

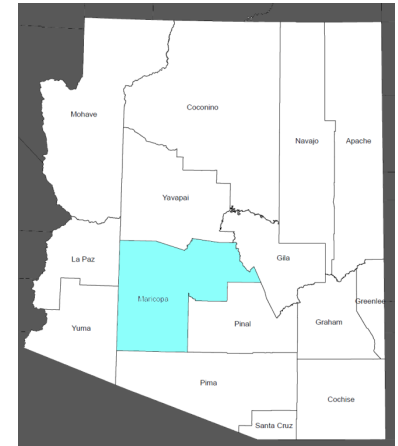
Maricopa County, AZ

Arizona County Agricultural Economy Profiles University of Arizona Cooperative Extension

Overview

Maricopa County is located in central Arizona and is home to the state capital Phoenix. It is Arizona's most populous county, with more than 4.4 million inhabitants. Only 2.4% of the county's population resides in rural areas. Maricopa County represents the largest county economy in the state. Top industries include a growing high-tech industry, manufacturing, and financial services. The county is also home to several higher education institutions including Arizona State University. On-farm agriculture accounts for approximately 0.3% of all private employment and directly contributes \$89.4 million in GDP to the county's \$247.6 billion economy.

Though small relative to total economic activity in the county, agriculture in Maricopa County plays a prominent role in the state's production of agricultural commodities. The county's fertile river valley land has been farmed for centuries by indigenous peoples. Today, a variety of crops are grown, including cotton, vegetables and melons, hay, and grains, however, county production is dominated by livestock, specifically milk production. Maricopa County accounts 31% of Arizona's total agricultural cash receipts.



Map of Maricopa County, Arizona

Indicator	Maricopa County	Arizona
Land Area (square miles)	9,224	113,990
Land in Farms (Crops, Grazing) (square miles)	741	40,822
Population (2018)	4,410,824	7,171,646
Annual Average Population Growth Rate (2010-18)	1.8%	1.4%
Percent of Population Over 65 (2018)	15.2%	17.5%
Percent Population Rural (2010)	2.4%	10.2%
Total Employment (2018)	1,993,417	2,826,095
Share Federal, State, & Local Government Employment (2018)	10.3%	13.8%
GDP (2018)	\$247.6 billion	\$348.3 billion
Ag, Forestry, & Hunting GDP (on-farm only) (2018)	\$89.4 million	\$2.3 billion

Industry	Location Quotient
Satellite telecommunications	16.29
Professional employer organizations	7.95
Other credit intermediation activities	7.60
Semiconductors and related device mfg.	6.89
Financial transaction processing and clearing	6.80
Solar electric power generation	6.13
Small arms and ordnance manufacturing	4.48
Translation and interpretation services	4.17
Land subdivision	3.93
Sales financing	3.93

Top 10 Private Industries in Maricopa County by Employment LQ

An economy can be characterized by the industries that make up the "base" of the economy. A common way to measure this is with location quotients (LQs), which measure the ratio of a particular industry's share of employment within a region to the same industry's share of national employment. An industry with a LQ greater than 1.25 is considered part of the economic base, exporting goods and services and bringing money into the region. LQs also help identify a region's areas of specialization. Higher LQs indicate greater specialization. Of the top 10 most concentrated industries in Maricopa County, agriculture does not rank among them. That said, the county is one of the top agricultural counties in the state, though due to the size of the county's economy, agriculture is outweighed by economic activity in the metro Phoenix area.

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Every 5 years, U.S. Department of Agriculture releases the Census of Agriculture, which provides the most comprehensive source of information on agricultural production by county. The Census provides information on the number of farms, types of crops and livestock produced, and farm characteristics, among other information. A farm is defined as any establishment that produced and sold, or could have sold, more than \$1,000 or more of agricultural products in the Census year. The following information comes from the most recent 2017 Census of Agriculture.

