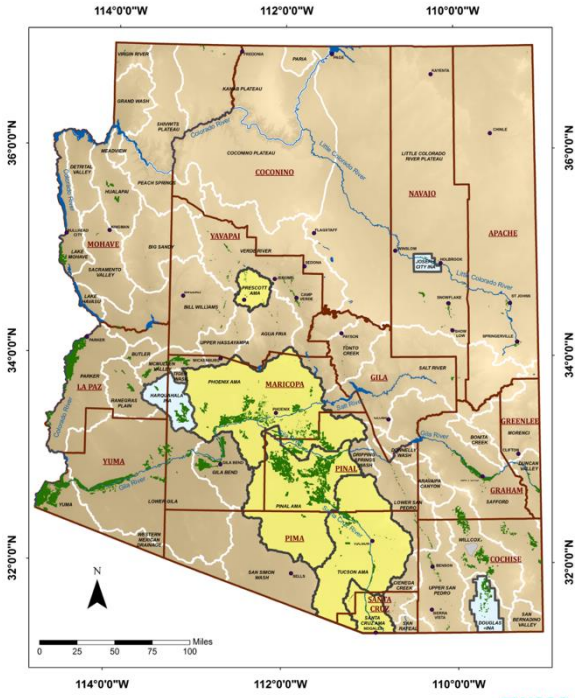


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# Creating Opportunities for a Changing Agriculture in Arizona

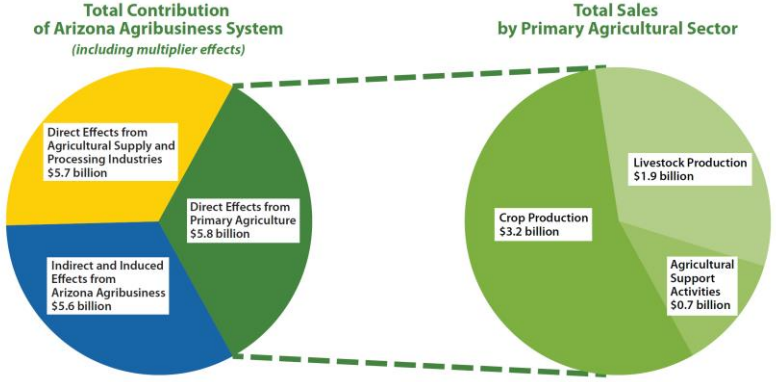
Ayman Mostafa




Commercial Agriculture land in Arizona

USGS

# Arizona Agriculture is a $30.9 Billion Industry




- **Three Counties ranking in the top 1% of all U.S. counties in a number of agricultural sales**
- **Support ≥ 126,000 full & part-time jobs**
- **Employing ≥ 160,000 unique workers.**

**TABLE 1** 2017 alfalfa hay yield by county (in tons per acre)

| | State, area, county | Yield (in tons/acre) |
|---|---|---|
| 1 | Arizona, Southern, Maricopa | 9.15 |
| 2 | Arizona, Northern, Mohave | 8.7 |
| 3 | Arizona, Southern, Pinal | 8.45 |
| 4 | Arizona, Southern, Lapaz | 8.15 |
| 5 | Arizona, Southern, Yuma | 7.6 |
| 6 | Washington, Southeast, Walla Walla | 7.3 |
| 7 | Arizona, Southern, Pima | 7 |
| 8 | New Mexico, Southwest, Sierra | 6.95 |
| 9 | New York, Southeast, Columbia | 6.9 |
| 10 | Arizona, Southern, Cochise | 6.65 |
| 11 | New Mexico, Southeast, Eddy | 6.5 |
| 12 | Washington, East Central, Grant | 6.45 |
| 13 | Washington, East Central, Adams | 6.4 |
| 14 | Illinois, Northwest, Putnam | 6.35 |
| 15 | Kansas, Southwest, Seward | 6.2 |
| 16 | Illinois, Southwest, St Clair | 6.05 |
| 17 | Colorado, Northeast, Morgan | 6 |
| 18 | Illinois, Southwest, Clinton | 5.95 |
| 18 | Kansas, Southwest, Grant | 5.95 |
| 20 | Colorado, East Central, Phillips | 5.85 |
| 20 | Illinois, Central, Mclean | 5.85 |
| 22 | New Mexico, Southeast, Chaves | 5.8 |
| 23 | Illinois, East Southeast, Cumberland | 5.75 |
| 23 | Illinois, Southwest, Randolph | 5.75 |
| 25 | Illinois, West Southwest, Bond | 5.65 |
| 25 | Kansas, Southwest, Gray | 5.65 |
| 27 | Idaho, Southwest, Owyhee | 5.55 |
| 27 | Nebraska, Southeast, Fillmore | 5.55 |
| 27 | Nebraska, Southwest, Hitchcock | 5.55 |
| 30 | Idaho, South Central, Cassia | 5.5 |
| 30 | New Mexico, Northeast, Torrance | 5.5 |
| 30 | Oregon, Southeast, Jefferson | 5.5 |

