Changes in New Mexico Agriculture 1993

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This report is a baseline reference for New Mexico's agricultural sector with respect to cash receipts, value of production, and major commodities. Annual cash receipts and value of production are converted from nominal monetary values to constant dollar values.[1] Inflation in the general price level produces nominal price changes that do not reflect changes in the real value of goods and services in the economy. To remove changes associated with inflation, the value of the commodities covered in this report are adjusted to a common base period (1990) using the consumer price index[2] (CPI) (Appendix A). Adjusting cash receipts to a common base period removes the variation in cash receipts between time periods that may be due to price differences associated with changes in the nominal value of the dollar. Adjusted values allow the identification of monetary values that have increased or decreased in real terms. Although conversion to a common base period does not take into account changes in production due to technology, a comparison of the constant dollar values between the two periods provides a measure of whether producers' real incomes have increased or decreased. For commodities with decreases in production, there also may be a decrease in the cost of production. In these cases, cost decreases could partially offset decreases in profits associated with lower quantities.

The data should not be interpreted as measuring the impact of agriculture upon the state's economy; they are cash receipts and values of production. Cash receipts understate total value in some cases and overstate total value in other cases; however, cash receipts are the values used in publications such as *New Mexico Agricultural Statistics*. Cash receipts do not account for intra-farm transfers of commodities such as hay, pasture, livestock, and grain. In contrast, the value of production for final products such as calves and yearlings may include the value of hay and grain that were produced on the farm or ranch. In these cases, cash receipts and value of production for the final product do not record the production of intermediate goods used in the final product. The general result is that cash receipts data overstate the importance of livestock operations where one animal may appear in cash receipts more than once in a given year and the value of nonmarketed feed is attributed to the animal, not the crop. Value added would be a preferable concept, but the data are not available. In addition, cash receipts and value of production leave unmeasured the multiplier effect that accompanies agricultural production. This unmeasured impact includes such important components as agriculture's impact on the input and service industries associated with the production process, the processing industry that is a part of agriculture, and the impact of the multiplier effect upon cash receipts as they cycle through the economy. The value of the multiplier for New Mexico's agricultural sector is 2.4472. This means every $1 change in output that occurs in the agricultural sector results in a $2.4472 change in New Mexico's aggregate economy (U.S. Department of Commerce, 1992, p. 34).

Agriculture in New Mexico

The 1992 Census of Agriculture classifies 60.33% of New Mexico's land area as farmland; however, the USDA definition does not distinguish between crop-

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[1]Throughout this report, changes between periods reported in 1990 dollar constant dollar values will be referred to as changes in real values measured in constant units.

[2]Adjustments to a constant value are most meaningful when the adjustment mechanism is familiar to those who will use the adjusted values. No single price index is appropriate for making adjustments to the values of all goods and services; however, the Consumer Price Index (CPI) is frequently used to measure inflationary changes in the economy. Because changes in the prices of goods and services are familiar to everyone, the CPI is used in this report to adjust the nominal dollar values.

land and rangeland. There were 14,279 farms, 0.6% of the U.S. total. Units of 2,000 acres or more accounted for 19.31% of the total farm classification, and units in the 1–50 acre range constituted 18.29% of the total number of units. By sales class, 80.58% of the units had sales less than $50,000 and 2.98% had sales greater than $500,000. The average operator age was 55.3 years, and 52.8% of the operators reported farming as their principal occupation. With respect to tenure, individual or family operations were the predominant types, comprising 83.75% of total operators (1992 Census of Ag., State Data, NM, pp. 8-9, 47).

From 1992 to 1993, the nominal, average per-acre value of farm real estate decreased from $239 to $225 (USDA-ERS, p.5). This change represented a nominal decrease of $14 per acre. The constant dollar, average per-acre value of farm real estate decreased $12.61 when measured in 1990 dollars. The nominal, average gross cash rent per acre decreased from $87.70 in 1992 to $80.40 in 1993. The decrease was $7.30 in nominal terms and $6.58 in constant dollar value (USDA-ERS, p.10).

In 1993 New Mexico ranked 34th among the 50 states with respect to total farm marketings and produced 0.93% of total U.S. farm marketings. New Mexico ranked 37th with respect to total farm marketings from crops, producing 0.58% of the U.S. total, and it ranked 28th with respect to total farm marketings from livestock, producing 1.25% of the U.S. total (USDA, Agricultural Statistics, p. 355). Farm income[3] was 1.96% of New Mexico's total personal income generated from all industries. Farm income increased from $363.5 million in 1991 to $478.7 million in 1992 (U.S. Dept. of Commerce, REIS). Cash receipts from all commodities were $1.54 billion in 1993, a nominal increase of 4.41% from 1992. In constant dollars, total cash receipts increased 1.55% from 1992 to 1993 (table 1).

From 1992 to 1993, the nominal value of cash receipts increased for 15 commodities, decreased for 10 commodities, and remained constant for four commodities. However, the constant dollar value of cash receipts indicates that in real terms the situation was different. When valued in constant dollars, 11 commodities showed an increase in cash receipts and 18 commodities showed a decrease. The rank of the commodities also showed substantial change from 1992 to 1993. Of the 29 commodities reported, 17 commodities maintained the same rank, six increased in rank, and 16 decreased in rank (table 1). When compared to the average, 1990–92 constant dollar cash receipts, the 1993 value of cash receipts was greater than the 1990–92 average for eight commodities and less for 21 commodities (table 2). Of the top 10 commodities in 1993, eight were in the top 10 for the 1990–92 constant dollar average. Only three of the top 10 commodities had 1993 constant dollar cash receipts that exceeded their 1990–92 constant dollar average. Corn and sorghum grain were in the 1993 top 10, but did not rank in the top 10 for the 1990–92 constant dollar average. Wheat and potatoes ranked in the top 10 for the 1990–92 constant dollar average, but did not rank in the top 10 in 1993.

Constant dollar value of cash receipts increased 1.55% from 1992 to 1993, and the balance sheet for New Mexico's farm sector (table 3) shows a real increase in the value of assets. Farm debt also declined in real terms; however, the decrease was less than 0.01%. The debt-to-equity and debt-to-asset ratios decreased from 1992 to 1993 due to the increase in the value of assets and the decline in debt. The value of farm assets increased 0.06% in nominal terms, and 0.03% in real terms. This increase in asset value resulted primarily from the increase in real estate, which is the largest farm asset category. The increase in the total value of farm real estate reported by ERS in *Economic Indicators of the Farm Sector: State Financial Summary, 1993* occurred in spite of the decrease in per-acre value reported by ERS in *Agricultural Resources: Agricultural Land Values and Markets*. From 1992 to 1993, non-real estate debt increased 0.01% and real estate debt declined 0.02% in real terms.

THE MAJOR COMMODITIES

In 1993, the top 10 commodities accounted for 88.92% of the 1993 total value of cash receipts for New Mexico. These commodities were taken as the major commodities for New Mexico in 1993, and a more detailed analysis of the changes between 1992 and 1993 is presented. An important part of the detailed analysis is the disaggregation of the change in the value of production into its component parts: change due to difference in commodity price, change due to difference in the quantity of commodity produced, and the interaction of difference in price and difference in quantity.

With respect to cash receipts, the top 10 (of 33 total) counties account for 67.90% of New Mexico's total cash receipts (table 4). The top two counties, Chaves and Doña Ana, account for 26.17% of total value of production in New Mexico. Chaves County ranks in the top 10 for seven of the top 10 commodities. Doña Ana County ranks in the top 10 for six of the top 10 commodities.

[3] Farm income consists of proprietor's net farm income, the wages of hired farm labor, the payment-in-kind of hired farm labor, and the salaries of officers for corporate farms.

Table 1. Cash receipts, all commodities for New Mexico 1992–93.