Farms

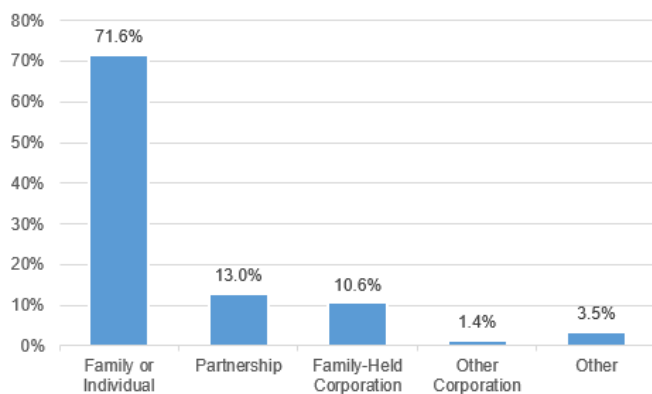
There were 1,874 farms in Maricopa County in 2017, covering 187,467 acres of cropland (95% irrigated) and 164,851 acres of pastureland (1% irrigated). The average farm size was 253 acres, smaller than the national average of 441 acres, with the top 3% of farms accounting for 72% of county acreage.

Of 1,874 farms, 724 had less than \$1,000 in sales and 186 had more than \$500,000 in sales. A majority of county farms (72%) are family- or individually-held, 13% were partnerships, 11% were family-held corporations, and 1.4% were non-family-held corporations.

Farms are classified by the type of agricultural products they produce. When a farm or ranch produces more than one agricultural product, they are classified by the product that constitutes more than 50% of their sales. The most common type of operation in Maricopa County is aquaculture and other animal production* (795 farms), followed by beef cattle ranching and farming (267 farms), and hay and all other crop farming (237 farms).

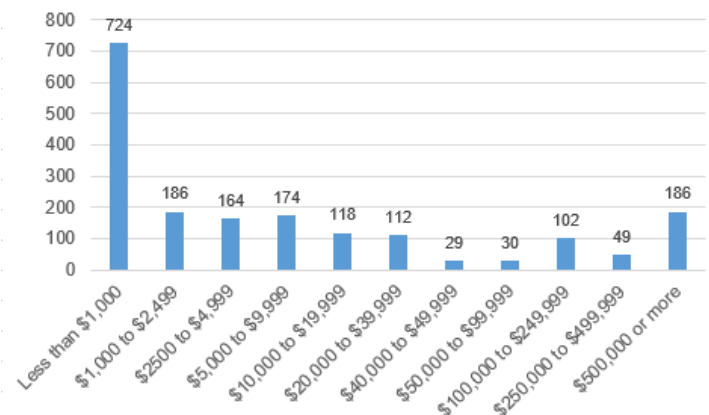
While the number of farms is helpful in understanding how many farms “specialize” in different types of agricultural production, it does not reflect the magnitude or scale of production by commodity, which is better captured by sales or cash receipts (next page).

Maricopa County Farms by Legal Organization, 2017



Source: USDA

Maricopa County Farms by Annual Sales, 2017



Source: USDA

Maricopa County Farms by Industry

Category	Farms
Total farms	1,874
Oilseed and grain farming	24
Vegetable and melon farming	27
Fruit and tree nut farming	176
Greenhouse, nursery, and floriculture production	49
Other crop farming	255
Cotton farming	18
Hay and all other crop farming	237
Beef cattle ranching and farming	267
Cattle feedlots	5
Dairy cattle and milk production	59
Hog and pig farming	34
Poultry and egg production	24
Sheep and goat farming	129
Aquaculture and other animal production*	795

* Includes farms where no single type of livestock accounts for more than 50% of farm sales.

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Production & Marketing

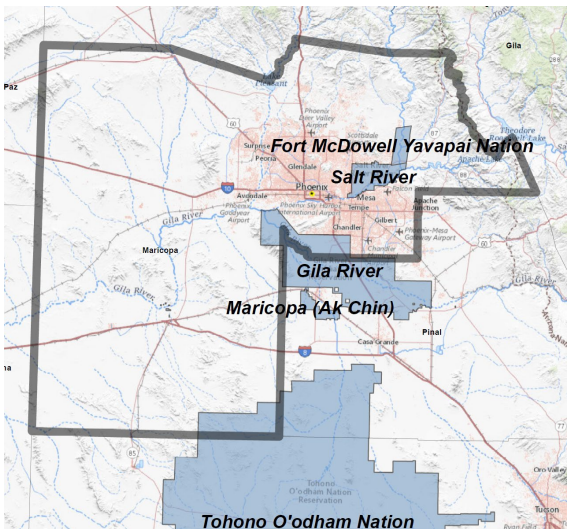
Maricopa County is a livestock-dominant county, with 61% of agricultural cash receipts originating from livestock and its products and 39% from sales of crops. Maricopa County is a major agricultural producer ranking in the top 1% of counties in the U.S. for sales of milk, other crops and hay, and vegetables and melons. Major agricultural commodities by sales include **milk from cows** (\$487.7 million), **vegetables, melons, potatoes, and sweet potatoes** (\$163.1 million), **other crops and hay** (\$129.5 million), and **nursery, greenhouse, floriculture, and sod** (\$123.7 million).

