS AND RANGES.

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

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

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total.....	10,792	131,153	12.2	4,044	16,775	4.1
White farmers.....	9,575	121,006	12.6	3,883	15,982	4.1
Colored farmers.....	1,217	10,147	8.3	161	813	5.0
Owners ¹	9,390	97,835	10.4	3,471	14,327	4.1
Managers.....	440	27,444	62.4	206	942	4.6
Cash tenants.....	232	2,140	9.2	132	708	5.4
Share tenants.....	730	3,734	5.1	235	798	3.4
Under 20 acres.....	4,115	24,579	6.0	987	3,354	3.4
20 to 99 acres.....	2,871	15,914	5.5	1,072	3,270	3.1
100 to 174 acres.....	2,449	32,312	13.2	1,102	4,487	4.1
175 to 259 acres.....	283	4,614	16.3	180	957	5.3
260 acres and over.....	1,074	53,734	50.0	703	4,707	6.7
Hay and grain.....	4,062	19,247	4.7	998	2,686	2.7
Vegetable.....	371	2,411	6.5	78	304	3.9
Fruit.....	247	1,021	4.1	116	288	2.5
Live stock.....	3,797	93,826	24.7	1,580	6,694	4.2
Dairy.....	643	6,819	10.6	682	5,447	8.0
Miscellaneous ²	1,672	7,829	4.7	590	1,356	2.3

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

²Including nurseries, sugar farms, and florists' establishments.

CROPS.

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

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

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn.....	41,345	Bushels.....	677,305	\$419,936
Wheat.....	37,907	Bushels.....	603,303	390,616
Oats.....	15,848	Bushels.....	342,777	151,847
Barley.....	1,110	Bushels.....	24,107	12,475
Rye.....	48	Bushels.....	1,064	701
Buckwheat.....	6	Bushels.....	73	50
Flaxseed.....	1	Bushels.....	3	3
Kafir corn.....	138	Bushels.....	4,473	1,778
Clover seed.....		Bushels.....	45	320
Hay and forage.....	87,358	Tons.....	196,545	1,427,317
Tobacco.....	6	Pounds.....	1,460	173
Broom corn.....	14	Pounds.....	5,800	290
Peanuts.....	1	Bushels.....	10	12
Dry beans.....	3,349	Bushels.....	36,022	73,001
Dry pease.....	2,220	Bushels.....	28,071	20,305
Potatoes.....	1,122	Bushels.....	72,613	49,552
Sweet potatoes.....	47	Bushels.....	6,180	4,588
Onions.....	160	Bushels.....	25,014	27,567
Miscellaneous vegetables.....	3,374			179,857
Sorghum cane.....	81	Tons.....	118	364
Sorghum sirup.....		Gallons.....	2,812	1,599
Sugar cane.....	5	Tons.....	191	705
Sugar cane kept for seed.....		Tons.....	20	70
Sugar beets.....	1,298	Tons.....	3,965	16,849
Small fruits.....	48			5,768
Grapes.....	1787	Centals.....	15,159	238,717
Orchard fruits.....	17,219	Bushels.....	267,835	\$ 197,331
Nuts.....				162
Figs.....		Pounds.....	30	1
Forest products.....				34,198
Flowers and plants.....	4			4,442
Nursery products.....	32			5,753
Miscellaneous.....				660
Total.....	204,028			3,064,567

¹ Estimated from number of vines or trees.

² Including value of wine, raisins, etc.

³ Including value of cider, vinegar, etc.

Of the total value of the crops in 1899, hay and forage contributed 46.6 per cent; cereals, 32.0 per cent; vegetables, including potatoes, sweet potatoes, and onions, 8.5 per cent; fruits and nuts, 7.7 per cent; dry beans and dry pease, 3.1 per cent; and other crops, 2.1 per cent.

The average value per acre of the various crops was as follows: Flowers and plants, \$1,110.50; nursery products, \$179.78; onions, \$172.29; small fruits, \$120.17; sweet potatoes, \$97.62; miscellaneous vegetables, \$46.43; potatoes, \$44.16; tobacco, \$28.83; orchard fruits, \$27.33; hay and forage, \$16.34; and cereals, \$10.16. The crops yielding the highest average returns per acre were grown upon very highly improved land. Their production required a large amount of labor and the greatest relative expenditures for fertilizers.

HAY AND FORAGE.

In 1900, 5,454 farmers, or 44.3 per cent of the total number, reported hay and forage crops. Exclusive of corn stalks and corn strippings, the average yield per acre was 2.2 tons. The acreage in hay and forage in 1899 was 231.2 per cent greater than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Alfalfa or lucern, 55,467 acres and 154,973 tons; wild, salt, or prairie grasses, 19,233 acres and 19,155 tons; grains cut green for hay, 4,857 acres and 7,871 tons; forage crops, 4,713 acres and 9,143 tons; and other hay and forage crops, 4,495 acres and 5,377 tons.

In Table 18 the production of corn stalks and corn strippings is included but the acreage is not, as the forage secured was only an incidental product of the land on which it was raised.