	1993					1992			Percent change cash receipts 1992–1993	
Commodity	Rank	Cash receipts ($1000)[a]	Percent agricultural cash receipts	Cumulative percent of agricultural cash receipts	Cash receipts ($1000) (1990 = 100)[b]	Rank[c]	Cash receipts ($1000)[a]	Cash receipts ($1000) (1990 = 100)[b]	Nominal dollars	Constant dollars
Cattle and calves	1	763,886	49.55	49.55	688,021	1	709,526	657,061	7.66	4.71
Milk—wholesale	2	300,339	19.48	69.02	270,511	2	258,884	239,741	16.01	12.83
Hay	3	73,421	4.76	73.79	66,129	3	103,694	96,026	-29.19	-31.13
Chile	4	56,077	3.64	77.42	50,508	4	67,379	62,397	-16.77	-19.05
Onions	5	40,392	2.62	80.04	36,380	**7**	38,080	35,264	6.07	3.17
Greenhouse nursery	6	37,181	2.41	82.46	33,488	6	43,413	40,203	-14.36	-16.70
Cotton lint	7	33,014	2.14	84.60	29,735	**10**	22,342	20,690	47.77	43.72
Corn	8	23,462	1.52	86.12	21,132	**11**	19,718	18,260	18.99	15.73
Sorghum grain	9	21,613	1.40	87.52	19,467	9	21,686	20,082	-0.34	-3.07
Pecans	10	21,600	1.40	88.92	19,455	**5**	49,200	45,562	-56.10	-57.30
Wheat	11	21,588	1.40	90.32	19,444	**8**	32,741	30,320	-34.06	-35.87
Potatoes	12	19,010	1.23	91.55	17,122	12	20,897	19,352	-9.03	-11.52
Peanuts	13	18,988	1.23	92.79	17,102	13	18,985	17,581	0.02	-2.72
Eggs	14	16,693	1.08	93.87	15,035	**15**	14,645	13,562	13.98	10.86
Misc. vegetables	15	16,250	1.05	94.92	14,636	**14**	16,250	15,048	0.00	-2.74
Other livestock	16	13,533	0.88	95.80	12,189	16	13,247	12,267	2.16	-0.64
Sheep and lambs	17	11,017	0.71	96.51	9,923	**19**	10,390	9,622	6.03	3.13
Other field crops	18	10,706	0.69	97.21	9,643	18	10,583	9,800	1.16	-1.61
Milk retail	19	10,428	0.68	97.89	9,392	**17**	10,670	9,881	-2.27	-4.95
Lettuce	20	7,128	0.46	98.35	6,420	20	8,711	8,067	-18.17	-20.41
Dry beans	21	5,956	0.39	98.73	5,364	21	5,818	5,388	2.37	-0.43
Forest products	22	5,000	0.32	99.06	4,503	22	5,000	4,630	0.00	-2.74
Hogs and pigs	23	4,894	0.32	99.38	4,408	23	3,880	3,593	26.13	22.68
Cotton seed	24	3,785	0.25	99.62	3,409	**26**	2,348	2,174	61.20	56.78
Wool and mohair	25	2,463	0.16	99.78	2,218	**24**	3,859	3,574	-36.18	-37.92
Apples	26	1,757	0.11	99.90	1,583	**25**	2,535	2,348	-30.69	-32.59
Other fruits and nuts	27	1,540	0.10	100.00	1,387	27	1,540	1,426	0.00	-2.74
Other poultry	28	40	0.00	100.00	36	28	40	37	0.00	-2.74
Farm chickens	29	36	0.00	100.00	32	29	31	29	16.13	12.95
Total		1,541,797			1,388,673		1,516,092	1,403,987	1.70	-1.09

[a]Source: New Mexico Agricultural Statistics—1994, p.16. Data for 1992 have been revised.

[b]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.0266 for 1993 and 107.9848 for 1992.

[c]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank.

Table 2. Cash receipts, all commodities for New Mexico 1990–93.

	1993			1992			1991			1990		1990–92 average			
Commodity	Rank	Cash receipts ($1000)[a]	Cash receipts ($1000) (1990 = 100)[b]	Rank[e]	Cash receipts ($1000)[a]	Cash receipts ($1000) (1990 = 100)[b]	Rank[e]	Cash receipts ($1000)[c]	Cash receipts ($1000) (1990 = 100)[b]	Rank[e]	Cash receipts ($1000)[d]	Rank[e]	Cash receipts ($1000)	Cash receipts ($1000) (1990 = 100)	Cash receipts 1993>1990–92 average (1990 = 100)
Cattle and calves	1	763,886	688,021	1	709,526	657,091	1	710,374	680,365	1	744,496	1	721, 465	693,974	NO
Milk—wholesale	2	300,339	270,511	2	258,884	239,741	2	213,180	204,175	2	198,454	2	223,506	214,123	YES
Hay	3	73,421	66,129	3	64,331	59,574	3	114,065	109,247	3	114,224	3	97,540	94,348	NO
Chile	4	56,077	50,508	4	67,379	62,397	4	59,219	56,717	4	53,564	4	60,054	57,559	NO
Onions	5	40,392	36,380	**7**	38,080	35,264	5	44,538	42,657	**8**	40,000	**7**	40,873	39,307	NO
Greenhouse nursery	6	37,181	33,488	6	43,413	40,203	**7**	41,000	39,268	**7**	40,000	6	41,471	39,824	NO
Cotton lint	7	33,014	29,735	**10**	22,342	20,690	**8**	32,196	30,836	**6**	49,193	**8**	34,577	33,573	NO
Corn	8	23,462	21,132	**11**	19,718	18,260	**10**	19,299	18,484	**12**	18,486	**11**	19,168	18,410	YES
Sorghum grain	9	21,613	19,467	9	21,686	20,082	**13**	16,769	16,061	**17**	9,871	**15**	16,109	15,338	YES
Pecans	10	21,600	19,455	**5**	49,200	45,562	**6**	42,920	41,107	**5**	52,020	**5**	48,047	46,230	NO
Wheat	11	21,588	19,444	**8**	32,741	30,320	**9**	20,686	19,812	11	19,603	**9**	24,343	23,245	NO
Potatoes	12	19,010	17,122	12	20,897	19,352	**11**	18,976	18,174	**9**	26,311	**10**	22,061	21,279	NO
Peanuts	13	18,988	17,102	13	18,985	17,581	**15**	14,357	13,751	**10**	23,400	**12**	18,914	18,244	NO
Eggs	14	16,693	15,035	**15**	14,645	13,562	**12**	17,617	16,873	**13**	17,452	**13**	16,571	15,962	NO
Misc. vegetables	15	16,250	14,636	**14**	16,250	15,048	**14**	16,539	15,840	**14**	16,250	**14**	16,346	15,713	NO
Other livestock	16	13,533	12,189	16	13,247	12,267	16	13,362	12,798	**15**	13,591	16	13,400	12,885	NO
Sheep and lambs	17	11,017	9,923	**19**	10,390	9,622	**19**	8,135	7,791	**19**	8,544	**19**	9,023	8,652	YES
Other field crops	18	10,706	9,643	18	10,583	9,800	18	10,478	10,035	**16**	10,570	**17**	10,544	10,135	NO
Milk—retail	19	10,428	9,392	**17**	10,670	9,881	**20**	7,814	7,484	**18**	9,535	**18**	9,340	8,967	YES
Lettuce	20	7,128	6,420	20	8,711	8,067	**17**	12,083	11,573	**24**	4,319	20	8,371	7,986	NO
Dry beans	21	5,956	5,364	21	5,818	5,388	21	5,233	5,012	**20**	7,833	21	6,295	6,078	NO
Forest products	22	5,000	4,503	22	5,000	4,630	22	5,000	4,789	**23**	5,000	22	5,000	4,806	NO
Hogs and pigs	23	4,894	4,408	23	3,880	3,593	23	4,315	4,133	**25**	4,059	23	4,085	3,928	YES
Cotton seed	24	3,785	3,409	**26**	2,348	2,174	**25**	2,256	2,161	**22**	5,048	**25**	3,217	3,128	YES
Wool and mohair	25	2,463	2,218	**24**	3,859	3,574	**24**	3,101	2,970	**21**	5,170	**24**	4,043	3,905	NO
Apples	26	1,757	1,583	**25**	2,535	2,348	**27**	520	498	**27**	1,217	**27**	1,424	1,354	YES
Other fruits & nuts	27	1,540	1,387	27	1,540	1,426	**26**	1,540	1,475	**26**	1,610	**26**	1,563	1,504	NO
Other poultry	28	40	36	28	40	37	**29**	40	38	**29**	40	**29**	40	38	NO
Farm chickens	29	36	32	29	31	29	28	42	40	**28**	58	**28**	44	42	NO
Total		1,541,797	1,388,673		1,476,729	1,367,534			1,394,162		1,499,918				

[a]Source: New Mexico Agricultural Statistics—1994 p. 16. Data for 1992 have been revised.