Local marketing represents roughly 12% of county cash receipts. Additionally, there were 18 farms with reported sales of organic production.

Tribal Agriculture

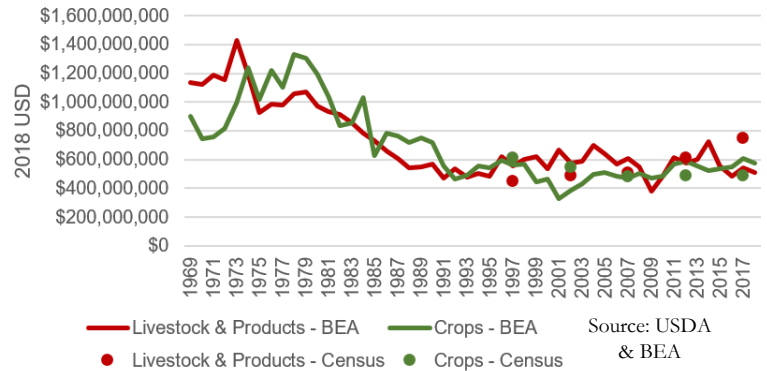
Maricopa County contains the Fort McDowell Yavapai Nation and the Salt River Pima-Maricopa Reservation, as well as portions of the Gila River Indian Community and the Tohono O'odham Nation. Statistics reported below represent production within entire tribal areas, therefore production occurring within the county is only a portion of the totals for tribal areas not fully within the county.

The Fort McDowell Yavapai Nation had 11 farms as of 2017; the Salt River Pima-Maricopa reservation had 8 farms, 5 of which farmed crops on 27,419 acres, with \$87.5 million in sales; the Gila River Indian Community, partially in Maricopa County, had 55 farms, 40,930 acres of crops, and \$32.8 million in sales, primarily cotton and hay; and the Tohono O'odham Nation had 164 farms, 8,603 acres of crops, and total sales of \$8.1 million.



Maricopa County Tribal Areas

Maricopa County Agricultural Cash Receipts for Crops & Livestock, 1969 to 2018



Central Arizona Ag History

Maricopa County and Central Arizona have long been a center of agricultural production. Agriculture in the area is estimated to date back to the fifth century A.D. when the Hohokam civilization farmed the area surrounding the confluence of the Salt and Gila Rivers. They developed a sophisticated system of hand-dug irrigation canals, measuring hundreds of miles in length. In fact, current day water conveyance systems in the region retrace portions of the original system.

In the late 1800s, non-native settlers arrived in the region. Flood control became problematic as agriculture expanded in major river valleys, and by the early 1900s major water infrastructure projects were underway, investing in large dams and reservoirs. The First World War marked a transition for agriculture in the region as long-staple cotton production expanded rapidly in the area to support the manufacture of tires for the war effort. By mid-century, Maricopa County had become one of the largest agricultural producing counties in the country.

Since that time, production has shifted to support dairy production, supplying the state's major population centers, and milk from cows is now the county's most valuable commodity in terms of sales. Nonetheless, the county continues to be an important producer of winter vegetables, fruit, and cotton. Maricopa County ranks 6th out of 1,892 counties nationally in its sales of milk from cows, 7th of 3,040 in other crops and hay, 20th of 2,821 in vegetables, melons, potatoes, and sweet potatoes, and 22nd for nursery, greenhouse, floriculture, and sod.

Source: *Contribution of Agriculture to the Maricopa County and Gila River Indian Community Economies (2018)* by Duval, D., Bickel, A.K., and Frisvold, G.