CEREALS.

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

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

PART 1.—ACREAGE.

YEAR. ¹	Barley.	Buck-wheat.	Corn.	Oats.	Rye.	Wheat.
1899.....	1,110	6	41,845	15,848	48	37,907
1889.....	1,484	81	28,539	9,814	69	21,858
1879.....	2,543	-----	41,449	9,287	17	51,230

¹No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

1899.....	24,107	78	677,805	842,777	1,064	608,808
1889.....	85,024	744	583,489	198,832	810	843,434
1879.....	50,053	-----	693,786	156,527	240	706,641
1869.....	3,876	10	640,823	67,660	42	352,822
1859.....	6,099	6	709,804	7,246	1,800	484,309
1849.....	5	100	366,411	5	-----	186,516

The total area devoted to cereals in 1899 was 96,264 acres; in 1889, 61,340 acres; and in 1879, 104,481 acres. Corn and wheat are the principal cereals and of the total acreage in cereals in 1899, 82.3 per cent was divided about equally between these crops. For each of them the acreage in 1899 was considerably larger than it was ten years before, though not so large as in 1879. The decreases for the twenty-year period were 0.3 per cent in the acreage of corn and 26.0 per cent in that of wheat. The acreage in oats, the cereal next in importance, showed an increase of 70.2 per cent and constituted, in 1899, 16.5 per cent of the total area in cereals. This cereal is grown principally in the northern counties, while corn and wheat are staple crops throughout the territory. Barley is a relatively unimportant crop and shows a decreasing acreage, while not a hundred acres of rye or of buckwheat have been reported by any of the last three censuses.

The second part of the table shows wide fluctuations from decade to decade in the production of each of the cereals except oats, for which a steady increase is noted. In this territory the nature of the season and the supply of water for irrigation purposes are the principal factors in determining the production of grain in any given year. In addition most of the cereals are grown chiefly or wholly for home consumption, and consequently production varies according to local conditions.

In the last decade, however, cereal production as a whole has doubtless been stimulated by increases in population and by the development of irrigation facilities.

ORCHARD FRUITS.

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

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

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples.....	483,157	40,416	142,882	37,192
Apricots.....	12,418	2,582	6,637	744
Cherries.....	18,296	3,383	5,228	672
Peaches.....	117,003	23,081	76,204	17,822
Pears.....	89,877	2,886	14,777	1,526
Plums and prunes.....	48,296	9,924	18,492	2,230

The value of the orchard fruits grown in 1899 was \$197,331, approximately one-half of which was contributed by Santa Fe, Donna Ana, and Rio Arriba counties.

In 1900, 67.2 per cent of all fruit trees in the territory were apple trees, and in 1890, 49.1 per cent. The number of these trees increased twelvefold in ten years, Chaves county reporting, in 1900, 26.9 per cent of the entire number. Between 1890 and 1900 the total number of peach trees increased fivefold. They are found in most parts of the territory, but in 1900, 48.7 per cent were in San Juan, Donna Ana, and Grant counties. During the last decade plum and prune, pear, cherry, and apricot trees have increased in number very rapidly.

In addition to the trees shown in Table 20, unclassified orchard trees to the number of 8,566 are reported, with a yield of 4,165 bushels of fruit. The value of orchard products, given in Table 18, includes the value of 655 barrels of cider, 556 barrels of vinegar, and 10,550 pounds of dried and evaporated fruits.

As the quantity of fruit produced in any year is determined largely by the nature of the season, comparisons between the crops of 1889 and 1899 have little significance.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 48 acres, distributed among 282 farms. The acreage and production of the various fruits are as follows: Currants, 10 acres and 14,340 quarts; gooseberries, 12 acres and 11,680 quarts; strawberries, 9 acres and 15,400 quarts; raspberries and Logan berries, 9 acres and 8,930 quarts; blackberries and dewberries, 3 acres and 2,940 quarts; and other berries, 5 acres and 6,400 quarts.

The value of fruits grown was \$5,768, an average of \$20.45 per farm. Outside of Chaves, Santa Fe, and San Juan counties, which are credited with 72.6 per cent of the total value of the crop of 1899, small fruits received little attention.

VEGETABLES.

The total area devoted to vegetables, including potatoes, sweet potatoes, and onions, was 5,203 acres. Of the 3,874 acres devoted to miscellaneous vegetables, the products of 2,012 acres were not reported in detail, as the greater part of this acreage was included in small family gardens. Of the remaining 1,862 acres, 638 acres were devoted to muskmelons; 493 acres, to watermelons; 262 acres, to sweet corn; 173 acres, to squashes; 168 acres, to cabbage; and 128 acres, to other vegetables.

SORGHUM.

The first report of sorghum grown for sirup making was obtained in 1860. From that date until 1890 the production fluctuated widely, the quantity of sirup made in the latter year being 3,150 gallons. In 1900 but 1,599 gallons were reported, a decrease of over 50.0 per cent for the decade.

FLORICULTURE AND NURSERIES.