[b]The Consumer Price Index with base year 1990 =100 was calculated to be 111.0266 for 1993, 107.9846 for 1992, and 104.5627 for 1991.

[c]Source New Mexico Agricultural Statistics—1992 p. 17

[e]Source New Mexico Agricultural Statistics—1991 p. 17

[f]Light shading indicates a higher nominal dollar rank in 1993 than in the respective year, dark shading indicates lower nominal dollar rank in 1993 than in the respective year, no shading indicates no change in nominal dollar rank between 1993 and the respective year.

Table 3. Change in balance sheet of New Mexico farm sector, 1992–93.[a]

	Number		Percent change
	1993	1992	1992–93
Farms	13,500	13,500	0.00

	1993		1992		Percent change 1991–1992	
	Millions dollars	Millions dollars (1990=100)[b]	Millions dollars	Millions dollars (1990=100)[b]	Nominal dollars	Constant dollars (1990=100)
Assets						
Real estate	9,891.5	8,909.1	9,346.1	8,655.0	0.06	0.03
Livestock and poultry	964.3	868.5	921.9	853.7	0.05	0.02
Machinery and motor vehicles	451.6	406.7	446.7	413.7	0.01	-0.02
Crops	76.5	68.9	64.2	59.5	0.19	0.16
Purchased inputs	36.1	32.5	21.0	19.4	0.72	0.67
Financial	419.9	378.2	386.8	358.2	0.09	0.06
Total farm assets[c]	11,839.9	10,664.0	11,186.7	10,359.5	0.06	0.03
Farm debt						
Real estate	569.2	512.7	563.4	521.7	0.01	-0.02
Non-real estate	503.5	453.5	484.1	448.3	0.04	0.01
Total farm debt[c]	1,072.7	966.2	1,047.5	970.0	0.02	-0.00
Equity	10,767.2	9,697.9	10,139.2	9,389.5	0.06	0.03
Ratios						
Debt/equity	9.96		10.33			
Debt/assets	9.06		9.36			

[a]Source: USDA, Economic Research Service Publication, ECIFS 13-2, January 1995. Data as of December 31,1993. Data are for farms with annual sales of $1,000 or more and include operator households. 1993 data are preliminary.

[b]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.0266 for 1993 and 107.9849 for 1992.

[c]Due to rounding, parts will not sum to total.

Table 4. Cash receipts for top 10 counties of New Mexico and county rank for the top 10 commodities, 1993.

County	Rank 1993	Rank 1992	Value ($1000)[a]	Percent of total value of NM production	Rank: Cattle and calves	Milk wholesale	Hay	Chile	Onions	Greenhouse nursery	Cotton lint	Corn	Sorghum grain	Pecans
Chaves	1	2	214,205	13.89	3	1	1	3	NR[c]	NA[d]	2	LR	10	2
Doña Ana	2	1	189,354	12.28	LR[b]	2	4	2	1	NA	1	LR	LR	1
Curry	3	3	145,472	9.44	1	4	8	LR	NR	NA	7	1	1	NR
Roosevelt	4	4	102,366	6.64	5	3	LR	LR	NR	NA	6	2	2	NR
Eddy	5	5	90,102	5.84	4	5	2	4	NR	NA	3	LR	7	5
Union	6	6	78,019	5.06	2	LR	LR	LR	NR	NA	LR	3	4	NR
Luna	7	7	68,421	4.44	10	LR	LR	1	2	NA	5	LR	5	4
Lea	8	9	61,422	3.98	8	6	7	8	NR	NA	4	10	6	6
San Juan	9	8	59,636	3.87	LR	LR	3	LR	NR	NA	LR	4	LR	NR
Socorro	10	11	37,884	2.46	LR	9	LR	9	NR	NA	LR	9	LR	NR
Total			1,046,881	67.90										

[a]Source: New Mexico Agricultural Statistics, 1994, p.18.

[b]LR indicates that the county did not rank in the top 10 for the commodity.

[c]NR indicates that county-level data is not kept that would allow the determination of the rank for the listed county.

[d]NA indicates that county-level data are not available.

Where possible the county-level analysis uses cash receipts; however, this is not possible for all commodities. At the county level, some commodity data is reported only in value of production. Differences in cash receipts and value of production arise for various reasons. In the case of commodities used in the production of another commodity (i.e. feed for livestock), sales do not account for the product consumed on the farm. In other cases, marketing issues such as grading and product damage result in final cash receipts lower than the value of production estimated at the county level. The cash receipts value represents the final reporting of the actual monetary value received by the producer from the product's sale.

Cattle and Calves

Cattle and calves were the number one commodity in 1993, with cash receipts of $763.9 million. Cash receipts from the top 10 counties in this sector comprised 54.36% of New Mexico's total cash receipts from cattle and calves (table 5). For the top 10 counties, nominal cash receipts increased 9.24% from 1992 to 1993. Constant dollar cash receipts decreased 6.25 % in 1993. Only Union County had a decline in cash receipts valued in constant dollars. In 1993, average sale price was $68.10/cwt for cattle and $94.90/cwt for calves (NM Ag. Statistics, 1994, p. 34). New Mexico cattle and calves totaled 1.37 million head as of January 1, 1993. This inventory represented a 2.14% decrease from 1992. The top 10 counties had an 1.64% decrease in the number of cattle and calves (table 5).

Milk

Wholesale milk ranked second with respect to cash receipts in 1993; however, county-level statistics include cash receipts from all milk sales. Therefore, comparison of county cash receipts for milk uses the receipts for all milk. Total milk production was 2,621 million pounds in 1993, resulting in cash receipts totaling $310.8 million. Cash receipts for the top 10 milk-producing counties constituted 98.60% of New Mexico's total cash receipts from milk. Chaves County led the state in cash receipts from milk with 37.67% of the state's total. Within the top 10, milk-producing counties, Eddy County experienced the greatest change in constant dollar cash receipts with an increase from $8,766,000 in 1992 to $18,853,000 in 1993, an increase of 109.18 %. Eddy County's 1993 increase was the third year that Eddy County had an increase greater than 100% (1991 = 240%, 1992 = 104.18%). Only one of the top 10 counties (Valencia) had a decrease in 1993. Percentage change in constant dollar cash receipts for the top 10 counties in the aggregate increased 12.20% in 1993. Average nominal price received for wholesale milk in 1993 was $11.70/cwt, a 4.10% decrease from the 1992 price of $12.20 (table 6).

The number of dairy cows in New Mexico was reported at 123,000 animals in 1993, a 21.78% increase over 1992 and a record high for the state. Replacement heifers numbered 27,000 (NM Ag. Statistics, 1994, p. 33).

Hay

Hay ranked third with respect to 1993 cash receipts. Total production for all hay was 1,434,000 tons in 1993, with a value of production of $150.6 million. Harvested acreage for 1993 was reported at 325,000 acres, 5,000 acres more than in 1992. Chaves County led in value of production from hay with 24.31% of the state total. Hay production in the top 10 counties comprised 73.54 of the state's hay production value. Statewide average yield per acre was reported at 4.41 tons, with an average price of $105.00 per ton. This represented an increase of 0.03 tons per acre and an increase of $7.50 per ton in price. Only three of the top 10 hay-producing counties (San Juan and Doña Ana) reported declines in constant dollar value of production ranging from 2.78 to 21.98%. Lea County experienced the greatest increase, 20.42%. The overall value of production for the top 10 counties declined 2.89% in constant dollars (table 7).

Chile

Chile ranked fourth with respect to cash receipts in 1993. Total chile production in 1993 was 117,000 processed tons: 81,000 tons of green and 36,000 tons of red (N.M. Ag. Statistics, 1993, p. 69). The 1993 total production dry weight equivalent was 46,345 with a value of $56.08 million. The value of production in the top 10 counties comprised 95.85% of the state's total for chile. Luna County led in value of production for chile with 30.51% of the state's total. Constant dollar value of production declined for seven of the top 10 counties, and decreased 18.38 % overall from 1992 to 1993. Within the top 10 chile-producing counties, Lea County experienced the greatest change in constant dollar cash receipts with an increase of 180.20%. Price per processed ton of chile averaged $260 for green and $880 for red (table 8).