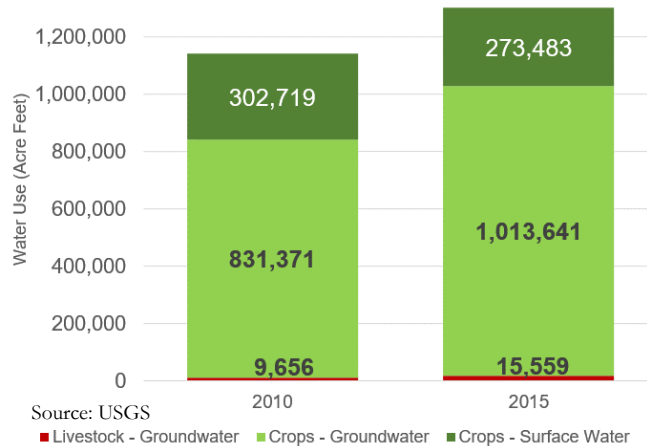
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Irrigation Water Use

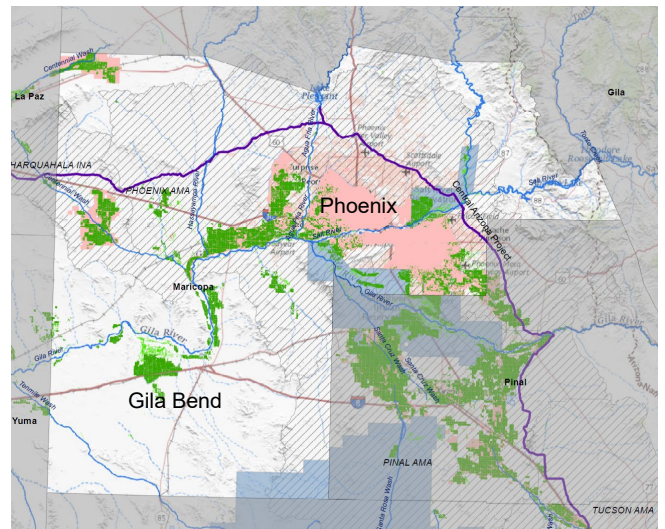
In Arizona, agriculture accounts for about 75% of the state's water use. More than half of withdrawals for agricultural uses in the state are from surface water. In some areas of the state with high demand, groundwater withdrawals for irrigated agriculture are limited by the 1980 Groundwater Management Act. This legislation established five Active Management Areas (AMA) as well as other Irrigation Non-Expansion Areas (INA) where groundwater pumping and expansion of irrigated agriculture are limited. Maricopa County has 48.8% of its land area in the Phoenix AMA, 4.1% in the Pinal AMA, 5.3% in the Harquahala INA, and 41.9% outside of an AMA or INA. Within the Phoenix AMA, total water demand has remained steady since its inception, though the share of water use consumed by agriculture has fallen from 58% in 1985 to 32% in 2017.

Based on 2015 USGS estimates of water use, agriculture accounted for 56.5% of Maricopa County water withdrawals, primarily for crop production. In 2015, an estimated 1,029,200 acre feet (AF) was sourced from groundwater for agricultural production and 273,483 AF was supplied by surface water. An acre-foot is the amount of water required to cover one acre one foot deep in water. Irrigated crop production is located throughout the county, but particularly in major river basins, such as the Gila and Salt Rivers, and their tributaries. Groundwater use increased between 2010 and 2015 and surface water use decreased. Meanwhile, total irrigated acreage is estimated to have increased between 2010 and 2015, primarily through acreage irrigated by gravity-flow irrigation.

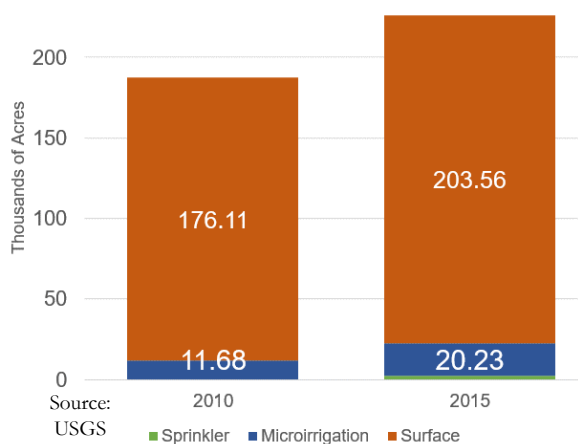
Maricopa County Agricultural Water Use by Use & Source



Maricopa County Water Map



Maricopa County Irrigated Acres by Irrigation Technology



Phoenix AMA Water Demand, 1985 - 2017