Flowers and plants were grown in 1899 by 9 farmers. Of this number 4 derived their principal income from the sale of floral products, having a capital of \$14,000 invested in land and buildings, and securing in 1899 products valued at \$5,800. They used 22,990 square feet of glass surface.

While 11 farmers reported nursery stock, but 1 derived over 40.0 per cent of his income from the sale of nursery products, his receipts in 1899 from 22 acres having been \$4,343.

INDIAN RESERVATIONS.

The New Mexico reserves reporting agriculture are the Jicarilla Apache reservation and the 19 pueblos of the Pueblo Indians. The reports of the latter, with the exception of Zuni, have been consolidated into one. Zuni, the largest and most remote of the pueblos, is more properly entitled to be called a reservation, as the tract conveyed by the original Spanish grant has been many times enlarged within recent years by grants from the United States Government.

The Jicarilla Apache and the Pueblo represent two distinct types of Indian agriculturists; the first, formerly a wild, nomadic tribe, has been forced through the encroachment of the white race to adopt the ways of civilization and to look to the soil for support; the second, possessing a distinct civilization of its own, was a peaceable, agricultural people long before the approach of the Spaniards.

JICARILLA APACHE RESERVATION.

Jicarilla Apache reservation, containing an area of 650 square miles, is situated in Rio Arriba county in the extreme northern part of New Mexico. It is chiefly a timber and grazing region consisting of low pine hills, mesas, and small valleys between narrow canyons.

The Jicarilla Apache, of Athapascan stock, numbered 829 on June 1, 1900. Their principal occupation is raising sheep and goats, although a few cultivate small areas of corn, wheat, or oats, with potatoes, or other vegetables, and cut large quantities of wild hay.

Most of the 42 Indian farmers reporting, cultivated from 4 to 10 acres of grain and vegetables, but their crops in the census year were practically destroyed by drought. These Indians are very proficient in making bows and arrows, baskets, and articles of bead work, for which they find a ready market, their sales of these articles in 1899 having amounted to \$7,000.

PUEBLO RESERVATION.

The Pueblo reserves, nineteen in number, are widely

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$1,951,110, an average of \$158 per farm. The average was highest on the most intensively cultivated farms and on the large cattle ranges, having been \$1,500 for nurseries, \$384 for live-stock farms, \$200 for florists' establishments, \$120 for fruit farms, \$98 for vegetable farms, \$85 for sugar farms, \$52 for dairy farms, and \$43 for hay and grain farms. "Managers" expended on an average \$1,489; "part owners," \$406; "owners," \$96; "cash tenants," \$90; "owners and tenants," \$87; and "share tenants," \$32. White farmers expended \$179 per farm and colored farmers \$3.

Fertilizers purchased in 1899 cost \$2,880, an average of less than 25 cents per farm. The average expenditure was greatest for nurseries, amounting to \$250. For florists' establishments the average was \$15, and for fruit farms, \$3.

scattered throughout the north central part of New Mexico, in Bernalillo, Rio Arriba, Santa Fe, Valencia, and Taos counties, most of them lying along the Rio Grande or its tributaries. Strictly speaking they are not reservations, being grants of the Spanish government, confirmed by United States patents. Exclusive of Zuni, which is reported separately, their total area is 1,081 square miles, and their total population, 6,602. The people live in adobe and stone houses, from two to five stories in height, which are collected in close, compact villages, or pueblos, usually located in the midst of their farm lands. They are peaceable and industrious, devoting all their time to their flocks and their fields of growing crops. The Pueblo are also noted pottery makers, and find a market for their product among visitors and in neighboring cities. Though generally self-supporting, they are very poor and in times of extreme drought require aid from the Government.

Their principal crops are Indian corn and wheat, although some pueblos raise a small amount of alfalfa. Beans, chili, onions, melons, and squashes constitute their supply of vegetables. Many Indians have small orchards of peach and apricot trees, and some also have apple, cherry, and plum trees, and grape vines.

No crops can be raised without irrigation, which the Pueblo have practiced in a primitive manner from earliest times. Their irrigation systems are very crude, but furnish a water supply sufficient to mature their crops in ordinary seasons. San Felipe has a canal 10 miles long, and in some places 15 feet wide, and 20 feet deep. All of their ditches are kept in good condition. The only pueblos that suffered from a shortage of irrigation water in the census year were San Ildefonso and Sia.

The majority of Pueblo farmers have from 10 to 30 acres each under cultivation, although a few have as high as 60 or 80 acres. Their land is not held by individuals under title of absolute ownership, but is parceled out to each head of a family, the community holding the title.

Their methods of harvesting, threshing, and grinding grain are most antiquated. Wheat is reaped with the sickle, which has been in use for so many centuries; threshing is accomplished by driving the animals over the threshing floor until the grain is trampled from the straw; foreign substances are picked out by hand and the grain washed, much of it being damaged in the process; and the inhabitants of those pueblos which are not situated near flouring mills still grind their grain by crushing it in stone mortars or between stone slabs.

