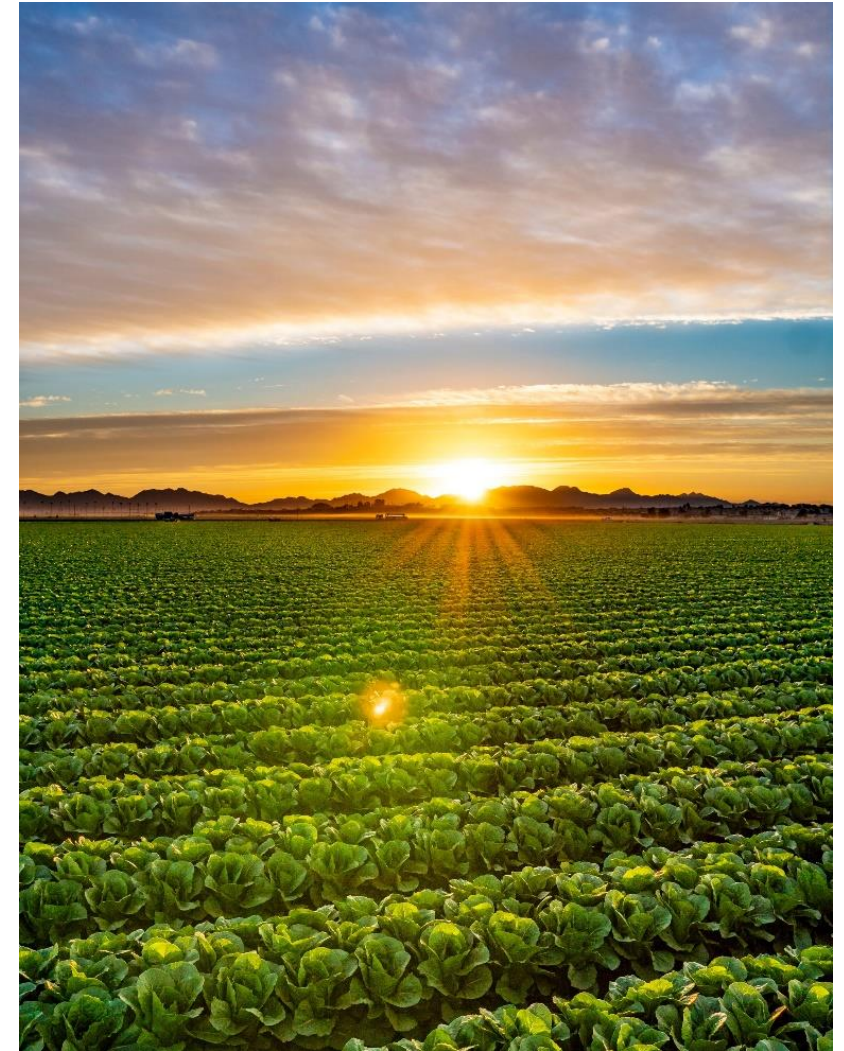


Arizona's Agribusiness System in the State Economy:

*An Economic Contribution Analysis for
2022*

**Claudia Montanía, Dari Duval, George Frisvold, José
Quintero**

Department of Agricultural & Resource Economics
University of Arizona Cooperative Extension

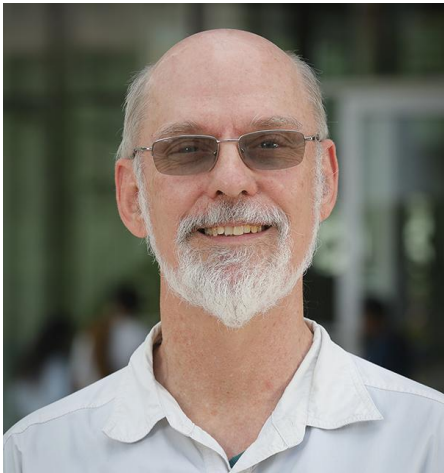


THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES
Cooperative Extension



COLLEGE OF AGRICULTURE & LIFE SCIENCES
Agricultural &
Resource Economics

Extension Regional Economic Analysis Program (REAP)



