ARIZONA NUT CROPS

THOMAS G. SCHORR, ARA

FARM CREDIT WEST



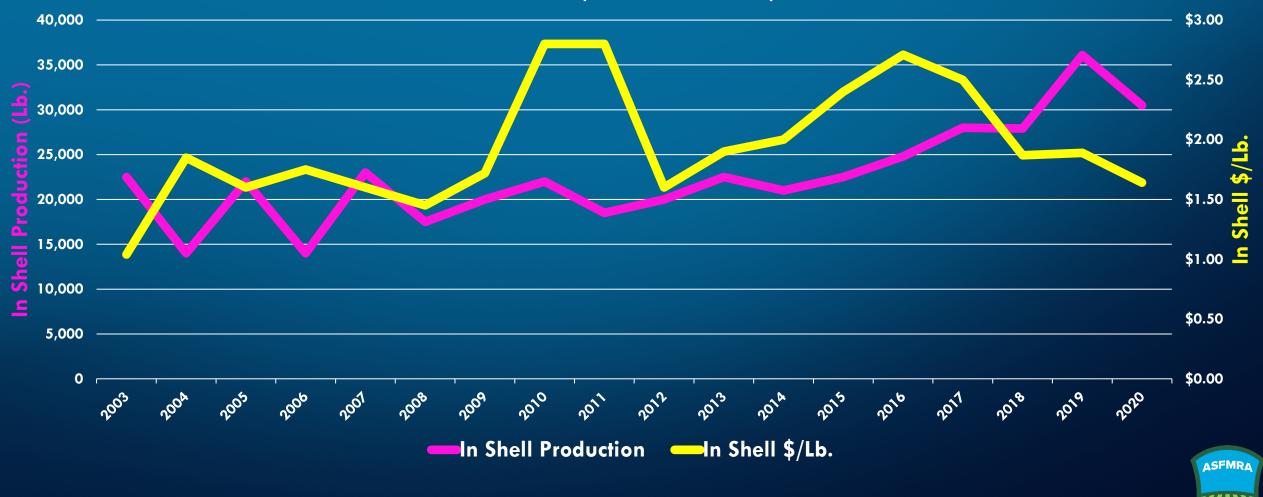
PECAN SALES

Price/Ac. VS Price/Lb.



ARIZONA PECAN IMPROVED VARIETIES

Production/Year VS Price/Lb.



PISTACHIO SALES

Price/Ac. VS Price/Lb.



CALIFORNIA PISTACHIOS

Acreage





Pecan Pre-Plant Phase





Un-Budded Pistachio Rootstock





Harvest Season





ARIZONA PECANS

- Arizona is the 4th largest producer of pecans in the US with Georgia being by far the largest. Arizona is averaging 28.3 million pounds per year of utilized production over the last six years.
- ➢ Previously, the US produced roughly 75% of the world supply. Mexico is estimated to supply roughly 50% of the world supply in the next several years.
- Arizona's current statistics are not accurately reported. There are believed to be between 27k to 30k acres of pecans planted, with an excess of 15-20k acres in bearing age status.



ARIZONA PECANS

- 1/3 of the plantings are in Cochise County (Elfrida, Kansas Settlement, San Simon and Bowie) with other plantings noted in Pima, Pinal, Maricopa, Yavapai, Graham and Mojave Counties.
- Most pecans planted at 2,500-4,200 feet above sea level with good air drainage. Minimum of 400-500 accumulated chilling hours in late fall to the end of February required. Ideal range is 32-45 degrees Fahrenheit.
- Alternate bearing. Primary varieties include Western's and Wichita's.
 Indian varieties increasing in the San Simon area.



ARIZONA PECANS

- ➢ Good mature production averages from 1,800 to 2,500 pounds/acre (in-shell). Breakeven prices are roughly \$.90 to \$1.00/lb. (in shell). Best orchards may average in excess of 2,500+ pounds/acre (in-shell).
- 2020 crop being marketed now, limited published data. Downward in-shell price trend from 2016 (\$2.71/lb.) through 2019 (\$1.64/lb.). Increasing acreage/inventory coming from Mexico, tariffs and Covid virus concerns are ongoing factors.
- Ongoing challenges: Environmental matching up an adequate water supply with elevation, air drainage, soils and climatic conditions. Marketing – not as organized as pistachio industry. Mexico's increasing production significantly.



Where Do Most US Pecans Come From?

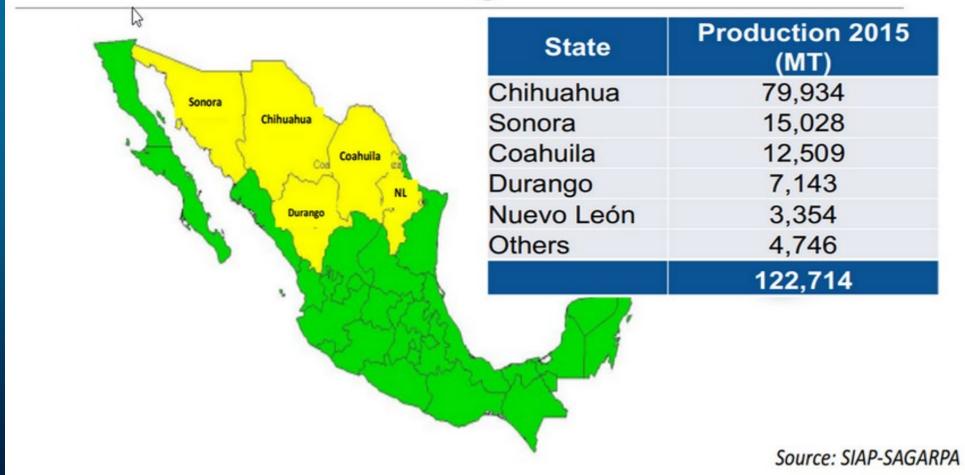
Pecan Bearing Acreage, Yield, Production, Price, and Value – States and United States: 2018-2020 (continued)