**National average 3.34**



**Significant dairy**



**Yuma**
**Winter salad bowl**

**Arizona tops US upland yields per acre**



**Arizona's High Quality Durum Wheat has Global Celebrity Status**

# Challenges, Needs and Limited Resources

- Management of water resources & drought
- Urbanization and land loss
- Climate change
- Labor Shortage
- Supply chain, trade, inflation, and economic uncertainty.
- Regulations and Policy shifts



# Arizona Water Resources and demands

## Arizona's Water Supply




## Arizona's Water Use Sectors




**Diminishing water availability in the Colorado River Basin**

**Aridification, Megadrought, Crisis**





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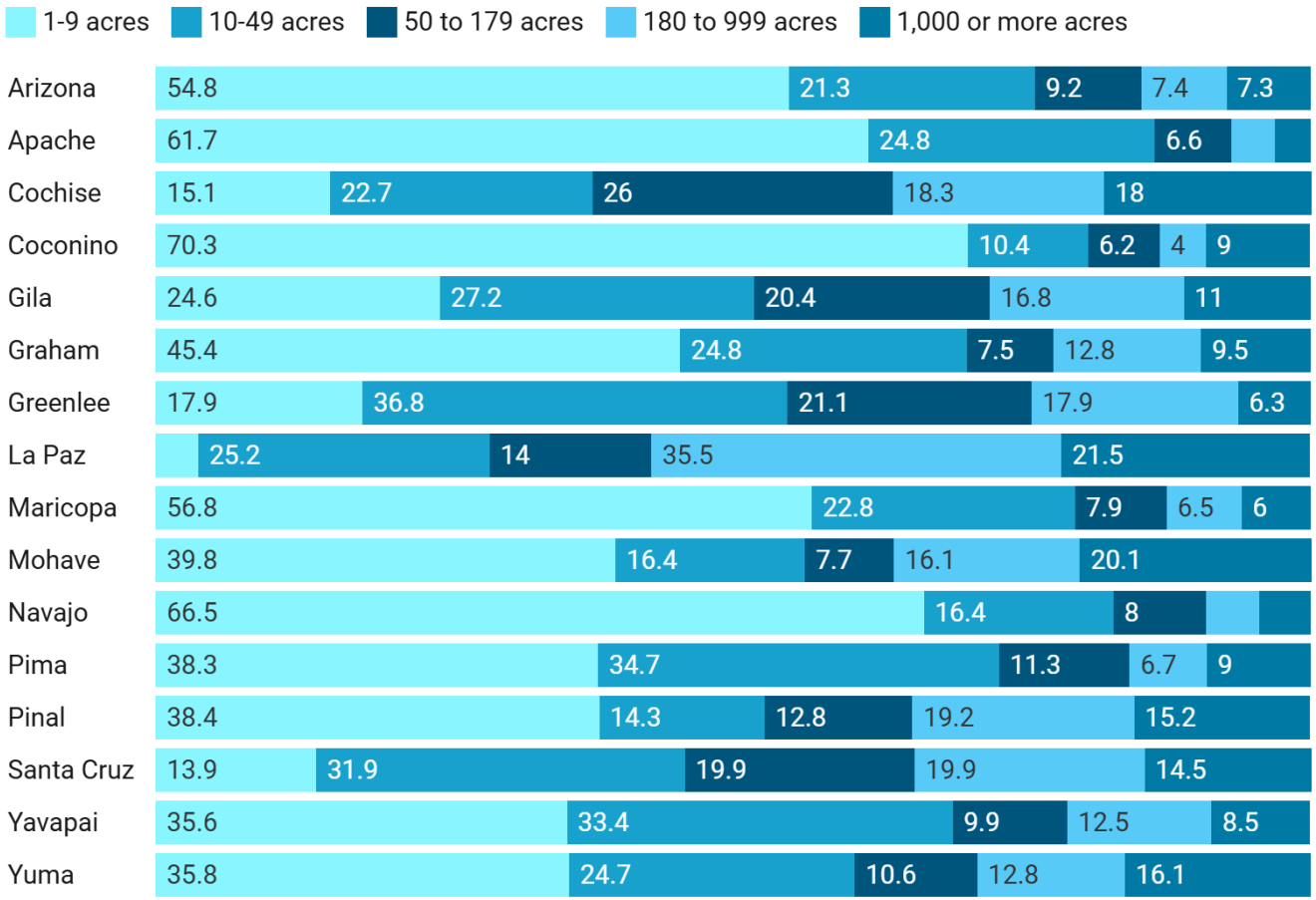
# Creating Opportunities for a Changing Agriculture in Arizona