George Frisvold



Dari Duval



Claudia Montanía



José Quintero

Overview

- Study quantifies contribution of *agriculture & agribusiness* to Arizona's economy in 2022
- Update to 2017 statewide economic contribution analysis
- Full report consists of:
 - Background on Arizona agricultural production
 - Overview of direct economic activity of agriculture & agribusiness industries
 - Economic contribution analysis for 2022

Findings – Economic Contribution of Ag in AZ

Agriculture & agribusiness had a \$30.9 billion dollar (sales) economic contribution in Arizona in 2022, including multiplier effects

Direct Contribution — \$20.2 billion



Crop industries
\$3.0 billion



Livestock industries
\$2.2 billion



Ag support service industries
\$672 million



Ag input suppliers
\$1.0 billion



Ag Processing
\$10.9 billion



Distribution & Marketing
\$2.3 billion

Multiplier Effects — \$10.7 billion



Indirect Multiplier Effects
Business-to-business purchases
\$5.5 billion



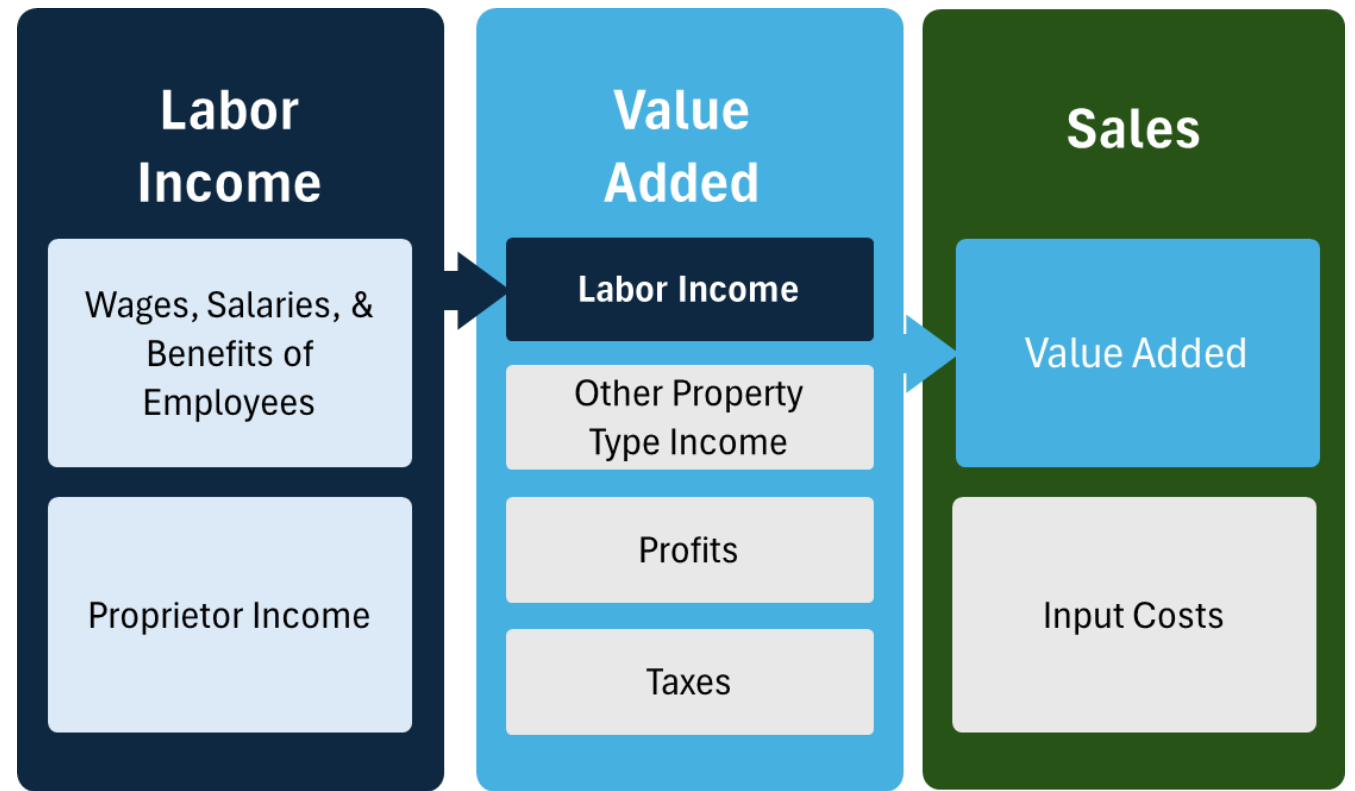
Induced Multiplier Effects
Household-to-business purchases
\$5.2 billion

Findings – Economic Contribution of Ag in AZ

\$30.9 billion sales contribution (direct & multiplier effects) includes...

