1991 ARIZONA AGRICULTURAL STATISTICS

Issued August 1992

ARIZONA AGRICULTURAL STATISTICS SERVICE

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Bulletin S-27 August 1992 2.3 M.

NUMBER OF FARMS AND RANCHES

The number of farms and ranches in Arizona rebounded somewhat from 1990, rising by 200 to reach 8,000 in 1991. Land in Arizona farms and ranches stands at an estimated 36 million acres. The USDA defines a farm or ranch as "an establishment from which \$1,000 or more per year of agricultural products were sold, or normally could be sold." Arizona's farm numbers, such as those for the nation as a whole, include many farm operators who do not receive the majority of their income from agriculture.

Many of those farms with operators who rely on off-farm income are hobby farms and mini-ranches that dot suburban areas of the state. The 1987 census of agriculture showed that 28 percent of Arizona's farms were less than 10 acres in size, while nearly 75 percent were under 500 acres. Land in farms, along with "average size" of farm can be misleading, especially in the western states, since the term excludes all state and federal public grazing lands leased on a per-head basis. Also, Indian lands that bypass classification as land belonging to an individual operator are reported as a single farm or ranch by a central tribal source. Land belonging to Indian nations in Arizona, comprises over 20 million acres of the Grand Canyon State's farm and ranch acreage, from the pine-studded Kaibab reservation of the north to the rugged Tohono O'Ohdam lands that border Mexico. Native Americans were Arizona's first farmers, using highly specialized canal systems to irrigate Arizona fields centuries before Columbus' voyage.

Arizona's ranches range in size from small ranchettes with only a few acres to large spreads of over 100 square miles. Forty-six hundred operations reported cattle in 1991, 450 had sheep, but such unconventional livestock products such as buffalo, ostriches, and llamas are also raised.

Crop farms show an amazing diversity owing to the many climate conditions of the state. According to census data, operations reporting cotton numbered around 1,200, vegetables over 300, with 1,400 operators reporting hay.

Given such variety, it is difficult to present a picture of the size of a "typical" farm in Arizona. The approximately 1,200 cotton farms in the 1987 Census of Agriculture had an average of 320 acres of cotton. However, if those 297 farms with less than 100 total acres are excluded, the size of a typical cotton farm is 405 acres. Virtually all crop acreage in Arizona is irrigated, and farm numbers and planted acreage are sensitive to the availability and cost of what is probably the most valuable resource of all to Arizona agriculture: water.

NUMBER OF FARMS AND RANCHES: Selected States, 1987-91

State	1987	1988	1989	1990	1991
			Number		
ARIZONA California Colorado Idaho Montana Nevada New Mexico Oregon Texas Utah Wyoming	8,400 83,000 27,000 23,000 24,500 2,600 14,000 37,000 188,000 13,600 38,000 8,800	8,100 84,000 27,300 22,500 24,600 2,600 14,000 36,500 187,000 13,300 38,000 8,900	8,100 84,000 27,000 22,100 24,700 2,500 14,000 37,000 186,000 13,000 38,000 8,900	7,800 85,000 26,500 21,800 24,700 2,500 13,500 36,500 186,000 13,200 37,000 8,900	8,000 84,000 26,000 21,400 24,800 2,500 13,500 37,000 185,000 13,300 37,000 9,000
UNITED STATES	2,212,960	2,197,140	2,170,520	2,140,420	2,104,560

LAND IN FARMS AND RANCHES: Selected States, 1987-91

State	1987	1988	1989	1990	1991	Average size of farms and ranches 1991
			1,000 acres			Acres
ARIZONA California Colorado Idaho Montana Nevada New Mexico Oregon Texas Utah Washington Wyoming	37,000 31,900 34,000 13,800 60,800 8,900 44,600 17,900 133,200 11,300 16,000 34,800	36,500 31,600 33,700 13,700 60,700 8,900 44,500 17,800 132,000 11,300 16,000 34,800	36,000 31,300 33,500 13,700 60,600 8,900 44,500 17,800 132,000 11,300 16,000 34,800	36,000 30,800 33,100 13,700 60,500 8,900 44,500 17,800 132,000 11,300 16,000 34,800	36,000 30,300 32,800 13,500 60,300 8,900 44,300 17,800 131,000 11,300 16,000 34,800	4,500 361 1,262 631 2,431 3,560 3,281 481 708 850 432 3,867
JNITED STATES	998,923	994,543	991,153	987,420	982,576	467