Production in 1993 was 46,733 dry equivalent tons, down from the 1992 record high of 53,475. The dry weight yield was 1.55 tons per acre. Total harvested acreage in 1993 was 29,900, a 13.33% decrease from 1992.

Table 5. Cash receipts for cattle and calves and number on farms in the top 10 New Mexico counties, 1993.

	Cash receipts								Animal numbers			
	1993				1992				1993		1992	
County	Rank	Value ($1000)[a]	Percent of total cash cattle & calves receipts	Value ($1000) (1990 = 100)[b]	Rank[e]	Value ($1000)[a]	Value ($1000) (1990=100)b	Percent change in constant dollar value 1992–1993	Number on farm[c]	Rank	Number on farm[d]	Rank
Curry	1	77,938	10.20	70,198	1	73,454	68,023	3.20	101,000	2	102,000	2
Union	2	67,302	8.81	60,618	2	70,382	65,178	-7.00	101,000	2	115,000	1
Chaves	3	56,874	7.45	51,226	3	41,704	38,620	32.64	102,000	1	92,000	3
Eddy	4	46,693	6.11	42,056	4	42,473	39,332	6.92	63,000	4	62,000	4
Roosevelt	5	29,713	3.89	26,762	**7**	25,892	23,977	11.61	55,000	7	55,000	8
Colfax	6	29,513	3.86	26,582	**5**	27,116	25,111	5.86	60,000	5	61,000	5
Quay	7	29,022	3.80	26,140	**6**	27,116	25,111	4.10	59,000	6	60,000	6
Lea	8	27,054	3.54	24,367	**9**	23,899	22,132	10.10	52,000	9	52,500	9
Grant	9	26,562	3.48	23,924	**8**	24,818	22,983	4.09	54,000	8	56,000	7
Luna	10	24,609	3.22	22,165	10	23,294	21,572	2.75	44,000	15	47,000	13
Total		415,280	54.36	374,036		380,148	352,038	6.25	691,000[f]		702,500[f]	

[a]Source: New Mexico Agricultural Statistics, 1994, p.20.

[b]The Consumer Price Index, with base year 1990 = 100, was calculated to be 111.0266 for 1993 and 107.9849 for 1992.

[c]Source: New Mexico Agricultural Statistics, 1993, p.35.

[d]Source: New Mexico Agricultural Statistics, 1992, p.37.

[e]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in the nominal dollar rank.

[f]There were 1,370,000 cattle and calves on inventory as of January 1,1993. Source: New Mexico Agricultural Statistics, 1993, p.35. There were 1,400,000 cattle and calves on inventory as of January 1,1992. Source: New Mexico Agricultural Statistics, 1992, p.37.

Table 6. Cash receipts for milk in the top 10 New Mexico counties, 1993.[a]

	1993				1992			Percent change in constant dollar value 1992–1993
County	Rank	Value ($1000)[b]	Percent of total milk cash receipts	Value ($1000) (1990 = 100)[c]	Rank[d]	Value ($1000)[b]	Value ($1000) (1990=100)[c]	
Chaves	1	117,056	37.67	105,431	1	107,384	99,444	6.02
Doña Ana	2	64,225	20.67	57,846	2	56,979	52,766	9.63
Roosevelt	3	37,292	12.00	33,588	3	35,064	32,471	3.44
Curry	4	20,718	6.67	18,660	**4**	15,340	14,206	31.36
Eddy	5	18,853	6.07	16,981	**8**	8,766	8,118	109.18
Lea	6	14,917	4.80	13,436	**5**	12,053	11,162	20.37
Valencia	7	10,773	3.47	9,703	**6**	11,177	10,351	-6.26
Bernalillo	8	10,566	3.40	9,517	**7**	9,862	9,133	4.20
Socorro	9	8,287	2.67	7,464	9	5,479	5,074	47.11
Sandoval	10	3,729	1.20	3,359	10	3,506	3,247	3.45
Total[f]		306,416[e]	98.60	275,984[e]		265,610[e]	245,970	12.20

[a]County-level wholesale milk receipts are not reported; therefore receipts for all milk are used for the country ranking.

[b]Source: New Mexico Agricultural Statistics, 1994, p.20.

[c]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.0266 for 1993 and 107.9849 for 1992.

[d]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1992 than in 1991, no shading indicates no change in nominal dollar rank.

[e]Total milk production in New Mexico was 2,621 million pounds in 1993 and 2,174 million pounds in 1992. The wholesale price of milk was $11.70 per 100 pounds in 1993 and $12.20 per 100 pounds in 1992. Source: New Mexico Agricultural Statistics, 1994, p.37.

[f]Due to rounding some columns may not sum to the total.

Table 7. Value of production and production of hay in the top 10 New Mexico counties 1993.

	1993					1992					
County	Rank	Production tons[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 = 100)[c]	Rank[d]	Production tons[a]	Value ($1000)[b]	Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Chaves	1	348,610	36,604	24.31	32,969	1	335,500	32,711	30,292	3.91	8.83
Eddy	2	200,560	21,059	13.99	18,967	2	184,800	18,018	16,686	8.53	13.67
San Juan	3	136,140	14,295	9.49	12,875	3	154,760	15,089	13,973	-12.03	-7.86
Doña Ana	4	88,690	9,312	6.18	8,388	4	95,550	9,316	8,627	-7.18	-2.78
Socorro	5	60,030	6,303	4.19	5,677	5	59,400	5,792	5,363	1.06	5.85
Quay	6	50,860	5,340	3.55	4,810	**7**	49,500	4,826	4,469	2.75	7.62
Lea	7	46,470	4,879	3.24	4,395	**9**	40,420	3,941	3,650	14.97	20.42
Curry	8	45,560	4,784	3.18	4,309	8	43,200	4,212	3,901	5.46	10.46
Valencia	9	39,330	4,130	2.74	3,720	**6**	52,800	5,148	4,767	-25.51	-21.98
Taos	10	38,280	4,019	2.67	3,620	10	37,400	3,647	3,377	2.35	7.21
Total[f]		1,054,530	110,726	73.54[e]	99,729		1,053,330	102,700	95,106	0.11	-2.89

[a]Source. New Mexico Agricultural Statistics, 1994, p.51.
[b]Value production x price per ton. Price per ton $105.00 in 1932 and $97 50 in 1992 Source: New Mexico Agricultural Statistics, 1994, p.51.
[c]The Consumer Price Index with base year 1990=100 was calculated to be 111.0266 for 1993 and 107.9849 for 1992.
[d]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank
[e]The 1993 production for all hay was 1,434,000 tons with a value of production of $150,570,000. The 1992 production was 1,401,000 tons with a value of production of $136,597,000. The harvested acreage was 325,000 in 1993 with an average yield per acre of 4.41 tons. In 1992 the harvested acreage was 320,000 with an average yield per acre of 4.38 Source New Mexico Agricultural Statistics, 1994. p.51.
[f]Due to rounding some columns may not sum to the total.

Table 8. Value of production and production of chile in the top 10 New Mexico counties, 1993.