- \$12.2 billion contribution to Gross State Product (state equivalent of GDP)
- \$7.2 billion in labor income (employee compensation & business owner income)

Relationship Between Economic Contribution Metrics

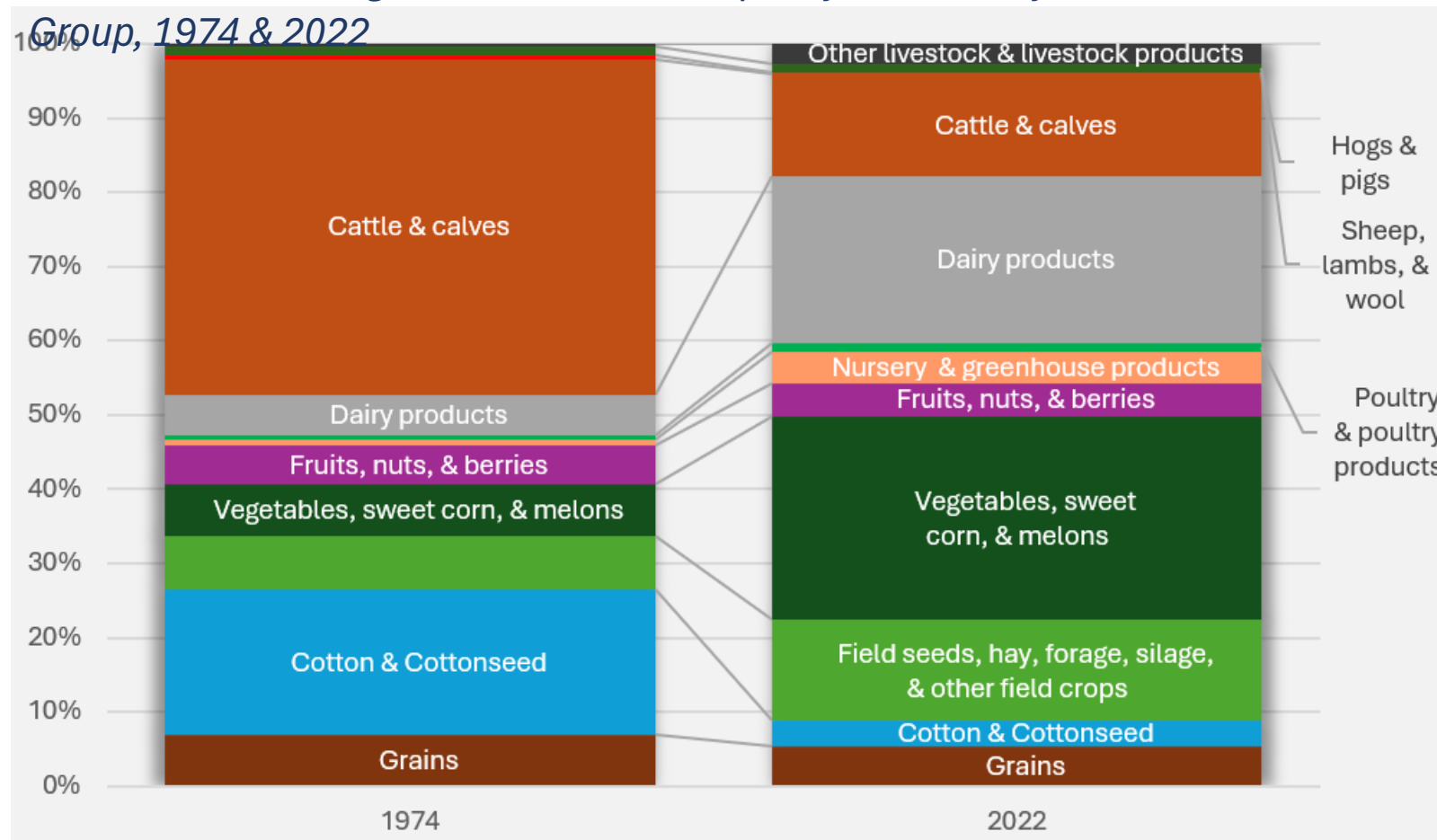


- 126,000 jobs

Findings – Agriculture in Arizona

Agriculture in Arizona has diversified over the past 50 years

Percent of Arizona Agricultural Cash Receipts by Commodity Group, 1974 & 2022



Source: 1974 & 2022 Censuses of Agriculture

From the 2022 Census of Agriculture

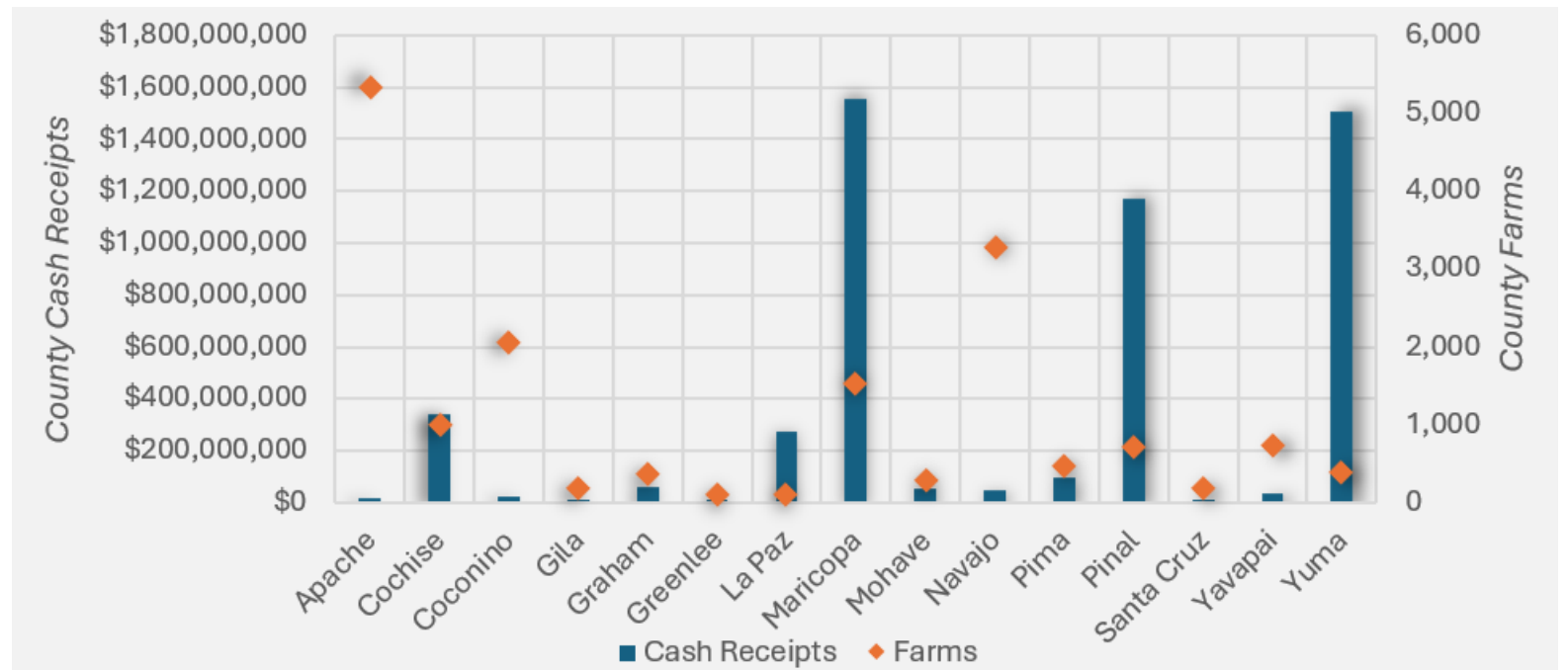
- There are 16,710 farm operations in Arizona
- Arizona farmers & ranchers manage \$24.2 billion in farm assets (land, buildings, and machinery)
- Arizona farmers & ranchers manage 25.5 million acres of land – 35% of Arizona's total land area
- 89% of Arizona farms are operated by families, individuals, or
- Arizona has the highest percent of female agricultural producers in the country, at 48%
- Arizona has the highest share of Native American & Alaska Native producers in the country, at 56%
- The top 5% of farms accounted for 97% of total agricultural sales
- The top 114 farms accounted for 75% of total agricultural sales

Findings – Agriculture in Arizona

Agriculture varies widely across the state...