A Pueblo farmer usually has a few horses, cattle, sheep, and occasionally burros, goats, swine, and chickens. Some farmers possess large flocks of sheep. There are very few dairy cows in their herds, cattle being kept almost exclusively for food supply.

ZUNI RESERVATION.

Zuni, the largest pueblo reserve, is situated in the extreme western part of New Mexico, in Valencia county, and lies in a great plain watered by the Zuni River. The original Spanish grant contained 27 square miles, but the reserve has since been greatly enlarged, the present area comprising 336 square miles.

The total population of the Zuni is 1,525; like other

Pueblo Indians, they are kind, peaceable, and industrious, and have been a self-supporting, agricultural people ever since they were first met by the white man. Their farms are situated from 15 to 25 miles from the pueblo in small valleys and canyons adjoining the basin in which their village is located. Throughout the growing season they spend most of their time on their farms, returning to the pueblo after the harvest. The majority of the 267 Zuni farms range in size from 10 to 20 acres, although a few contain from 30 to 40 acres each. The larger part of the land is planted in corn, but wheat, beans, sweet corn, onions, melons, and squashes are common crops. The Zuni farmers also possess peach orchards, and usually dry large quantities of fruit, which they store away for use during the winter months. Late frosts destroyed their fruit crop in the census year and no report of their orchards was made. They irrigate their land in a primitive manner but keep their ditches in good repair.

The chief wealth of the Zuni, however, lies in their flocks of sheep, which nearly all possess. They are famous blanket makers, some specimens of their weaving being waterproof and rivalling in quality the blankets of the Navaho Indians. Small numbers of ponies, mules, range cattle, swine, and chickens were reported.

IRRIGATION STATISTICS.

New Mexico lies in the southern part of the Rocky Mountain area, well within the arid region, and embraces 122,460 square miles, or 78,374,400 acres. The territory may properly be divided into three distinct regions—the eastern plains, the Rio Grande Valley, and the western plateaus. The eastern portion is an extension of the high plains of Texas, broken by the head waters of the Canadian and Pecos rivers. This broad stretch of open grazing land continues to the uplands which form the southern extension of the Rocky Mountains of Colorado. Until recently this portion of the territory was the paradise of cattlemen and of outlaws, who alternated the legitimate business of "rounding up" cattle with the less legitimate occupation of keeping out settlers and evading officers of the law. Much of this lawlessness, however, has been broken up by the introduction of irrigation along the Pecos River, the consequent immigration of many farmers, and the building of railroads from the east and south. Beyond this broken country is the Rio Grande Valley, and still farther west the elevated arid table-lands, which have little value even for grazing purposes. These extend to the mountains, which lie about the head waters of the Gila and Salt rivers. In the extreme northwestern part of the territory, where lie the fertile valleys of the San Juan River and its tributaries, there has recently been a considerable development of irrigation.

The Rio Grande, rising in southern Colorado, enters the territory from the north through deep canyons. These widen in places, allowing room for bottom lands, and again the walls die down to low mesas. In the south, where the principal towns and agricultural communities

are found, the proportion of low land increases. Here the river tends to spread out over the bottom lands, losing the greater part of its water by evaporation, or by diversion into ditches, and in the lower part of its course, above El Paso, the channel is frequently dry. In the Rio Grande section there are very few large irrigation canals, but many small community ditches supply lands held by the Indians and Mexicans. The origin of these ditches is lost, even in local tradition, and it is probable that many of them were in use before the advent of the white race. The farmers in this valley, among whom those of mixed Spanish and Indian descent predominate, have followed traditional customs, and show little energy or skill. Their lands are tilled in the most laborious fashion, largely by hand, and the returns are small.

Under the community system, each ditch is held and controlled by the owners of the land it irrigates, these living usually together in a village or pueblo. In the fall of each year a mayordomo is elected who has full control of the ditch for the following season. He assesses the land for the labor necessary to clean the ditch and keep it in repair during the irrigation season; apportions the water to each consumer according to the local conditions, and in general supervises all matters pertaining to irrigation. While the apportionment of labor varies, it is generally such that a farmer holding a tract of 6 acres is required to furnish the labor of one man in cleaning and repairing the entire ditch in the spring, while he who holds 12 acres furnishes a man's labor whenever necessary during the whole season. The ditches have no regulating gates or sluices, and flooding is the only means

of irrigation. Consequently, the use of water is extremely wasteful.

The development of the agricultural resources of New Mexico depends largely upon the control of the Rio Grande. On the head waters of this stream in Colorado are a number of canals of sufficient combined capacity to take all of the water. The seepage and inflow from small streams maintain the river to a moderate volume in northern New Mexico, but practically no water penetrates to the southern end of the territory during the irrigation season. Sites suitable for reservoirs along the Rio Grande and its principal tributaries are numerous, and many of them excellent. Large dams constructed at these points would render it possible to hold great quantities of water for the irrigation of a number of open valleys along the course of the river. Some of these reservoir sites have been surveyed.