VEGETABLES, MELONS AND POTATOES

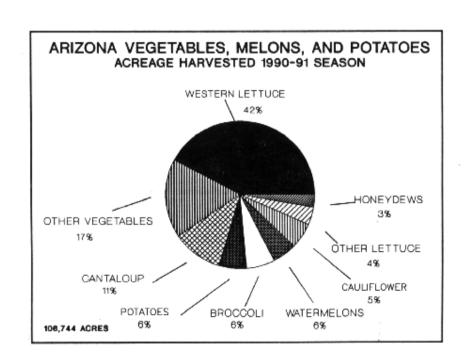
Vegetable growers in Arizona grow a variety of produce ranging from anise to zucchini. The mild winter climate and modern irrigation techniques along with multiple cropping allow vegetable producers to grow crops throughout the year. The seasons for commercial vegetable crops vary by crop, with farmers carefully timing harvests to meet the most advantageous "market window". Produce prices are highly variable and can often turn a money making field of crops into a loss --- overnight.

The summaries for western lettuce, carrots, broccoli and cauliflower reflect the 1990-91 growing season while other vegetable crops included represent the 1991 season. Where possible, monthly average prices are published to illustrate their erratic nature and seasonal fluctuation. Principal vegetables grown in Arizona include lettuce, carrots, broccoli, dry onions and cauliflower. In addition, potatoes, watermelons, cantaloupes and honeydews are major crops. Small acreages of several dozen "other" and "miscellaneous" vegetables are also raised. Over 106,000 acres were devoted to all vegetables, 90,100 to principal vegetables, melons, and potatoes. For the fresh market vegetables covered by the Agricultural Statistics Board, Arizona ranked third nationally in area harvested, production and value of production. California and Florida were ranked first and second.

The total value of all vegetables, melons, and potatoes produced in Arizona in 1991, estimated at \$270.6 million, increased 32.4 percent from the previous year's level. Principal vegetable and melon production accounted for \$247.1 million of the total and was up 35.4 percent from the 1990 value of production.

Head lettuce continued to be the most significant vegetable crop in Arizona, accounting for 55 percent of the total value of production for all vegetables. Melons, primarily, cantaloup, honeydews and watermelons, were second to lettuce in production and total value. Nationally, the state ranked second in broccoli, cauliflower and lettuce production, third in the production of honeydews and fourth in spring onion production.

"Miscellaneous" and "other" vegetables were harvested from over 16,000 acres, with a value of production estimated at \$54.2 million, 17 percent of the total value of all vegetables produced in Arizona. The most significant among these were leaf and romaine lettuce, greens, asparagus, and cabbage.



FRUITS AND NUTS

The 1990-91 crop year was another record setter for many Arizona fruit and nut producers with the total value of production for the sector jumping by over \$23 million to reach \$163 million.

The Citrus category (which accounted for two-thirds of total Arizona fruit and nut revenues) saw an increase in production value of 22.1 million dollars for the crop year ending in mid-1991. Elevated orange prices caused by 1990 holiday season freezes in California were responsible for most of the rise in citrus value of production. The season average price (packinghouse door) for Valencia oranges soared to a record high \$10.00 per carton, up from \$3.88 per carton for the previous season. Navel, sweet, and miscellaneous oranges season average prices rose over 32 percent, reaching \$7.08 per carton (packinghouse door), another all-time record.

Grapefruit growers saw season average prices decline 36 percent to earn \$3.20 per carton. Harvested acreage declined by 200 acres, but production rose 400,000 cartons, a 9 percent increase. The value of grapefruit production fell by 30.3 percent to attain \$15.3 million. Lemon season average prices also declined, falling by \$1.13 per carton to end the 1990-91 season at \$5.99. Lemon production rebounded by 46 percent from the disappointing 5,600 cartons of the 1989-90 season, and value of production of the 1990-91 season's 8,200 cartons rose over \$9 million in spite of lower prices. Tangerine season average prices grew by 14 percent, raising value of production to \$11.2 million.

Another important member of Arizona's fruit and nut category is the grape industry. Vineyard returns were 13 percent below their 1990 levels, and prices received were still well below the \$1,000 per ton level that prevailed during most of the 1980's.

The pecan production estimate for Arizona is combined with Kansas, Missouri, and Tennessee. Production in these four states totaled 20.7 million pounds, a 2 percent increase from the 20.3 million pounds produced in 1990. The average price received for pecans marketed in these four states, averaged \$1.29 compared with \$1.30 for the 1990 season.