- Commodities produced
- Size of farms
- Number of farms
- Sales per farm

Arizona County Agricultural Cash Receipts & Number of Farms,

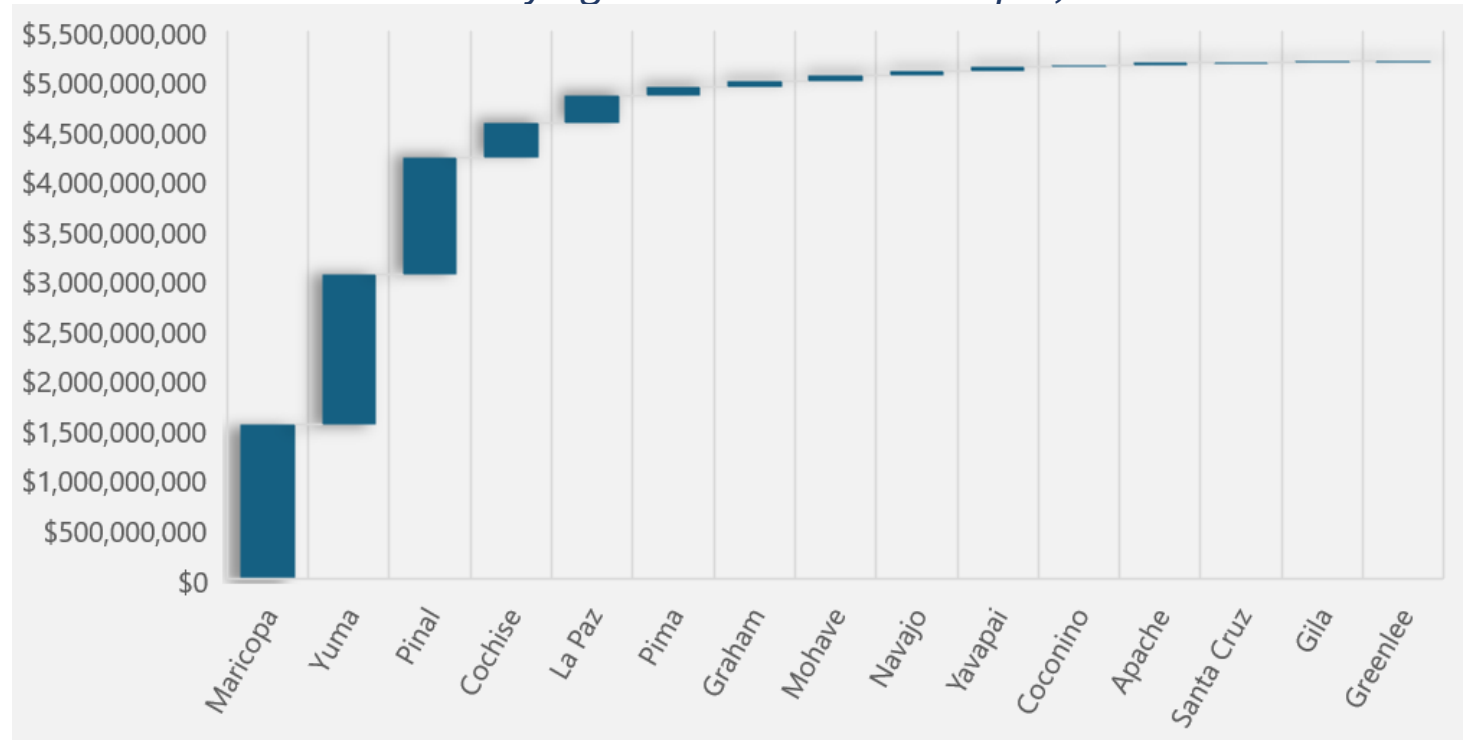


Source: 2022 Census of Agriculture

Findings – Agriculture in Arizona

Three counties were responsible for 81% of Arizona’s agricultural cash receipts in 2022 – Maricopa, Yuma, & Pinal