Irrigation on the eastern plain is of comparatively recent introduction, but this region is destined soon to lead the rest of the territory in the number of acres irrigated. The water supply is drawn from the Canadian and Pecos rivers. The Canadian River, rising on the eastern slope of the Rocky Mountains, flows through a valley 200 miles in length within the territory. Irrigation ditches in this drainage basin are confined almost wholly to the tributaries, the course of the main stream being for the most part through a canyon, from which it does not emerge until it passes the boundary. Important irrigation systems are supplied by the Cimarron, Vermejo, Mora, and Conchas rivers, those on the two first mentioned streams being the most extensive in the territory. Two large canals, constructed by a corporation, are located on the Maxwell Grant, a tract containing 1,491,765 acres of grazing and agricultural lands, and including within its boundaries the head waters of the Canadian, Vermejo, and Cimarron rivers. Along the line of these canals is a series of natural basins or ancient lake beds, favorably situated, in which large quantities of water are stored. Many smaller natural reservoir sites, located at elevations where evaporation is comparatively slight, are found near the head waters of nearly all the streams which originate in this basin. Eleven reservoirs, with a combined capacity of 6,000 acre feet,¹ have been constructed on the Vermejo. On the Cimarron there are 13 individual ditches and 1 corporation ditch. Connected with these are 4 storage reservoirs, with an aggregate capacity of 6,000 acre feet. The area irrigated by the ditches of this stream is 7,629 acres. Mora River and its tributaries supply water for practically all the irrigation systems in Mora county. None of the normal flow of this stream reaches the Canadian River during the irrigating season, and there is a general scarcity of water throughout its entire drainage basin. The insufficient water supply has greatly retarded agricultural development, and has caused the abandonment of many acres of valuable land. As a partial relief from these conditions, two ditches have been built by which, during the periods of greatest scarcity, water is taken

from the Rio Del Pueblo in Taos county, and diverted through passes in the mountains. All the ditches along the Mora and its tributaries are either private or community ditches, and the methods of management and distribution are those commonly found in all Mexican settlements.

The Pecos River rises northeast of Santa Fe, in the northern part of the territory, and first becomes a considerable stream at its confluence with the Gallinas near La Junta. As the river has mountain sources, the flow in the upper portion of its basin is perennial; but shortly after it emerges from the highlands, much of its water is lost by seepage, and for several months in the year this part of the river bed is dry. In the lower part of its course in New Mexico, the Pecos receives large quantities of water from numerous springs, which are a notable feature, many of them emerging from the earth with such volume and force as to prove beyond question that they come from the drainage waters of the high, precipitous mountain ranges on the west.

The following are the principal tributaries of the Pecos, many of them furnishing a constant supply: Agua Negra, Agua Negra Chiquita, Rio Hondo, Berenda rivers (North, Middle, and South), the Spring rivers (North and South), Penasco, Seven Rivers, Rocky Arroyo, and Black rivers.

The drainage area or catchment basin of the Pecos River, lying within the territory and available for irrigation purposes, is estimated at 20,000 square miles. It extends across 4 degrees of latitude, with varying altitudes of from 3,000 to 11,000 feet. In the valley between Roswell and the territorial line, many of the lands subject to irrigation are of excellent quality, others are somewhat alkaline. A plentiful supply of water was reported in 1899 by all the irrigators on the upper portion of this river. In Guadalupe county the only ditch reported as not receiving sufficient water is Las Colonias. This ditch, which covers 2,000 acres and in an average year waters 1,500 acres, irrigated only 98 acres in 1899. In Chaves and Eddy counties, the water supply was sufficient for the land under ditch.

In the western plateau region the total number of acres irrigated is small compared with the other two main divisions of the territory. The waters affording supply for this region are the San Juan and its tributaries, the Gila, the Zuni, and the Mimbres rivers. The lands irrigated by the San Juan River are in the northern part of San Juan county. The sources of this river are in the San Juan and La Plata mountains in Colorado, and the affluents which it receives from the south are unimportant. Near the Colorado line, the San Juan has a mean flow of about 960 cubic feet per second. This is augmented by the waters of the Rio de Los Pinos, which has an estimated flow of 80 cubic feet per second. The most important tributary is the Las Animas, which has a normal flow, at a point below Bloomington, of 855 cubic feet per second. The Rio La Plata, another tributary, has an estimated flow of 50 cubic feet per second.

While the flow of all these streams is perennial, it fluctuates with the seasons, being increased by the melting

¹The acre foot is an amount of water sufficient to cover 1 acre to a depth of 1 foot.

snows in the spring and later by the rains, which usually occur in the latter part of August and in September.

In the drainage basin of the San Juan there are 52 ditches, located as follows: On the Las Animas, 20 ditches, irrigating 7,132 acres; on the San Juan, 19, irrigating 3,999 acres; and on the La Plata, 13, irrigating 3,063 acres. The total area irrigated by the San Juan and its tributaries is 14,734 acres.

The Gila River rises in the Black and Mimbres ranges, and in Grant county flows for the most part through narrow mountain valleys. The total acreage irrigated by it is 5,933 acres. The flow is perennial, and only a small portion is used.