	1993					1992					
County	Rank	Production tons[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 = 100)[c]	Rank[d]	Production tons[a]	Value ($1000)[b]	Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Luna	1	14,260	17,255	30.51	15,541	1	19,220	24,217	22,426	-25.81	-30.70
Doña Ana	2	12,245	14,816	26.20	13,345	2	13,795	17,382	16,096	-11.24	-17.09
Chaves	3	4,495	5,439	9.62	4,899	**4**	5,115	6,445	5,968	-12.12	-17.92
Eddy	4	4,030	4,876	8.62	4,392	**3**	5,425	6,836	6,330	-25.71	-30.62
Hidalgo	5	3,178	3,845	6.80	3,463	5	3,643	4,590	4,250	-12.77	-18.52
Sierra	6	2,713	3,282	5.80	2,956	6	2,325	2,930	2,713	16.67	8.97
All other[e]	7	1,938	2,344	4.15	2,112	7	1,395	1,758	1,628	38.89	29.72
Lea	8	1,860	2,251	3.98	2,027	**9**	620	781	723	200.00	180.20
Socorro	9	853	1,032	1.82	929	**8**	930	1,172	1,085	-8.33	-14.38
Rio Arriba	10	388	469	0.83	422	**11**	310	391	362	25.00	16.75
Sandoval	10	388	469	0.83	422	10	388	488	452	0.00	-6.60
Bernalillo	10	388	469	0.83	422	**11**	310	391	362	25.00	16.75
Total[g]		46,733	56,546	100.00[f]	50,930		53,475	67,379	62,396	-12.61	-18.38

[a]Source: New Mexico Agricultural Statistics, 1994, p. 70. Production calculated as acreage harvested a yield per acre dry weight equivalent.
[b]Value = production x price per ton. Price per ton = $1,210 in 1993 and $1,260 in 1992 Source: New Mexico Agricultural Statistics, 1993, p.68.
[c]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.9266 for 1993 and 107.9848 for 1992.
[d]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank
[e]All other includes: Curry, De Baca, Lincoln, Otero, Quay, Roosevelt, San Juan, San Miguel, and Santa Fe counties.
[f]Total New Mexico production dry weight equivalent was 46,733 tons in 1993 and 53,475 tons in 1992. The state average yield per acre dry weight equivalent was 1.55 tons in 1993 and 1.55 tons in 1992. In 1993 the average price was $260 per ton for green and $880 for red. In 1992, the average price was $254 per ton for green and $935 per ton for red. Source: New Mexico Agricultural Statistics, 1993, p.69.
[g]Due to rounding some columns may not sum to the total.

Onions

In 1993, onions ranked fifth with respect to cash receipts. Total onion production was 4.1 million cwt[4] in 1993, and cash receipts for onions were $43.99 million. In nominal dollars, cash receipts increased 15.53% from 1992. In constant value dollars, cash receipts increased 15.55%. Doña Ana County accounted for 43.83% of the total value of production for onions. Sierra County experienced the largest change in constant dollar cash receipts with an increase of 26.12% (table 9).

Acreage planted in onions increased from 8,200 in 1992 to 9,900 in 1993. Acreage harvested increased from 8,000 in 1992 to 9,700 in 1993. The nominal price per hundredweight decreased from $11.90 in 1992 to $10.80 in 1993.

Greenhouse Nursery

At $41 million, greenhouse nursery ranked sixth in 1993. In nominal dollars, this represents a decrease of 14.36%. In constant dollars, the cash receipts for greenhouse nursery decreased 16.70% (table 1). Records of county-level cash receipts for greenhouse nursery products are not available from the New Mexico Crop and Livestock Reporting Service. Cash receipts include sales of plants grown and finished entirely in New Mexico, sales of plants imported into New Mexico and finished in New Mexico, and sales of plants imported into New Mexico as finished products.

Cotton Lint

Cotton production in New Mexico is concentrated in the state's southern and southeastern areas. Cotton lint ranked seventh with respect to cash receipts in 1993. In constant dollar value, cash receipts for cotton lint increased 45.85% from 1992. Cotton production in New Mexico is divided between Upland and American-Pima. Upland cotton accounted for 73.60 % of the 1993 total value of production for cotton. Acreage planted to Upland was 55,000 in 1992 and 53,500 in 1993. Acreage harvested was 53,500 in 1992 and 48,700 in 1993. The price per pound for Upland was $0.606 ($290.88 per 480-pound bale) in 1993, an increase of $.019 per pound from 1992. American-Pima acreage decreased from 13,000 in 1992 to 11,000 in 1993; acreage harvested decreased from 12,800 to 11,000. The 1993 price-per-pound for American-Pima was $0.913 ($438.24 per 480-pound bale), an increase of $0.067 from 1992 (table 10).

In constant dollar value, Curry County had the largest (1,254.94%) increase in Upland value of production. The Upland average increase in value of production in constant dollars was 54.88%. Doña Ana County accounted for 99.20% of New Mexico's value of production for American-Pima. Doña Ana's production decreased 7.51%, and the constant dollar value of production for New Mexico decreased 7.71%.

Corn

Corn ranked eighth in cash receipts in 1993 with $23.5 million. Cash receipts for corn harvested for grain in the top 10 counties accounted for 98.79% of New Mexico's total. For the top 10 counties, nominal cash receipts increased 30.47% from 1992 to 1993 while constant dollar cash receipts increased 26.90%. Three counties experienced a decrease in constant dollar cash receipts. Roosevelt County experienced the largest change in constant dollar cash receipts with an increase of 60.93% (table 11).

The price per bushel of corn increased 6.0% from $2.50 in 1992 to $2.65 in 1993. Corn acreage planted to all purposed increased from 105,000 in 1992 to 118,000 in 1993. Acreage harvested for grain increased from 71,000 to 85,000. These acreages represented an increase of 12.38% in planted acreage and 19.72% in acreage harvested for grain (NM Ag. Statistics, 1994, p. 55).

Sorghum Grain

Sorghum for grain ranked ninth in cash receipts in 1993, with $21.61 million. Value of production for sorghum harvested for grain in the top 10 counties accounted for 94.62% of New Mexico's total. For the top 10 counties the nominal value of production decreased 13.86% from 1992 to 1993, while constant dollar value of production decreased 16.23%. In constant dollar value, the value of production decreased for six counties. Within the top 10 sorghum-producing counties, Lea County experienced the greatest change in constant dollar value of production, with a decrease of 54.69% (table 12).

The price per bushel[5] of sorghum increased from $1.92 in 1992 to $2.75 in 1993. Sorghum acreage planted for all purposes decreased from 215,000 in 1992 to 210,000 in 1993. Acreage harvested for grain decreased from 205,000 to 165,000. These acreages represented an decrease of 2.33% in planted acreage and 19.51% in acreage harvested for grain (NM Ag. Statistics, 1994, p. 53).

[4]Production figures are in cwt, the reporting unit used by USDA. The industry reporting unit is the 50-pound sack.

[5]Production figures are in bushels, the reporting unit used by USDA. The industry reporting unit is cwt.

Table 9. Value of production and production of onions in New Mexico, 1993.

	1993					1992					
County	Rank	Production cwt (1000)[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 = 100)[c]	Rank[d]	Production cwt (1000)[d]	Value ($1000)[b]	Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Doña Ana	1	1,785	19,278	43.83	17,363	1	1,580	18,802	16,935	12.97	2.53
Luna	2	1,700	18,360	41.74	16,537	2	1,320	15,708	14,148	28.79	16.88
Sierra	3	189	2,041	4.64	1,838	3	136	1,618	1,458	38.97	26.12
Other counties[e]	4	399	4,309	9.80	3,881	4	163	1,940	1,747	144.79	122.16
Total[g]		4,073[f]	43,988	100	39,620		3,199[f]	38,068	34,287	27.32	15.55

[a]Source: New Mexico Agricultural Statistics, 1994, p.68.
[b]Value = production × price per cwt. Price per cwt = $10.80 in 1993 and $11.90 in 1992. Source: New Mexico Agricultural Statistics, 1994, p.68.
[c]The Consumer Price Index, with base year 1990 = 100, was calculated to be 111.0266 for 1993 and 107.9848 for 1992.
[d]Source: New Mexico Agricultural Statistics, 1993, p.67.
[e]Includes Chaves, Eddy, Socorro, Otero, Valencia, Curry, Roosevelt, and San Juan counties.
[f]In 1993, 9,900 acres of onions were planted and 9,700 were harvested, with an average yield of 420 cwt per acre
In 1992, 8,200 acres of onions were planted and 8,000 were harvested, with an average yield of 400 cwt per acre Source: New Mexico Agricultural Statistics, 1994, p.68.
[g]Due to rounding some columns may not sum to the total.

Table 10. Value of production and production of cotton in New Mexico, 1993.