Cumulative Arizona County Agricultural Cash Receipts, 2022



Source: 2022 Census of Agriculture

Arizona County Rankings Among All US Counties

County	Commodity Group	Top %
Apache	Sheep, goats, wool, mohair, milk	4%
	Horses, ponies, mules, burros, donkeys	7%
	Vegetables, melons, potatoes, & sweet potatoes	21%
Coconino	Sheep, goats, wool, mohair, milk	4%
	Horses, ponies, mules, burros, donkeys	13%
	Cattle & calves	29%
	Vegetables, melons, potatoes, & sweet potatoes	33%
Gila	Horses, ponies, mules, burros, donkeys	4%
	Milk from cows	49%
Navajo	Sheep, goats, wool, mohair, milk	7%
	Horses, ponies, mules, burros, donkeys	16%
	Vegetables, melons, potatoes, & sweet potatoes	22%
	Nursery, greenhouse, floriculture, sod	33%
Yavapai	Horses, ponies, mules, burros, donkeys	2%
	Cattle & calves	30%
	Poultry & eggs	31%
	Sheep, goats, wool, mohair, milk	31%
	Vegetables, melons, potatoes, & sweet potatoes	35%

Arizona County Rankings Among All US Counties

County	Commodity Group	Top %
Mohave	Other crops & hay	3%
	Fruits, tree nuts, berries	8%
	Horses, ponies, mules, burros, donkeys	13%
	Vegetables, melons, potatoes, & sweet potatoes	29%
La Paz	Other crops & hay	1%
	All agricultural products	19%
Yuma	Vegetables, melons, potatoes, & sweet potatoes	0.1%
	All crops	0.4%
	All agricultural products	1%
	Other crops & hay	1%
	Fruits, tree nuts, berries	3%
	Cotton & cottonseed	22%
Pima	Grains, oilseeds, dry beans, dry peas	30%
	Horses, ponies, mules, burros, donkeys	5%
	Nursery, greenhouse, floriculture, sod	7%
	Other crops & hay	10%
	All crops	30%
	Cotton & cottonseed	32%

Arizona County Rankings Among All US Counties

County	Commodity Group	Top %
Maricopa	Other crops & hay	0.1%
	Vegetables, melons, potatoes, & sweet potatoes	1%
	Milk from cows	1%
	All crops	1%
	All agricultural products	1%
	Livestock, poultry, & products	1%
	Nursery, greenhouse, floriculture, sod	1%
	Cotton & cottonseed	22%
Pinal	Milk from cows	1%
	Cattle & calves	1%
	Livestock, poultry, & products	1%
	All agricultural products	1%
	Cotton & cottonseed	1%
	All crops	3%
	Nursery, greenhouse, floriculture, sod	3%
	Fruits, tree nuts, berries	6%
	Vegetables, melons, potatoes, & sweet potatoes	13%
Grains, oilseeds, dry beans, dry peas	26%	

Arizona County Rankings Among All US Counties

County	Commodity Group	Top %
Cochise	Fruits, tree nuts, berries	2%
	Other crops & hay	4%
	Vegetables, melons, potatoes, & sweet potatoes	8%
	All Crops	10%
	Horses, ponies, mules, burros, donkeys	18%
	Livestock, poultry, & products	19%
	Sheep, goats, wool, mohair, milk	22%
Graham	Cotton & cottonseed	10%
	Fruits, tree nuts, berries	12%
	Horses, ponies, mules, burros, donkeys	21%
	Other crops & hay	24%
	Hogs & pigs	26%
Greenlee	Sheep, goats, wool, mohair, milk	47%
	Hogs & pigs	51%
Santa Cruz	Cattle & calves	59%
	Vegetables, melons, potatoes, & sweet potatoes	67%

Findings – Agriculture in Arizona

Arizona plays a key role
national supply of a
variety of commodities

*Nationally Top-Ranking
Commodities Produced in
Arizona in Terms of
Weight, Acres Harvested,
& Yield, 2022*