In the northeastern part of Grant county a small acreage is irrigated by the Rio Mimbres. This stream flows southward as far as Deming, then turns abruptly to the east, and discharges its waters upon the Florida plains, where they are lost in the sands.

Between the basins of the San Juan and the Gila rivers, there is a small area drained by the Zuni River. Portions of this area are irrigated by the Zuni Indians.

Of the 78,374,400 acres of land surface in New Mexico, only 5,130,878, or 6.5 per cent, were included in farms in 1899, and only 326,873, or 0.42 per cent, were improved. Of the improved land, 303,438 acres are located outside of the Indian reservations. The importance of irrigation is demonstrated by the fact that in 1899 the irrigated area outside of the Indian reservations was 203,893 acres, or 67.2 per cent of the improved land. In 1889 the corresponding irrigated area was but 91,745 acres. By the building of new ditches and the extension of old ones, the irrigated area of the territory has been augmented 112,148 acres—a net increase of 122.2 per cent.

The relation of irrigation to the various agricultural operations is shown in the following table:

TABLE A.—ACREAGE AND YIELD OF ALL CROPS, AND OF IRRIGATED CROPS, 1899.

CROPS.	ACREAGE.			PRODUCTION.			
	Total.	Irrigated.	Per cent irrigated.	Unit of measure.	Total.	Irrigated.	Per cent irrigated.
All crops	204,028	182,804	89.6				
Corn	41,345	35,928	86.9	Bushels	677,305	619,094	91.4
Oats	15,348	13,322	84.1	Bushels	342,777	300,851	87.8
Wheat	37,907	36,688	96.7	Bushels	603,303	589,185	97.7
Barley	1,110	942	84.9	Bushels	24,107	21,412	88.8
Kafir corn	138	138	100.0	Bushels	4,473	4,473	100.0
Wild, salt, and prairie grasses	19,233	12,828	66.7	Tons	19,155	14,787	77.2
Alfalfa, or lucern	55,467	54,485	98.2	Tons	154,973	153,850	99.3
Grain cut green for hay	4,857	3,867	79.6	Tons	7,871	7,011	89.1
Other hay and forage crops	7,301	6,191	79.5	Tons	14,546	11,900	81.8
Dry beans	3,349	2,902	86.7	Bushels	36,022	32,340	89.8
Dry pease	2,220	1,965	88.5	Bushels	28,071	26,279	93.6
Potatoes	1,122	885	78.9	Bushels	72,613	60,528	83.4
Onions	160	153	95.6	Bushels	25,014	24,807	99.2
Miscellaneous vegetables	3,374	3,697	109.6				
Sugar beets	1,298	1,298	100.0	Tons	13,965	13,965	100.0
Grapes	2,787	2,740	94.0	Centals	15,159	14,091	93.0
Orchard fruits	27,219	26,596	91.4	Bushels	267,835	251,294	93.8
Other crops	298	224	76.7				

¹Quantity sold.

²Estimated from number of vines or trees.

The total area of land irrigated in 1899 was 203,893 acres, while the total area of irrigated crops, as given above, was 182,804 acres. The difference, 21,089 acres, represents approximately the area of pasture land irrigated. It is probable that a portion of the area upon which crops

were reported as grown without irrigation, was in reality irrigated at some time during the year.

Table B presents an exhibit by counties of the number of irrigators and the acreages irrigated, 1889 and 1899.

TABLE B.—NUMBER OF IRRIGATORS AND ACRES IRRIGATED.

COUNTIES.	NUMBER OF IRRIGATORS.			ACRES IRRIGATED.		
	1899.	1899.	Per cent increase.	1899.	1899.	Per cent increase.
The Territory ¹	7,884	3,085	155.6	203,893	91,745	122.2
Bernalillo ²	624	220	(3)	11,003	4,648	(8)
Chaves ³	185		(3)	15,790		(8)
Colfax	101	46	(3)	15,002	5,904	(8)
Donna Ana	604	275	(3)	17,242	11,051	(8)
Eddy ⁴	84		(8)	6,187		(8)
Grant	278	158	72.8	10,976	5,718	92.0
Guadalupe ⁵	99		(3)	1,855		(8)
Lincoln	135	194	(3)	4,085	7,789	(8)
Mora	732	348	(8)	26,530	11,403	(8)
Otero ⁶	119		(8)	2,130		(8)
Rio Arriba	815	231	190.0	15,812	6,368	143.3
San Juan	459	253	79.3	14,734	9,510	54.9
San Miguel	907	395	(3)	15,857	9,168	(8)
Santa Fe	694	123	(8)	8,249	1,358	(8)
Sierra	84	65	29.2	2,648	1,417	66.9
Socorro	797	218	(3)	10,567	4,798	(3)
Taos	564	262	115.3	11,853	6,420	84.6
Union ⁷	95		(3)	6,479		(8)
Valencia	612	304	85.5	8,941	6,113	13.5

¹ Exclusive of Indian reservations.

² Part of Santa Fe county annexed since 1899.