State and variety	Utilized production (in-shell basis)		
	2018	2019	2020
0	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)
Alabama ²	1,600	(NA)	(NA)
Improved	1,490 110	(NA) (NA)	(NA) (NA)
Arizona	27,900	36,100	30,500
Improved	27,900	36,100	30,500
California ²	3,700	(NA)	(NA)
improved	3,700	(NA)	(NA)
Georgia	70,000	73,000	142,000
improved	70,000	73,000	142,000
Louisiana 2	6,030	(NA)	(NA)
Improved	2,510 3,520	(NA) (NA)	(NA) (NA)
New Mexico	89,100	87,800	77,000 77,000
Improved	89,100	87,800	11,000
Oklahoma	9,000	21,200	7,450
Improved	2,970	4,240	2,380
Native and seedling	6,030	16,960	5,070
Texas	33,600	37,500	45,400
Improved	28,800	30,000	36,300
Native and seedling	4,800	7,500	9,100
United States	240,930	255,600	302,350
Improved	226,470	231,140	288,180
Native and seedling	14,460	24,460	14,170



Mexico Pecan Production

Main Pecan-Producing States in Mexico





ARIZONA PISTACHIOS

- California is the largest pistachio producing state with 485k+ acres, of which 371k+ acres are bearing. New plantings have trended down nearly 50% from 2012 to 2016 highs over the last two years (Admin. Committee for Pistachio Processors).
- Comparatively, Arizona has very limited pistachio acreage with an estimated 10k+/acres total, 2,400+ of which are mature bearing. Mostly in Cochise and Graham Counties. Lesser, but growing acreages in La Paz County (mostly in Kingman).
- Kingman there is talk of 10k acres of pistachios or more long-term with almonds as well and even pecans. Most current plantings are less than 3 years old. Big names from California are behind this trend.



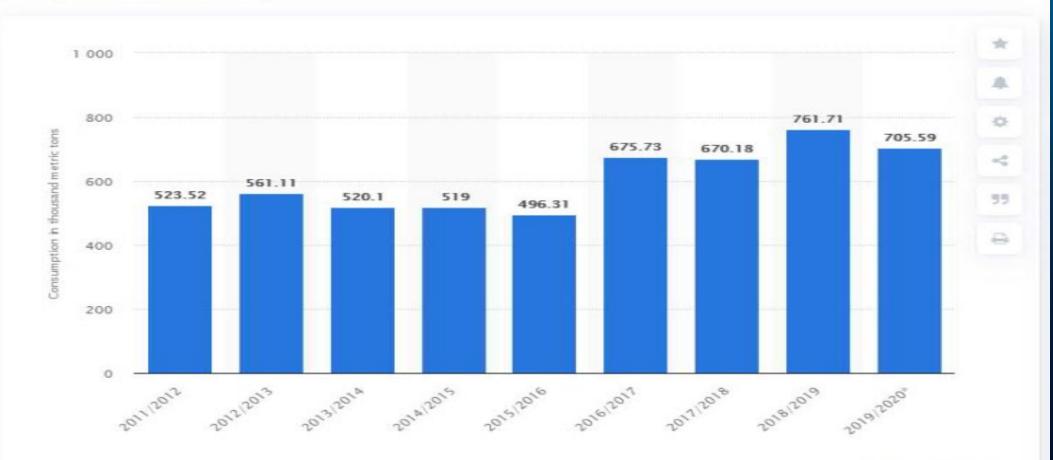
ARIZONA PISTACHIOS

- Desired climate is similar to pecans, but pistachios use less water and can tolerate lower quality water. Chilling hours required are a minimum of 500+/- hours between 32 and 45 degrees Fahrenheit during November – February. Kingman reportedly exceeds this minimum significantly.
- Good mature production exceeds 2,800-3,000 lbs./acre with a breakeven price of \$.70-\$1.00/lb.
- Pistachios are alternate bearing like pecans.
- Worldwide consumption has been strong the last 4 crop years (see the graph to follow from Statista). Prices are off highs in 2013-2015 (\$3.29-\$3.57/lb.), but still profitable. 2018-19 prices trended up from \$1.69/lb. in-shell in 2017 to \$2.65-\$2.62/lb. in-shell, respectively.



Pistachio Consumption Worldwide (Statista) in Metric Tons

(in 1,000 metric tons)



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SUMMARY

- Market expectations for pecans and pistachios is continued profitability long-term, subject to normal short-term cycles. Increasing plantings primarily in Mexico and California may put downward pressure on prices.
- China continues to be a big buyer; economic cycles in that economy place pressure on nut prices. Tariff issues have not helpful, but prices remain profitable.
- >20+ year drought cycle and on-going groundwater overdraft in closed basin areas will remain a long-term challenge for all groundwater users.