	National Rank (Among States)			
Measure	1 st	2 nd	3 rd	Other
<i>Production (Weight)</i>	<ul style="list-style-type: none"> • Traditional or Indian corn • Jojoba 	<ul style="list-style-type: none"> • Spring durum wheat • Industrial hemp produced in the open • Angora mohair 	<ul style="list-style-type: none"> • Pima cotton • Bermuda grass seed 	<ul style="list-style-type: none"> • Alfalfa hay (8th) • Barley (9th)
<i>Acres Harvested</i>	<ul style="list-style-type: none"> • Spring durum wheat (irrigated) • Jojoba 	<ul style="list-style-type: none"> • Lettuce (total) • Head lettuce • Romaine lettuce • Leaf lettuce • Cantaloups • Broccoli • Spinach • Cauliflower • Traditional or Indian corn • Honeydew • Artichokes 	<ul style="list-style-type: none"> • Alfalfa (irrigated) • Pima cotton (irrigated) • Celery • Fresh cut herbs & parsley 	<ul style="list-style-type: none"> • Garlic (5th) • Kale (6th) • Watermelon (7th)
<i>Yield</i>	<ul style="list-style-type: none"> • Alfalfa (irrigated) • Sorghum (irrigated) • Spring durum wheat (irrigated) 	<ul style="list-style-type: none"> • Corn for grain • Upland cotton (irrigated) • Pima cotton (irrigated) 	<ul style="list-style-type: none"> • Barley (irrigated) 	

Findings – Agriculture Arizona

Regional specializations include...

- Vegetable & melon production, ag support services, and ag processing industries in Yuma County
- Dairies & alfalfa farming in Pinal & Maricopa counties
- Fresh produce import industry cluster in Santa Cruz County
- Vineyards / wineries in Cochise, Santa Cruz, Yavapai counties
- And many more...

Arizona County Employment Location Quotients, Ag & Agribusiness Industries, 2022	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
Crop Production															
Corn farming		10.3													
Other <u>vegetable</u> (except potato) & melon farming															71.9
Tree nut farming		40.2													
Other food crops grown under cover														7.5	
Cotton farming								1.4			2.8				
Hay farming		3.4						2.1				18.7			
All other miscellaneous crop farming												4.9			7.0
Livestock Production															
Beef cattle ranching and farming	2.0	3.0								2.4		3.5			
Cattle feedlots												5.9			
Dairy cattle and milk production												18.7			
Agricultural Support Services															
Soil preparation, planting, and cultivating												4.5			23.3
Crop harvesting, primarily by machine							43.2					4.1			93.8
Postharvest crop activities (except cotton ginning)		2.9											15.6		51.4
Farm labor contractors and crew leaders							5.4								49.7
Support activities for animal production														1.6	
Ag Input Suppliers															
Water supply and irrigation systems								1.7				313.7			4.9
Ag Processing Industries															
Perishable prepared food manufacturing								2.0							13.5
Wineries		4.6											9.8	9.0	
Ag Marketing & Distribution															
Fresh fruit and vegetable merchant wholesalers													162.8		1.6
Farm supplies merchant wholesalers		1.7					3.6					2.8			6.1
Freight transportation arrangement													18.2		
Refrigerated warehousing and storage													32.2		2.2
Specialized (LQ >= 1.25) Highly Specialized (LQ >= 100)															
■ = Not Specialized or Data Not Disclosed															

Yuma is to vegetable production & Santa Cruz, Co is to produce shipping what Hollywood is to the movie industry, Detroit is to the automobile industry, and New York is to the investment banking industry

County, State	Metro Area	Economic Activity	Location Quotient
Santa Cruz, AZ		Fresh fruit & vegetable wholesalers	162.8
Yuma, AZ		Crop harvesting	93.8
Santa Clara	Silicon Valley	Electronic computer manufacturing	67.7
Yuma, AZ		Vegetable & melon farming	58
Yuma, AZ		Postharvest crop activities	51.4
Yuma, AZ		Farm labor contractors & crew leaders	49.7
Snohomish, WA	Seattle Suburbs	Aerospace product & parts manufacturing	34.3
Santa Cruz, AZ		Refrigerated warehousing & storage	32.2
Cook, IL	Chicago	Securities & commodity exchanges	21.4
Wayne, MI	Detroit	Motor vehicle manufacturing	18.5
Harris, TX	Houston	Crude petroleum extraction	17.8
New York, NY	Manhattan	Investment banking & securities	14.1
Los Angeles	Hollywood	Motion picture & sound recording industries	11.4

Contact

George Frisvold
Professor & Extension Specialist
Department of Agricultural & Resource Economics
University of Arizona
frisvold@ag.arizona.edu