County	1993 Rank	1993 Production 480 lb net bales[a]	1993 Value ($1000)[b]	1993 Percent of total value of N.M. production	1993 Value ($1000) (1990 =100)[c]	1992 Rank[e]	1992 Production 480 lb net bales[d]	1992 Value ($1000)[b]	1992 Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Upland											
Chaves	1	21,500	6,285	27.56	5,661	**2**	12,450	3,508	3,249	72.69	61.37
Eddy	2	15,300	4,472	19.62	4.028	**3**	12,050	3,395	3,144	26.97	18.65
Doña Ana	3	15,000	4,385	19.23	3,949	**1**	13,800	3,888	3,601	8.70	1.57
Lea	4	10,100	2,952	12.95	2,659	**5**	2,600	733	678	288.46	262.99
Luna	5	6,100	1,783	7.82	1,606	**4**	3,850	1,085	1,005	58.44	48.05
Roosevelt	6	3,600	1,052	4.62	948	**7**	700	197	183	414.29	380.57
Curry	7	2,900	848	3.72	764	**9**	200	56	52	1350.00	1254.94
Hidalgo	8	2,800	818	3.59	737	**6**	900	254	235	211.11	190.72
Quay	9	600	175	0.77	158	**8**	450	127	117	33.33	24.59
Other counties[f]	10	100	29	0.13	26	10	500	141	130	-80.00	
Total[i]		78,000	22,801	100.00	20,536		47,500	13,243	12,264	64.21	55.08
Pima											
Doña Ana	1	18,550	8,103	99.20	7,298	1	19,500	7,890	7,307	-4.87	-7.51
Other counties[g]	2	150	66	0.80	59	2	200	81	75	-25.00	-27.08
Total[i]		18,700	8,168	100.00	7,357		19,700	7,971	7,382	-5.08	-7.71
Total all cotton[i]		96,700[h]	30,969		27,893		67,200[h]	21,214	19,645	43.90	31.49

[a]Source: New Mexico Agricultural Statistics, 1994, p.57 for Upland cotton and p.59 for Pima cotton.

[b]Value = production 5 price per pound. Price per pound = $0.606 in 1993 and $0.587 in 1992 for Upland cotton. Source: New Mexico Agricultural Statistics, 1994, p 57. Price per pound = $0.910 in 1993 and $0.843 in 1992 for Pima cotton Source: New Mexico Agricultural Statistics, 1994, p.59.

[c]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.0266 for 1993 and 107.9848 for 1992

[d]Source: New Mexico Agricultural Statistics, 1993, p.58 for Upland cotton and p.60 for Pima cotton

[e]Light shading indicates a higher nominal dollar rank in 1993 than in 1992 dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank.

[f]Upland cotton: Includes Otero and Sierra counties

[g]Pima cotton: Includes Eddy, Hidalgo, and Luna counties

[h]In 1993, 53,500 acres of Upland cotton were planted and 48,700 acres were harvested, with an average yield of 769 lb per acre.
In 1992, 55,000 acres of Upland cotton were planted and 53,500 acres were harvested. with an average yield of 616 lb per acre.
In 1993, 11,000 acres of Pima cotton were planted and 11,000 acres were harvested, with an average yield of 816 lb per acre.
In 1992, 13,000 acres of Pima cotton were planted and 12,800 acres were harvested with an average yield of 739 lb per acre.
Source: New Mexico Agricultural Statistics, 1994, pp. 57–59.

[i]Due to rounding some columns may not sum to the total

Table 11. Value of production and production of corn harvested for grain in the top 10 New Mexico counties, 1993.

	1993					1992					
County	Rank	Production bushels (1000)[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 =100)[c]	Rank[e]	Production bushels (1000)[d]	Value ($1000)[b]	Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Curry	1	5,395,950	14,299,268	38.47	12,879,135	1	4,417,500	11,043,750	10,227,135	22.15	25.93
Roosevelt	2	2,912,000	7,716,800	20.76	6,950,405	**4**	1,865,500	4,663,750	4,318,895	56.10	60.93
Union	3	2,544,000	6,741,600	18.14	6,072,058	3	1,872,000	4,680,000	4,333,944	35.90	40.10
San Juan	4	2,171,500	5,754,475	15.48	5,182,969	**2**	2,159,200	5,398,000	4,998,852	0.57	3.68
Torrance	5	222,400	589,360	1.59	530,828	5	256,500	641,250	593,834	-13.29	-10.61
Hidalgo	6	208,800	553,320	1.49	498,367	**8**	143,750	359,375	332,801	45.25	49.75
Quay	7	165,600	438,840	1.18	395,257	**6**	243,000	607,500	562,579	-31.85	-29.74
Santa Fe	8	108,000	286,200	0.77	257,776	**7**	175,500	438,750	406,307	-38.46	-36.56
Socorro	9	69,500	184,175	0.50	165,884	9	63,250	158,125	146,433	9.88	13.28
Lea	10	58,000	153,700	0.41	138,435	NP[f]					
McKinley	12					**10**	60,500	151,250	140,066	23.97	
Total[g]		13,855,750	36,717,738	98.79	33,071,113		11,256,700	28,141,750	26,060,846	23.09	26.90

[a]Source: New Mexico Agricultural Statistics, 1994, p.56.
[b]Value = production × price per bu. Price per bu. = $2.65 in 1993 and $2.50 in 1992; source New Mexico Agricultural Statistics, 1994, p.55.
[c]The Consumer Price Index, with the base year 1990 = 100, was calculated to be 111.0266 for 1993 and 107.9848 for 1992.
[d]Source: New Mexico Agricultural Statistics, 1993, p.55.
[e]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank.
[f]NP indicates no production reported for the county for the time period.
[g]Due to rounding some columns may not sum to the total.

Table 12. Value of production and production of sorghum grain in the top 10 New Mexico counties, 1993.

	1993					1992					
County	Rank	Production bushels (1000)[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 =100)[c]	Rank[e]	Production bushels (1000)[d]	Value ($1000)[b]	Value ($1000) (1990 = 100)[c]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Curry	1	3,586.0	9,862	48.30	8,882	**2**	4,887.0	9,383	8,689	-26.62	2.22
Roosevelt	2	2,486.2	6,837	33.48	6,158	**1**	5,203.2	9,990	9,251	-52.22	-33.44
Quay	3	639.0	1,757	8.61	1,583	3	880.4	1,690	1,565	-27.42	1.11
Union	4	274.0	754	3.69	679	4	527.1	1,012	937	-48.02	-27.59
Luna	5	145.7	401	1.96	361	**6**	207.0	397	368	-29.61	-1.95
Lea	6	109.6	301	1.48	271	**5**	337.0	647	599	-67.48	-54.69
Eddy	7	55.3	152	0.74	137	7	105.4	202	187	-47.53	-26.91
De Baca	8	49.1	135	0.66	122	**9**	49.5	95	88	-0.81	38.18
Hidalgo	9	27.9	77	0.38	69	**8**	65.7	126	117	-57.53	-40.84
Chaves	10	23.8	65	0.32	59	10					
Other counties[f]							37.3	72	66		
Total[g]		7,397	20,341	99.62	18,321		12,299.6	23,615	21,869	-39.86	-16.23

[a]Source: New Mexico Agricultural Statistics, 1994, p.55.
[b]Value = production × price per bu. Price per bu. = $2.75 in 1993 and $1.92 in 1992. Source New Mexico Agricultural Statistics, 1994, p.53.
[c]The Consumer Price Index with base year 1990 = 100 was calculated to be 111.0266 for 1993 and 107.9848 for 1992.
[d]Source: New Mexico Agricultural Statistics, 1993, p.53.
[e]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank.
[f]In 1992 all other production was included in Other counties which included Chaves, Doña Ana, Harding, and San Miguel counties.
[g]Due to rounding some columns may not sum to the total.

Pecans

Although pecan production is limited to the state's southern counties, pecans ranked 10th with respect to cash receipts in 1993. Pecan production totaled 36 million pounds and generated $21.6 million in value of production in 1993. Doña Ana County reported the largest production, 25.1 million pounds, with a value of $15.1 million. Production in Doña Ana County was 69.72% of New Mexico's total. The average price per pound for pecans in 1993 was $0.60, a decrease 63.41% from 1992. The $0.60 price per pound was the lowest price in nominal value since 1975 (1975 = $0.57). However, in constant dollar terms, the 1993 price was the lowest price per pound that producers received during the period 1960–1993. Constant dollar value of production decreased for all counties from 1992 to 1993. Within the top 10 pecan-producing counties, Sierra County experienced the greatest change in constant dollar value of production with a decrease of 59.38%. In constant value dollars, pecans had a 57.30% decrease in value of production (table 13). The 36-million pound harvest was the largest pecan harvest reported in New Mexico to date.