The state's apple crop realized an increase of over 61 percent in total value of production from the prior year, with the amount pegged at nearly 7.9 million dollars. Much of the bearing acreage of over 4,000 acres lies in Cochise County near Willcox where winter "chill" requirements can be met. Production declined from a record 61.0 million pounds in 1990 to 56.0 million in 1991.

APPLES: Acreage, production, price and value, Arizona, 1989-91

Crop	Bearing	Utili	zation of product	ion	Season average	Value of	
year	acreage	Fresh	Processed	Total	price	production	
	Acres		Mil. lbs.		Dol. per lb.	1,000 dol.	
1989	4,400	12.8	21.2	34.0	.074	2,531	
1990	4,000	11.0	50.0	61.0	.080	4,892	
1991	4,000	14.9	41.1	56.0	.141	7,891	

PECANS: Production, price and value, four states, 1989-91 1/

Crop year	Utilized production	Price per pound	Value of production
	1,000 lbs.	Dollars	1,000 dollars
1989	16,300	.810	13,199
1990	20,250	1.300	26,243
1991	20,700	1.290	26,638

^{1/} Four states include Arizona, Kansas, Missouri and Tennessee.

CATTLE AND CALVES

Arizona's inventory of cattle and calves, taken on January 1, 1992, showed 900,000 cattle valued at over 535 million dollars, up 60,000 head and 15 million dollars from the previous January. While steers 500 pounds and over in inventory fell 18,000 head from 1991, 30,000 more beef cows and 44,000 additional heifers, steers, and bulls under 500 pounds accounted for most of the increase in the inventory. The 1991 calf crop of 300,000 head was 7.1 percent above the 1990 figure.

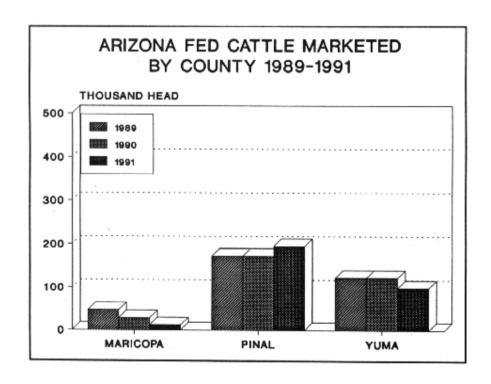
Record highs in cattle and calf prices occured during the Spring of 1991, with downward pressure during the second half of the year. The marketing year average price per hundredweight (cwt.) for all beef cattle rose to \$73.20, up from \$71.70 for 1990. Steers and heifers brought a marketing year average of \$76.60 per cwt., having peaked in May at \$83.40. Calf prices also reached record levels, hovering above \$100 per cwt. from February through May before ending the year at \$85.80. Calves averaged \$94.90 per cwt. for the 1991 marketing year, up \$3.00 from 1990.

Gross income on the 698 million pounds of marketings (excluding in-state interfarm sales and farm slaughter) rose 3.7 percent from 1990 to 1991 topping out at 519 million dollars.

Arizona's 13 feedlots marketed 306,000 head in 1991, a decline of 7,000 from the previous year. As of April 1, 1992, 203,000 cattle on feed were reported in Arizona. Of these, 194,000 were steers on feed for slaughter along with 9,000 heifers. Heifers on feed in Arizona feedlots historically have comprised less than 5 percent of the total number on feed.

Arizona's 22 livestock slaughtering establishments produced 238.8 million pounds of red meat during 1991, 12 million more pounds than in 1990. Nearly 350,000 cattle were slaughtered, an increase of over 5,000 head from the previous year.

In-shipments of cattle to Arizona from other states and Mexico fell over 6 percent during 1991 from their 1990 level. Most cattle shipped into Arizona are destined for feedlots. Fed cattle marketings account for about half of all cattle sold in Arizona.