³ Comparison with figures of 1889 impracticable as important changes in county lines have been made.

⁴ Organized from part of Lincoln county in 1891.

⁵ Organized from parts of Lincoln and San Miguel counties in 1891.

⁶ Organized from parts of Donna Ana, Lincoln, and Socorro counties in 1899.

⁷ Organized from parts of Colfax, Mora, and San Miguel counties in 1898.

A glance at the percentages of Table 1 and Table B discloses the intimate relation between the growth of irrigation and the general development of agriculture. The number of farms outside the Indian reservations increased in ten years 145 per cent, the number of irrigators, 155.6 per cent, and the irrigated area, 122.2 per cent.

In Table C the number of irrigated farms is compared with the total number of farms, and the irrigated acreage with the total improved acreage.

TABLE C.—COMPARISON OF IRRIGATED FARMS WITH TOTAL NUMBER OF FARMS, AND OF IRRIGATED ACREAGE WITH IMPROVED ACREAGE, JUNE 1, 1900.

COUNTIES.	NUMBER OF FARMS.			NUMBER OF IMPROVED ACRES IN FARMS.		Per cent improved land irrigated.
	Total.	Irrigated.	Per cent irrigated.	Total.	Irrigated.	
The Territory ¹	10,925	7,884	72.2	303,438	203,893	67.2
Bernalillo	840	624	74.3	18,737	11,003	58.7
Chaves	945	185	53.8	19,068	15,790	82.3
Colfax	410	191	46.6	37,893	15,002	39.6
Donna Ana	571	504	88.3	21,870	17,242	78.8
Eddy	168	84	50.0	8,876	6,187	71.3
Grant	472	278	57.8	14,903	10,976	73.5
Guadalupe	277	99	35.7	3,711	1,855	50.0
Lincoln	345	135	56.5	7,100	4,085	56.9
Mora	983	732	83.9	35,103	26,530	75.4
Otero	180	119	66.1	3,639	2,130	58.5
Rio Arriba	860	815	94.8	18,152	15,812	87.1
San Juan	492	459	93.3	16,157	14,734	91.2
San Miguel	1,287	907	69.9	23,581	15,857	67.4
Santa Fe	918	694	75.6	18,610	8,249	60.6
Sierra	160	84	52.5	8,036	2,648	32.9
Socorro	991	797	80.4	17,723	10,567	59.6
Taos	629	564	89.7	18,839	11,853	85.6
Union	419	95	22.7	9,652	6,479	67.1
Valencia	618	412	66.7	11,973	6,941	58.0

¹ Exclusive of Indian reservations.

Of the farms of the territory, 72.2 per cent were wholly or partially irrigated in 1899, while of the improved acreage 67.2 per cent was irrigated. The average area of improved land in each irrigated farm was 33 acres, of which 26 were irrigated. For Arizona the corresponding averages were 78 acres of improved land, and 60 acres of irrigated land.

Table D presents the principal statistics relating to irrigation ditches.

TABLE D.—NUMBER, LENGTH, AND COST OF IRRIGATION DITCHES REPORTED.

COUNTIES.	IRRIGATION DITCHES.			ACRES OF LAND.		
	Number.	Length in miles.	Cost of construction.	Under ditch.	Irrigated in 1899.	
				Total.	Per mile of ditch.	
The Territory ¹	975	2,332	\$4,140,319	646,784	203,893	86
Bernalillo	75	238	336,200	72,856	11,003	49
Chaves	27	98	250,334	45,765	15,790	161
Colfax	27	130	207,393	29,880	15,002	115
Donna Ana	14	123	67,600	62,948	17,242	149
Eddy	8	35	2,265,600	92,400	6,187	73
Grant	67	158	154,073	18,590	10,976	69
Guadalupe	15	56	22,251	10,485	1,855	33
Lincoln	41	32	14,946	5,885	4,085	49
Mora	58	181	35,605	52,513	26,530	147
Otero	43	40	13,617	3,087	2,130	58
Rio Arriba	170	198	49,460	49,472	15,812	80
San Juan	55	211	265,000	49,737	14,734	70
San Miguel	63	136	51,390	20,890	15,857	117
Santa Fe	93	107	46,453	17,240	8,249	77
Sierra	31	69	21,850	14,581	2,648	33
Socorro	58	100	43,492	25,292	10,567	66
Taos	69	103	21,000	26,415	11,853	110
Union	32	76	29,035	8,910	6,479	85
Valencia	44	123	100,120	89,368	6,941	55

¹ Exclusive of Indian reservations.

No reports were secured concerning the cost of irrigation ditches on Indian reservations. The statistics presented in Table D relate exclusively to the canals and ditches in the counties outside the reservations.