ANALYSIS

Rank Order

The rank order of six of the top 10 commodities (cattle and calves, milk-wholesale, hay, chile, greenhouse nursery, and sorghum grain) remained unchanged from 1992 to 1993. Of the remaining four commodities in the top 10, three (onions, cotton lint, and corn) moved up in rank, and one (pecans) decreased. One of the top 10, corn, was not in the top 10 in 1992. Wheat was in the top 10 in 1992 but dropped to 11 in 1993. The top 10 commodities accounted for 88.92% of New Mexico's total cash receipts generated by agriculture. Cattle and calves ranked first and accounted for 49.55% of all agricultural cash receipts. Milk-wholesale ranked second and accounted for 19.48% of cash receipts (table 1).

Of New Mexico's top 10 commodities in 1993, pecans, onions, and sorghum ranked in the upper half of the states reporting for the respective commodities (table 14). New Mexico's pecan production ranked third out of 14. Cash receipts from pecans comprised 1.40% of New Mexico's total agricultural cash receipts. Although New Mexico ranked only sixth out of 15 in total national onion production, New Mexico is the largest U.S. producer of summer, non-storage onions. New Mexico's chile production ranks high at the national level, but national production statistics for chile are not reported separately from all peppers.

Changes 1992 to 1993

New Mexico experienced a 1.55% increase in agricultural cash receipts from 1992 to 1993 in constant dollars. Of the 29 commodities reported, 11 had an increase in constant dollar cash receipts. The increases ranged from 56.78% (cottonseed) to 3.13% (sheep and lambs). The decreases in constant dollar cash receipts ranged from 0.43% (dry beans) to 57.30% (cotton lint). Cash receipts were used to determine the top 10 commodities; however, where the data were not available, value of production figures were used to estimate the county-level production of the commodity.

Corn ranked in the top 10 commodities in 1993, but was not in the top 10 in 1992. From 1992 to 1993, cash receipts for corn increased 18.97% in nominal dollars and 15.73% in constant dollars. Wheat ranked in the top 10 commodities in 1992, but was not in the top 10 in 1993. From 1992 to 1993, cash receipts for wheat decreased 34.06% in nominal terms and 35.87% in constant dollars.

Components of Change in Value of Production

The analysis of changes in the value of production (VOP) requires that the change be separated into its components (see Appendix B). From an economic point of view, the change in VOP (ΔVOP) has three components. The first change, a quantity effect ($\Delta Q \times P$), results from the change in quantity (ΔQ) multiplied by the original price (P). The second change, a price effect ($\Delta P \times Q$), results from the change in price (ΔP) multiplied by the original quantity (Q). The third change, an interaction effect ($\Delta Q \times \Delta P$), results from the change in quantity (ΔQ) multiplied by the change in price (ΔP). Without a determination of these components, the relative impacts of the changes upon VOP cannot be determined, as it is possible for changes in price or quantity to partially offset or cancel one another.

Nominal Dollar Comparisons

The relative impacts of price and quantity changes in nominal dollars are shown in table 15. For six of the nine commodities[6] analyzed, ΔVOP in nominal dollars is positive. For five of the nine commodities, the change in VOP produced by the quantity effect was greater in absolute terms than the change resulting from the price effect. Based upon the relative dominance of the quantity effect for the individual producer during the period

[6]Available price and quantity data did not permit this analysis for cattle and calves and greenhouse nursery. For this analysis, cotton was divided into Upland and Pima. This results in 9 commodities for analysis.

Table 13. Value of production and production of pecans in New Mexico, 1993.

	1993					1992					
County	Rank	Production (1000 lb)[a]	Value ($1000)[b]	Percent of total value of N.M. production	Value ($1000) (1990 =100)[d]	Rank[e]	Production (1000 lb)[c]	Value ($1000)[b]	Value ($1000) (1990 = 100)[d]	Percent change in production 1992–1993	Percent change in constant dollar value 1992–1993
Doña Ana	1	25,100	15,060	69.72	13,564	1	20,886	34,253	31,720	20.18	-57.24
Chaves	2	3,950	2,370	10.97	2,135	2	3,300	5,412	5,012	19.70	-57.41
Otero	3	2,200	1,320	6.11	1,189	**4**	1,377	2,258	2,091	59.77	-43.15
Luna	4	1,660	996	4.61	897	**3**	1,827	2,996	2,775	-9.14	-67.67
Eddy	5	1,620	972	4.50	875	5	1,365	2,239	2,073	18.68	-57.77
Lea	6	970	582	2.69	524	6	813	1,333	1,235	19.31	-57.55
Sierra	7	250	150	0.69	135	7	219	359	333	14.16	-59.38
Other counties	8	250	150	0.69	135	8	213	349	323	17.37	-58.24
Total[f]		36,000	21,600	100.00	19,455		30,000	49,200	45,562	20.00	-57.30

[a]Source: New Mexico Agricultural Statistics, 1994, p.64.
[b]Value = production × price per lb. Price per lb. = $0.60 in 1993 and $1.64 in 1992. Source: New Mexico Agricultural Statistics, 1994, p.64.
[c]Source: New Mexico Agricultural Statistics, 1993, p.63.
[d]The Consumer Price Index, with base year 1990 = 100, was calculated to be 111.0266 for 1993 and 107.9848 for 1992.
[e]Light shading indicates a higher nominal dollar rank in 1993 than in 1992, dark shading indicates a lower nominal dollar rank in 1993 than in 1992, no shading indicates no change in nominal dollar rank.
[f]Due to rounding some columns may not sum to the total.

tqbl3 14

table 15

1992–93, market price had less impact on total cash receipts for the top 10 commodities than decisions and variables that influenced production and quantities marketed.

The relative changes and signs for ΔVOP and its components in nominal dollars are shown in fig. 1. In nominal terms the quantity effect was positive for six of the nine commodities. The price effect was positive for five of the nine commodities. The interaction effect was positive for four of the nine commodities. In three cases (hay, Upland cotton, and corn), price and quantity effects were both positive. In one case (chile), price and quantity effects were both negative. In two cases (milk-wholesale and onions), the positive change in VOP resulting from the quantity effect offsets all of the negative change in VOP resulting from the price effect. In one case (pecans), the positive change from the quantity effect offsets 31.5% of the negative change in VOP resulting from the price effect. In two cases (Pima cotton and sorghum), the positive change in VOP resulting from the price effect offsets all of the negative change in VOP resulting from the quantity effect. One commodity (chile) had negative results for both the price and quantity effects. For all commodities, the change in VOP resulting from the interaction effect is the smallest of the three change components. The interaction effect is positive in four cases (hay, chile, Upland cotton, and corn) and negative in five cases (milk-wholesale, onions, Pima cotton, sorghum, and pecans).

Constant Dollar Comparisons

The relative impacts of price and quantity changes on VOP in constant dollars are shown in table 16. For five of the nine commodities analyzed, ΔVOP in constant dollars is positive. For seven of the nine commodities, the change in VOP produced by the quantity effect was greater in absolute terms than the change resulting from the price effect. The change to constant dollar values did not change the importance of production and quantity marketed relative to price in the determination of ΔVOP.

The relative changes and signs for ΔVOP and its components in constant dollars are shown in fig. 2. In constant value terms the quantity effect was positive for six of the nine commodities. The price effect was positive for five of the nine commodities. The interaction effect was positive for four of the nine commodities. In three cases (hay, Upland cotton, and corn), the price and quantity effects were both positive. In two cases (milk-wholesale and onions), the positive change in VOP from the quantity effect offsets all the negative change in VOP from the price effect. In one case (pecans), the positive change in VOP from the quantity effects offsets 31.5% of the negative change in VOP from the price effects. In two cases (sorghum and Pima cotton) where price effect is positive and quantity effect is negative, the positive change in VOP from the price effect offsets 99.2% and 98.17%, respectively, of the negative change in VOP from the quantity effect. In constant value terms, one commodity (chile) had negative values for both the quantity and price effects. For all commodities, the interaction effect is the smallest of the three change components. The interaction effect is positive in four cases (hay, chile, Upland cotton, and corn) and negative in five cases (milk-wholesale, greenhouse nursery, Pima cotton, sorghum, and pecans).

REFERENCES

Economic Research Service, U.S. Department of Agriculture, *Agricultural Resources: Agricultural Land Values and Markets - Situation and Outlook Report*, June 1993.

Economic Research Service, U.S. Department of Agriculture, *Economic Indicators of the Farm Sector: State Financial Summary, 1993*, ECIFS 13-2, January 1995.