ALL CATTLE: Monthly and marketing year average prices received by producers, Arizona, 1987-91

Year	Monthly ar	reb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Marketin year average
						Doll	ars per	cwt.				7.5	
						ALL B	EEF CATT	LE 1/					
							V0.00	61.10	61.60	57.60	57.60	59.90	61.00
1987	55.30	58.70	60.60	63.10	64.20	63.50	60.80	67.50	65.70	65.50	64.00	61.90	65.80
1988	59.50	65.10	68.00	66.80	69.40	65.50	64.50		63.70	62.40	61.70	67.30	66.30
1989	66.60	70.30	69.50	67.40	66.70	64.00	66.60	68.20	73.40	71.40	72.30	74.50	71.70
1990	68.60	69.20	74.20	69.20	70.20	70.70	71.50	73.90	70.80	69.80	66.90	66.20	73.20
1991	72.90	74.60	76.00	76.00	80.40	77.10	73.60	71.80	70.00	07.00			
						STEER	S AND H	EIFERS					
						45.00	63.30	65.50	66.80	64.60	64.40	64.00	64.6
1987	58.50	62.40	62.80	66.70	67.50	65.80		69.60	69.20	71.80	72.80	71.40	69.8
1988	65.90	68.00	69.60	70.70	72.50	68.20	66.40	73.60	70.40	71.50	73.10	75.10	72.9
1989	73.60	74.10	75.80	73.00	72.80	70.10	70.80	77.20	77.00	77.70	78.00	77.50	76.5
1990	75.80	77.20	77.30	77.10	75.80	73.70	73.70	73.70	73.80	76.70	71.20	69.00	76.6
1991	77.10	78.10	78.70	79.40	83.40	79.20	75.80	73.70	73.00	70	, , , , ,		
							CALVES						
						70 50	73.60	81.70	87.40	79.90	81.60	78.70	
1987	65.10	68.80	69.40	72.20	72.70	72.50	80.00	88.10	86.90	86.90		88.40	87.3
1988	87.00	90.60	86.90	86.10	87.20	78.20	84.80	92.20	90.10	86.60		80.70	86.7
1989	90.10	93.60	89.10	83.40	85.20	86.70	90.50	93.50	91.70	88.40		93.10	
1990	88.90	91.40	96.00	94.80	95.40		95.20	92.90	95.10	91.20		85.80	94.9
1991	95.20	101.00	103.00	103.00	102.00	94.00	93.20	92.70	,,,,,	,,,,,,			
							COWS						
				/0.00	41.40	41.70	42.50	44.00	45.70	43.00	42.10	43.30	
1987	40.00	41.80	43.00	42.20			43.40		44.40		43.40	44.90	
1988	46.90	48.10	48.70	46.90	45.40		45.70		48.50			44.60	
1989	46.40	51.80	47.60	46.10	44.30		49.90					50.20	51.
1990	48.00	54.80	53.00	51.50			49.90		47.20				49.
1991	49.90	52.10	54.20	54.10	52.90	51,10	40.00	40.20	71120	72721			-8

1/ Includes steers and helfers, and cows.

HORSES

The noble horse has been a vital part of Arizona agriculture for more than a century. Over a hundred years ago, the Arizona Territory had more horses than people and horses were a necessity for frontier living. As times have changed, so have the uses of horses. Today, pleasure use, horse racing, breeding, and general ranch use make up the primary use of horses.

University of Arizona researchers estimated that Arizona had over 166,400 horses in 1990. Just over half of these were classified as pleasure horses, those owned by private households and not used commercially. Approximately 3% of Arizona households own a pleasure horse according to the study. An estimated 47,600 horses were owned by 1,900 commercial horse operations. These are operations with over \$25,000 of annual expenses and/or two or more employees. The study found 4,800 semi-commercial horse operations with 33,000 horses.

The researchers found that the horse industry was directly responsible for nearly 10,000 jobs and \$460 million in expenditures annually in Arizona. Horses have a healthy appetite for Arizona agricultural products, as Arizona feed producers and alfalfa farmers can testify. The feed bill for Arizona's horse herd exceeds \$50 million dollars annually.

Households owning pleasure horses typically spend \$300 per year on veterinary services, \$310 for shoeing, \$1,200 for boarding and \$180 per year on miscellaneous expenditures. Total costs of ownership were \$4,600 per household once land, buildings, and equipment are figured in. The average pleasure horse household has slightly over two horses.

Wild horses still exist in untamed parts of Arizona. The U.S. Bureau of Land Management estimates that fewer than 1,000 wild horses inhabit sparsely settled desert rangeland in Mohave and Yuma counties. The BLM's Adopt-a-Horse program was founded in 1974 to permit the excess horse population to be humanely settled with families rather than be exterminated. In 1991, approximately 50 horses were purchased for the \$125 adoption fee.