Ayman Mostafa

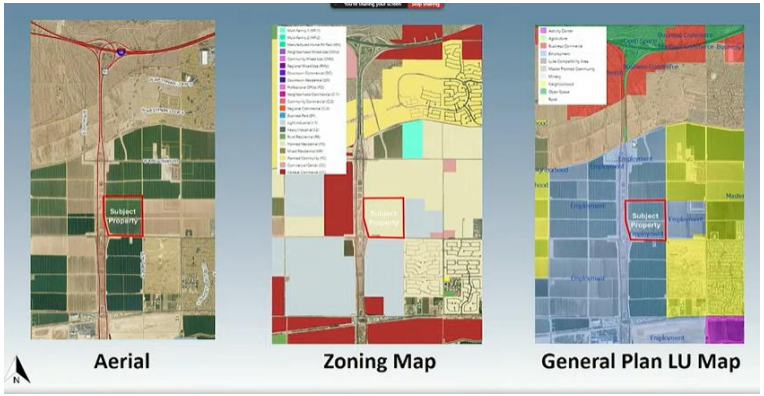
# Number of Farms 2012 - 2022

| | 2022 | 2017 | 2012 | Percent Change 2017-2022 | Percent Change 2012-2022 |
|---|---|---|---|---|---|
| U.S. | 1,900,487 | 2,042,220 | 2,109,303 | -6.9% | -9.9% |
| Arizona | 16,710 | 19,086 | 20,005 | -12.4% | -16.5% |
| Apache | 5,343 | 5,551 | 5,591 | -3.7% | -4.4% |
| Cochise | 1,002 | 1,083 | 1,093 | -7.5% | -8.3% |
| Coconino | 2,057 | 2,142 | 2,239 | -4.0% | -8.1% |
| Gila | 191 | 298 | 195 | -35.9% | -2.1% |
| Graham | 359 | 448 | 412 | -19.9% | -12.9% |
| Greenlee | 95 | 123 | 159 | -22.8% | -40.3% |
| La Paz | 107 | 97 | 125 | 10.3% | -14.4% |
| Maricopa | 1,527 | 1,874 | 2,479 | -18.5% | -38.4% |
| Mohave | 274 | 317 | 335 | -13.6% | -18.2% |
| Navajo | 3,269 | 4,205 | 3,846 | -22.3% | -15.0% |
| Pima | 478 | 661 | 855 | -27.7% | -44.1% |
| Pinal | 718 | 762 | 938 | -5.8% | -23.5% |
| Santa Cruz | 166 | 219 | 236 | -24.2% | -29.7% |
| Yavapai | 727 | 850 | 940 | -14.5% | -22.7% |
| Yuma | 397 | 456 | 562 | -12.9% | -29.4% |

# Percent of Farms by Size 2022



# The Loss of Agricultural Land






**Example in Maricopa County**

- **The county has the fastest farmland loss rate in the U.S.**
  - American Farmland Trust report
- **~ 11.5 sq miles/year.**
- **No farmland in the County in 36 years!**
- **Significant footprint of farmland conversion**

# More statistics

- Average age of farmer in AZ is 60.1 (national average is 58.1)
- 88% of the farms earn less than $25,000 in annual sales.
- Average farm sizes in Arizona decreased by 57%
- Farms with $25,000 - $49,999 in sales increased in number by 19% from 2017-2022, with 25% beginning farmers in AZ. Every other category decreased.


Thank you!