Regional Economic Information System (REIS), 1969-92 (compact disc), U.S. Department of Commerce, Economics & Statistics Administration, Bureau of Economic Analysis, November 1995.

Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II), U.S. Department of Commerce, Economics & Statistics Administration, Bureau of Economic Analysis, May 1992.

U.S. Department of Agriculture, *Agricultural Statistics, 1993*, Washington, D.C., 1994.

U.S. Department of Agriculture, New Mexico Crop and Livestock Reporting Service and New Mexico Department of Agriculture, *New Mexico Agricultural Statistics, 1993*, June 1994.

U.S. Department of Agriculture, New Mexico Crop and Livestock Reporting Service and New Mexico Department of Agriculture, *New Mexico Agricultural Statistics, 1994*, June 1995.

U.S. Department of Commerce, *1992 Census of Agriculture, Vol. 1 Geographic Area Series, Part 31 New Mexico State and County Data*, October 1994.

U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1994.

figure 1

figure 2

table 16

APPENDIX A:

Index Numbers and the Conversion of Nominal Dollar Values

Most economic and financial statistics recorded in the U.S. are reported in nominal dollars. These statistics measure value in the monetary value of the dollar of the given year. When these figures are used, comparisons between years include changes in the value of the dollar. To obtain meaningful comparisons between years, the values must have the effects of inflationary or deflationary price changes removed. One method of removing inflationary effects is to divide a given year's values by a price index. This procedure expresses product value in the given year as the dollar amount it would be if the value of the dollar had remained the same as in the base year.

No single price index is appropriate for making adjustments to the values of all goods and services. However, the Consumer Price Index (CPI) is frequently used to measure inflationary changes in the economy. Changes in the CPI indicate that consumer prices have changed by the amount of the change in the CPI, and these changes are taken to mean that the purchasing power of a dollar had changed by an equivalent amount. Cash receipts and value of production represent purchasing power of the New Mexico farm and ranch community. While other indices could be used to adjust the value of production or cash receipts, the CPI adjustment is an accepted method of adjusting nominal dollar values to arrive at a value in constant terms. The adjusted values provide a more accurate measure of real changes in the income of the farm and ranch community than do nominal dollars. This study will use the CPI to adjust nominal (yearly) values to constant dollar values.

The current CPI statistics maintained by the U.S. Department of Commerce take the period 1982–84 as the base year (1982–84 = 100). This study will use 1990 as the base year (1990 = 100). As a consequence, the Department of Commerce CPI figures have been adjusted as follows:

1982–84 = 100 [7]	1990 = 100
1983 = 99.0	1983 = 75.2825
1984 = 104.6	1984 = 78.7833
1985 = 108.0	1985 = 82.1293
1986 = 110.5	1986 = 84.0304
1987 = 114.3	1987 = 86.9202
1988 = 119.0	1988 = 90.4943
1989 = 124.6	1989 = 94.7529
1990 = 131.5	1990 = 100.0000
1991 = 137.5	1991 = 104.5627
1992 = 142.0	1992 = 107.9848
1993 = 146.0	1993 = 111.0266

Using the adjusted index number, conversion of the 1991 nominal dollar values uses the following equation:

$$_{93}D_{1990} = (D_{1993} \times 100)/111.0266$$

where:

$_{93}D_{1990}$ = the 1993 dollar value expressed in 1990 dollars, and
D_{1993} = the 1993 nominal dollar value.

For example, total farm assets in 1993 were valued at $11,839.9 million in 1993 nominal dollars. To obtain the value in 1990 dollars:

$$_{93}D_{1990} = (D_{1993} \times 100)/111.0266$$

$$_{93}D_{1990} = (\$11,839.9 \times 100)/111.0266$$

$$_{93}D_{1990} = \$10,664.0$$

Therefore, the total value of farm assets in 1993, when valued in 1990 dollars, is $10,664 million. This method is used to calculate the adjustments in 1992 and 1993 values throughout the report.

[7]CPI figures used in this report are for All Items, Western region of the U.S. *Source*: Statistical Abstract of the United States, 1993, U.S. Department of Commerce, Bureau of the Census, U.S. Government Printing Office, Washington, D.C., p.486.

APPENDIX B:

Impacts of Price and Quantity Changes on Cash Receipts and Value of Production

Changes in price (P) and quantity (Q) have direct impacts on the cash receipts received by producers and the value of production (VOP).[8] Four possible combinations of changes[9] are considered:

1. Case 1: an increase in price (↑P) × an increase in quantity (↑Q);
2. Case 2: (↑P) × a decrease in quantity (↓Q);
3. Case 3: a decrease in price (↓P) × (↑Q); and
4. Case 4: (↓P) × (↓Q).

The impacts of price and quantity changes on VOP can be illustrated using the figure shown above. The change in VOP (ΔVOP) is represented by three rectangles: ABGF, CFED, and FGHE. Area ABGF represents the part of ΔVOP that results from selling the original quantity at a new price.[10] Area CFED represents the part of ΔVOP that results from selling a new quantity at the original price.[11] Area FGHE represents the part of ΔVOP that results from selling the new quantity and the new price.[12] The relative sizes of ABGF and CFED will depend upon the relative sizes of the changes in price and quantity. In all cases, FGHE will be the smallest of the three areas.[13] The three areas may be

graphic

[8]Throughout this appendix *value of production* will be used in the discussion rather than the phrase, *cash receipts and value of production.*

[9]Four other combinations of change are possible: an increase or decrease in P, when Q remains constant; and an increase or decrease in Q, when P remains constant. The situation when P or Q for the individual is exactly the same as the previous year, results in two portions of the change in VOP being zero. When P does not change, there is no increase or decrease associated with P and no interaction of P with Q. If the change in Q is zero, the only change in VOP is represented by the rectangle ABGF. When Q does not change, there is no increase or decrease associated with Q and no interaction of Q with P. If the change in P is zero, the only change in VOP is represented by the rectangle CFED. Because these cases of no change from the previous year are less likely to occur for the individual producer, they are not considered in the discussion.

[10]When P increases, ABGF is positive (represents an addition to VOP). When P decreases, ABGF is negative (represents a reduction in VOP).

[11]When Q increases, CFED is positive (represents an addition to VOP). When Q decreases, CFED is negative (represents a reduction in VOP).

[12]FGHE depends upon the direction of change in both P and Q. When P and Q both increase or decrease, the change in VOP represented by FGHE is positive. When the change in either P or Q is a decrease, the change in VOP represented by FGHE is negative.

[13]In some analyses the value of FGHE is omitted due to the small impact on the total value of ΔVOP.

thought of as a price effect, a quantity effect, and an interaction effect, respectively. The use of discrete values (the original price and quantity values), rather than incremental changes in price and quantity in the calculations of the price and quantity effect, result in slight misspecifications of the price and quantity effect. The interaction term represents the adjustment that is necessary to arrive at the true value of ΔVOP.

Case 1

In Case 1, the price for the previous year is represented by OA and quantity for the previous year is OC. The previous year's VOP is represented by OAFC. In the current year, price increases to OB, quantity increases to OD and VOP is represented by OBHD. In Case 1, all three ΔVOP components (ABGF, CFED, and FGHE) are positive.

Case 2

In Case 2, the price for the previous year is represented by OA, and the quantity for the previous year is OD. The previous year's VOP is represented by OAFD. In the current year, price increases to OB, quantity decreases to OC, and VOP is represented by OBGC. In Case 2, the price effect component (ABGF) of ΔVOP is positive, and the quantity (CFED) and interaction effect (FGHE) components are negative.

Case 3

In Case 3, the price for the previous year is represented by OB and the quantity for the previous year is OC. The previous year's VOP is represented by OBGC. In the current year, price decreases to OA, quantity increases to OD, and VOP is represented by OAED. In Case 3, the price effect (ABGF) and interaction effect (FGHE) components are negative, and the quantity effect component (CFED) is positive.

Case 4

In Case 4, the price for the previous year is represented by OB and the quantity for the previous year is OD. The previous year's VOP is represented by OBHD. In the current year, price decreases to OA, quantity decreases to OC, and VOP is represented by OAFC. In Case 4, the price (ABGF) and quantity (CFED) effect components are negative, but the interaction effect component (FGHE) is positive.