

Contribution of Agriculture to the Maricopa County and Gila River Indian Community Economies

Dari Duval, Ashley Kerna Bickel, George Frisvold, Xinye Wu, Chenyang Hu
Department of Agricultural & Resource Economics, University of Arizona Cooperative Extension
for Maricopa County Food System Coalition
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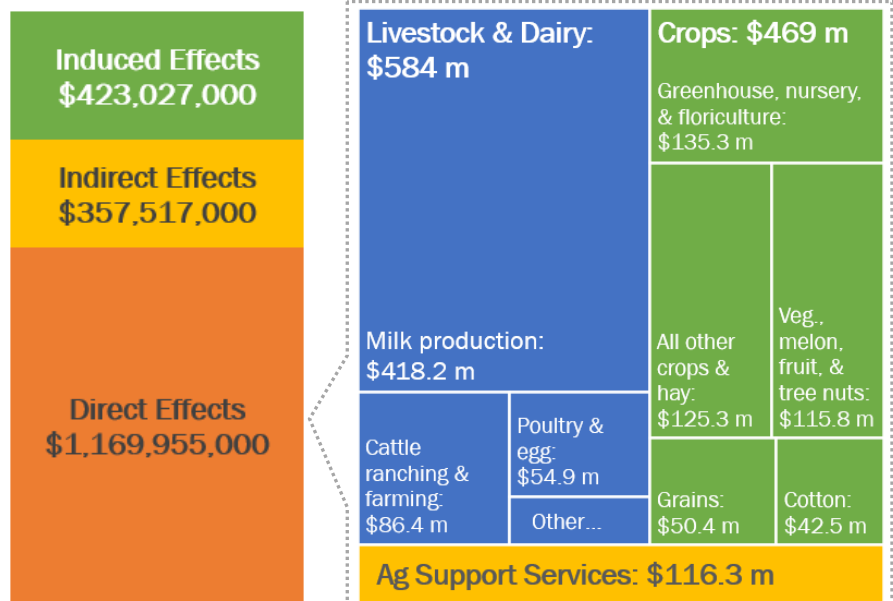
What Is the Issue?

Strategies to promote local and regional food systems benefit from a baseline understanding of existing agricultural activity and its role within the regional economy. Such understanding is needed to gauge the potential economic impacts of shifting production and marketing channels. This study estimates of the economic contribution of **on-farm agriculture** to the Maricopa County economy in 2015, as well as the regional economic contribution of agricultural activity taking place within the Gila River Indian Community. On-farm agriculture includes the cultivation and harvest of crops, livestock, and dairy production, while excluding downstream industries that process those primary agricultural goods into value added or manufactured products. In addition to the direct sales effects of commodities produced and agricultural support services provided, agricultural production supports additional economic activity in other non-agricultural industries in the region, known as multiplier effects. *Indirect* multiplier effects occur through business-to-business transactions when agricultural producers purchase goods and services for production, such as machinery or irrigation supplies. *Induced* multiplier effects occur through household-to-business transactions when people employed through agriculture pay mortgage or rent, visit a doctor, or buy groceries. This study provides an overview of the current state of agricultural production in Maricopa County and the Gila River Indian Community and their respective contributions to the regional economy.

What Did the Study Find?

- The total sales contribution of on-farm agriculture to the Maricopa County economy was **\$1.95 billion** in 2015, including direct, indirect, and induced effects.
- Direct sales effects, including cash receipts from crops, livestock, and dairy, and agricultural support services, were **\$1.2 billion**.
- According to study estimates, Maricopa County generated roughly \$469 million in sales from crops and \$584 million in sales from livestock, poultry and their products in 2015. The top 5 crop and livestock industries in Maricopa County were milk from cows; greenhouse, nursery, and floriculture production; all other crop farming (includes hay and alfalfa); vegetable and melon farming; and cattle ranching and farming.
- The total value added contribution, also known as gross state product (GSP), was **\$831 million**, including \$586 million in labor income, \$192 million in profits and other property type income, and \$52 million in taxes on production and imports.
- On-farm agriculture directly and indirectly supported roughly **14,200 jobs** in the Maricopa County economy, of which 9,190 were directly supported on-farm. These estimates include both hired labor and farm proprietors.