The average number of acres of irrigated land for each mile of ditch reported is 86. The area under ditch for each mile is 272 acres, or over three times the average irrigated area. In many states, where there is a larger percentage of new irrigation enterprises than in this territory, the area irrigated bears a much smaller ratio to the area under ditch. In the sections of New Mexico where irrigation has been practiced for centuries, the effect on the old canals of the diversion of water at points farther up the streams is shown by the difference between acreage under ditch and acreage actually irrigated. This is especially evident along the Rio Grande. On the other hand, in the valleys of the Pecos and San Juan rivers and their tributaries, the difference is due to the presence of new enterprises which have not been sufficiently developed to furnish water to all the land under them. In the newer districts this difference indicates that an increase in the irrigated area is possible. In the older districts further development without water storage is unlikely.

The average cost of constructing the ditches was \$1,738 per mile, \$6.40 per acre of land under ditch, and \$20.30

per acre of land actually irrigated in 1899. The term water right, as used in Table E, means the first cost, per acre, to the irrigator, of putting water on the land irrigated in 1899, exclusive of the cost of maintenance of the ditch, or of annual water rental. By a glance at the table it will be noticed that the average cost of water right per acre irrigated in 1899 was \$6.59, as stated by the owners.

Table E is a comparative exhibit of the average values per acre of irrigated and unirrigated farms and of irrigated land, together with the average cost per acre of water right, and of annual maintenance.

TABLE E.—AVERAGE VALUE PER ACRE OF IRRIGATED AND UNIRRIGATED FARMS, JUNE 1, 1900.

COUNTIES.	AVERAGE VALUE PER ACRE EXCLUSIVE OF BUILDINGS.				AVERAGE COST PER ACRE.	
	All farms.	Unirrigated farms.	Irrigated farms.	Irrigated land.	Water right.	Annual maintenance.
The Territory ¹	\$3.85	\$1.66	\$4.67	\$29.26	\$6.59	\$0.82
Bernalillo.....	9.00	1.52	13.99	61.73	13.79	1.66
Chaves.....	12.53	3.87	15.51	37.52	7.87	0.33
Colfax.....	1.82	1.39	2.57	25.54	10.89	0.49
Donna Ana.....	17.31	2.50	20.48	21.55	3.60	0.62
Eddy.....	2.45	1.42	5.26	18.05	9.42	1.25
Grant.....	12.62	9.19	15.49	35.48	10.71	0.59
Guadalupe.....	3.26	2.67	4.28	23.58	6.02	0.77
Lincoln.....	6.70	3.14	10.92	24.07	3.53	0.42
Mora.....	4.45	2.02	5.45	24.91	1.93	0.71
Otero.....	8.88	1.90	11.11	23.00	6.45	0.80
Rio Arriba.....	7.87	1.17	12.17	34.12	2.23	0.36
San Juan.....	13.79	2.45	14.48	32.24	7.00	0.52
San Miguel.....	1.74	1.59	1.77	23.88	3.14	0.35
Santa Fe.....	2.55	1.50	2.80	17.21	5.07	0.21
Sierra.....	1.33	0.65	7.55	12.10	3.23	1.44
Socorro.....	4.21	3.48	4.86	65.84	4.12	2.47
Taos.....	5.59	1.10	6.44	12.59	1.72	0.33
Union.....	2.68	2.08	3.45	22.48	3.55	0.36
Valencia.....	7.96	4.19	9.83	27.70	4.60	0.57

¹ Exclusive of Indian reservations.

² One irrigated farm in Santa Fe county having a total area of 500,000 acres, only 1,000 of which are irrigated, causes the low average valuation of irrigated farms. The other 698 farms, having a total area of 24,277 acres, have an average valuation of \$21.40 per acre.

Of the 12,311 farms in the territory, including those in Indian reservations, 9,128 are irrigated, and 3,183 are unirrigated. The acres in the irrigated farms number 2,892,855; in the unirrigated, 2,238,023. The value of all land in the irrigated farms, not including buildings, is \$18,551,592, and in the unirrigated, \$3,772,117. The value of all buildings on irrigated farms is \$2,775,532, and on the unirrigated, \$789,573. Live stock on the irrigated farms has a value of \$15,785,760, and on the unirrigated, \$15,941,640. Irrigated farms are, in number, 74.1 per cent of the total for the territory; in acreage, 56.4; in value of land and improvements, exclusive of buildings, 78.2; in buildings, 77.8; in implements and machinery, 75.9; in live stock, 49.7; and in total farm wealth, 64.5.

The average size of all farms, exclusive of those held by Indians, is 464 acres, and that of irrigated farms, 360 acres. The average area of irrigated land in each irrigated farm is 26 acres. For farms making use of irrigation the average value of products not fed to live stock is \$2.13 per acre. The unirrigated farms make greater use of the public domain for grazing purposes than do those which are irrigated, and an income is thus secured in addition to that obtained directly from the land owned and leased. In the unirrigated districts large areas of public land are fenced by cattlemen, although the title rests wholly with the Government. Nevertheless, for unirrigated farms, the average value per acre of products not fed to live stock is only \$1.79.

The average value per acre for irrigated land is \$29.26, while that for the best irrigated alfalfa land is from \$50 to \$100 per acre. The value of irrigated fruit land frequently runs as high as \$400 per acre, and occasionally reaches \$500.