SHEEP, LAMBS, AND WOOL

At the beginning of 1992, sheep and lamb inventories in Arizona stood at 225,000 head, a drop of 25,000 from the previous January. The number of stock sheep fell for the third consecutive year to 180,000 head, accounting for four-fifths of all sheep in the state. Breeding ewes declined by 13,000 to 150,000 head. New crop lambs fell 10 percent to 45,000 head, the lowest level since 1988. Sheep and lambs on feed remained at 45,000 head. Slightly under two-thirds of all sheep in the state are to be found on Indian reservations due to the rich cultural heritage and weaving traditions of Arizona's Native American population.

Sheep and lamb marketings rose to reach 22 million pounds. Average prices per hundredweight received by Arizona stockmen were again depressed for both sheep and lambs. The 19.80 per hundredweight price for sheep was 4.20 below the 1990 price. The 48.40 per hundredweight price for lambs was 13.70 under the 1990 level and was the lowest price since 1975. Cash receipts were 8.9 million dollars.

Inshipments rose to 106,000 head, up 6,000 from 1990. This increase, amid declines in inventories, reflects more winter grazing of sheep from Montana, Idaho, Colorado, Utah, New Mexico, and Wyoming on Arizona alfalfa fields. Inter-mountain sheep producers are finding the cost of shipping their sheep to Arizona is more than recovered by profitable weight gains under healthier conditions.

Average wool prices continued to decline, falling 33.3 percent, to reach 42 cents per pound, down from the 1990 price of 63 cents. Value of wool production dwindled to 626,000 dollars, the lowest level since 1971.

SHEEP: Number of operations and inventory, January 1, Arizona and United States, 1988-92 1/

Year	Ariz	ona		d States	
	Operations	Head	Operations	Head	
	Number	Thousand	Number	Thousand	
1988	500	284	113,440	10,945.4	
	450	284	111,140	10,857.5	
1989	450	262	108,940	11,363.3	
1990	450	250	105,710	11,200.1	
1991 1992	2/	225	2/	10,849.9	

^{1/} An operation is any place having one or more sheep on hand during the year.

SHEEP: By class, farm value and lamb crop, Arizona, January 1, 1988-92

Year	Stock sheep and lambs 1/		Sheep and All shee	All sheep	farm	value	Lamb crop		
	Ewes	Rams and wethers	lambs on feed 2/	and lambs	Per head	Total	Breeding ewes Jan. 1	Lambs saved	
***************************************		1,000	head		Dollars	1,000 dol.	1,000	head	
1988	208	29	47	284	89.50	25,418	180	125	
1989	211	28	45	284	90.00	25,560	185	130	
1990	197	23	42	262	89.00	23,318	170	115	
1991	185	20	45	250	80.00	20,000	163	10	
1991	165	15	45	225	83.00	18,675	150	3,	

^{1/} Ewes, rams and wethers of all ages excluding new crop lambs.

SHEEP AND LAMBS: Inventory, supply, and disposition, Arizona, 1987-January 1, 1992

Year Inventor January	Inventory	Lamb	Inshipments	Market	ings 1/	Farm	Deaths	
	January 1	crop		Sheep	Lambs	staughter 2/	Sheep	Lambs
				1,000	head			
1987	283	120	95	63	117	14	9	11
1988	284	125	93	67	117	13	9	12
1989	284	130	71	75	114	13	9	12
	262	115	100	71	124	13	8	11
1990				52	158	13	3	10
1991	250	105	106	32	150	13		12.53
1992	225							

^{1/}Includes animals for slaughter market, as well as younger animals shipped to other states for feeding or breeding purposes. Excludes interfarm sales within the State and farm slaughter.

^{2/} Not available until January 1993.

^{2/} Excludes stock sheep and lambs and new crop lambs.

^{3/} Not available until January, 1993.

^{2/} Excludes custom slaughter for farmers at commercial establishments.

WEATHER

Arizona's wide spectrum of climate and terrain support a remarkable agricultural diversity. While most crops are irrigated, (meaning yield variability is less influenced by rainfall here than in the rain-fed agricultural states), weather conditions are still important to crop farmers in making planting and harvesting decisions. Ranchers are especially dependent on the highly variable climate, with weather conditions diverging widely even on a single ranch due to altitudes and the fickle nature of localized gullywashers. Because of the unpredictable temperament of the state's climate and the fact that conditions can vary dramatically even in a single locality, statistics of local weather stations are only a broad generalization.

Rainfall statistics are one example of the extreme weather contrasts within Arizona. Yuma, with a long-term average of 2.65 inches per year, typically receives the lowest annual rainfall; while McNary, with an average of 27.24 inches, normally receives the most precipitation of major reporting stations. In 1991, this trend continued with Yuma's 3.16 inches of rain and McNary's 25.77 inches of precipitation.