Total Sales Contribution of Agriculture to Maricopa County Economy, 2015



Rankings from the 2012 Census of Agriculture

1st

... Maricopa County's statewide rank in terms of total value of agriculture products sold.

1st

... Maricopa County's statewide rank for value of milk sales (from cows), as well as poultry and egg sales. Maricopa County ranked 11th nationally among counties for value of milk sales.

7th

... Maricopa County's national rank among counties for value of other crops and hay sales. Production of hay and forage crops supports the region's large dairy industry.

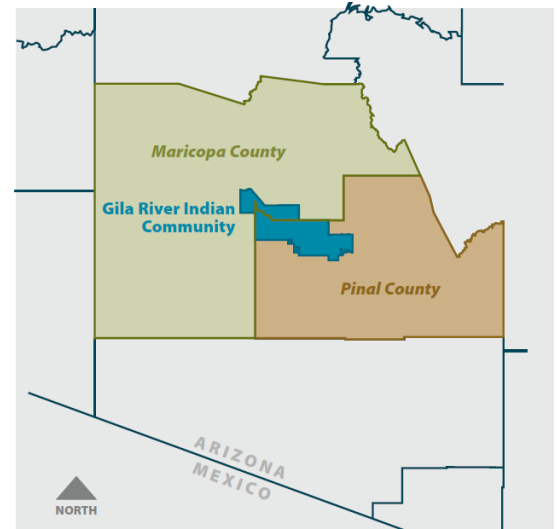
Top 1%

... Maricopa County's percentile rank nationally among counties for production of vegetable, potato, and melon crops.

Agriculture in the Gila River Indian Community

- The Gila River Indian Community is located in both Maricopa County and Pinal counties. According to the 2012 Census of Agriculture report on American Indian Reservations, the Gila River Indian Community had a total of 41 farms and 346,551 acres of land in farms.
- Agricultural production in the Gila River Indian Community is heavily dominated by crops. The most common type of agricultural operation in 2012 was operations producing forage and hay (19 farms). The second most common type of operation was those producing cotton (8 farms).
- Agricultural production within the Gila River Indian Community generated \$38.4 million in cash receipts in 2012 according to the Census of Agriculture. These cash receipts cannot be combined with figures for Maricopa County as part of the Gila River Indian Community is located within the county, and combining figures would lead to some double counting.

Map of Gila River Indian Community & Surrounding Counties



How was the study conducted?

On-farm agricultural production for Maricopa County and the Gila River Indian Community in 2015 was estimated using Bureau of Economic Analysis data on farm cash receipts, assuming relative production levels by industry as captured in the Census of Agriculture. Estimation is required because county-level production by commodity is available only every 5 years. Data from the Bureau of Economic Analysis, Bureau of Labor Statistics, and 2012 Census of Agriculture were used to update farm employment estimates. The IMPLAN 3.1 input output model and software for Maricopa County, AZ was used to estimate the total economic contribution of agriculture to the county economy, including multiplier effects. Unlike other recent studies of agribusiness's economic contribution in Arizona¹, this study looks only at on-farm activities: primary production of crops, livestock and dairy, and agricultural support services. More explicitly, this analysis defines on-farm agriculture as including NAICS² codes 111 (Crop Production), 112 (Animal Production and Aquaculture), and 115 (Support Activities for Agriculture and Forestry). This does not include agribusiness industries categorized under food and fiber manufacturing, chemical manufacturing, machinery manufacturing, wholesale, food and beverage retailers, and warehousing and storage.

¹ Kerna Bickel, A., Duval, D., & Frisvold, G. (2017). Arizona's Agribusiness System: Contributions to the State Economy. University of Arizona Department of Agricultural & Resource Economics, Cooperative Extension. Accessed at <https://cals.arizona.edu/arec/publication/arizonas-agribusiness-system-contributions-state-economy>

² North American Industry Classification System (NAICS) codes are used to categorize businesses by their economic activity for statistical purposes.