One characteristic of Arizona agriculture is a long growing season. Both Phoenix and Yuma offered year around frost-free seasons and had no temperatures below 32 degrees during 1991. Buckeye, Chandler Heights, Gila Bend, Parker and Tucson each had longer than normal days without frost as well.

Nineteen-Ninety-One began with a storm system that brought three days of rain to most of Arizona, with January also bringing higher than average temperatures and rainfall amounts for portions of the state. Yuma received nearly an inch of rain in the month, 220 percent of normal.

February brought warmer than average conditions for the entire state and with March came cooling. Phoenix's average temperature for February, at 66 degrees, was nearly 10 degrees above normal. February's mean monthly temperatures exceeded those for March for most major reporting stations except Douglas and Winslow.

Spring brought more rain as storms swept through during March, leaving Parker with nearly five times the normal March precipitation. Some rain damage was reported to alfalfa stands in western Arizona and cool temperatures and precipitation delayed cotton seeding.

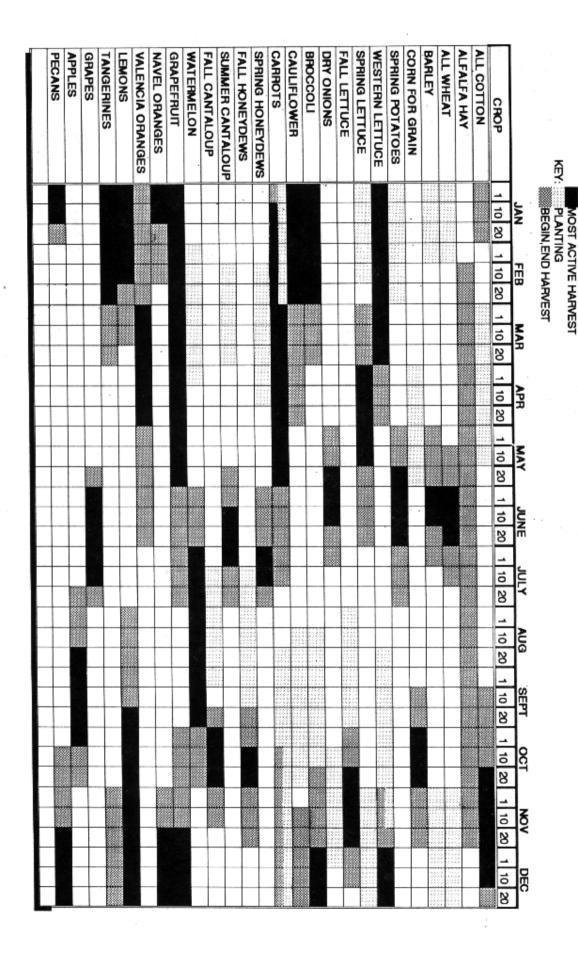
April and May brought cooler than average nights throughout cotton producing areas, slowing seed germination. Late frost nipped crops in eastern Arizona.

The late spring and summer months were marked by characteristically hot conditions throughout the state, though average temperatures for much of the state were below normal for May, June, and July. Such news brought little consolation to Yuma or Parker area farmers; even though average temperatures for those locations were 2 to 4 degrees below normal, the monthly average temperature still was above 90 degrees for August.

Summer rains were more irregular than usual. The normally, wet month of July saw below normal rainfall for most major stations except Casa Grande, Chandler Heights, Window Rock and Prescott. August and September saw scattered thunderstorm activity with western stations ending September above normal in rainfall, but parched regions, especially near Flagstaff, experienced below normal amounts. Summer range conditions and stock water availability were better than normal in the south but less than adequate in the north and central parts of the state.

Fall saw an especially warm October as the mercury reached 100 degrees in Phoenix and central areas for a record 15 days of the month. November brought rainfall amounts above normal in all areas of the state except extreme western Arizona. Winter temperatures were generally normal or above for most crop areas with first frosts occurring late or not at all. A key exception was portions of southeastern Arizona where the cotton crop was damaged by a hard freeze on the 28th of October.

The onset of winter saw first freeze dates delayed until late October for the higher elevations. Frost did not reach many middle elevations in central and southern Arizona until early December. Temperatures were above normal in most winter agricultural areas. Stockwater, soil moisture and range conditions ended the year rated poor in the north and fair in the south.



Usual Planting & Harvesting Dates