Arizona Dairy Market Trends



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Dairy Industry Overview

- First ½ of 2016 was not profitable, 2nd ½ prices milk price improved to above breakeven
- US milk production increased 2.4% from 4th qrtr 2015 to qrtr 2016.
- US dairy herd increased 26,000 hd (.28%) year over year in 4th quarter 2016

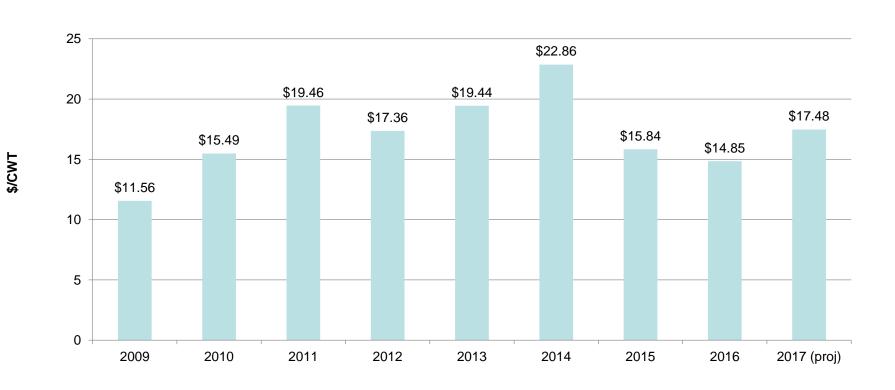
Dairy Income & Expense Trends

Data From Frazer, Frost LLLP's "Dairy Farm Operating Trends"

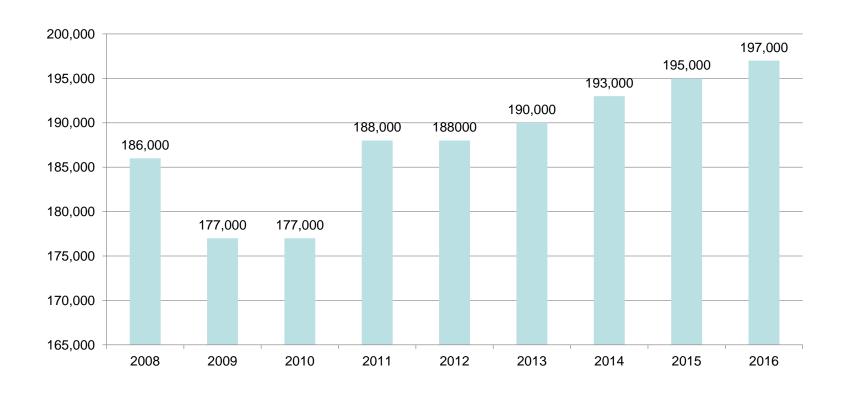
Income/ Cow	2011	2012	2013	2014	2015	2016 (1 st 6 Months)
Milk	\$4,253	\$4,001	\$4,351	\$5,113	\$3,703	\$1,705
Calves-other	<u>54</u>	<u>67</u>	<u>80</u>	<u>263</u>	<u>203</u>	103
Gross Income/ Cow	\$4,307	\$4,068	\$4,431	\$5,376	\$3,906	\$1,808
Expenses/Cow						
Feed	\$2,180	\$2,490	\$2,527	\$2,350	\$2,148 •	\$1,069
Labor	343	411	408	451	450	227
Herd Repl.	265	221	221	151	198	109
<u>Other</u>	<u>1,098</u>	<u>1,001</u>	<u>1,068</u>	<u>1,163</u>	<u>1,137</u>	562
Total Ex.	\$3,886	\$4,123	\$4,224	\$4,15	\$3,933	\$1,967
Net Income/ Cow	\$421	(\$55)	\$207	\$1,261	(\$27)	(\$159)



AZ Milk Price 50-50 Blend Quota/Over Quota



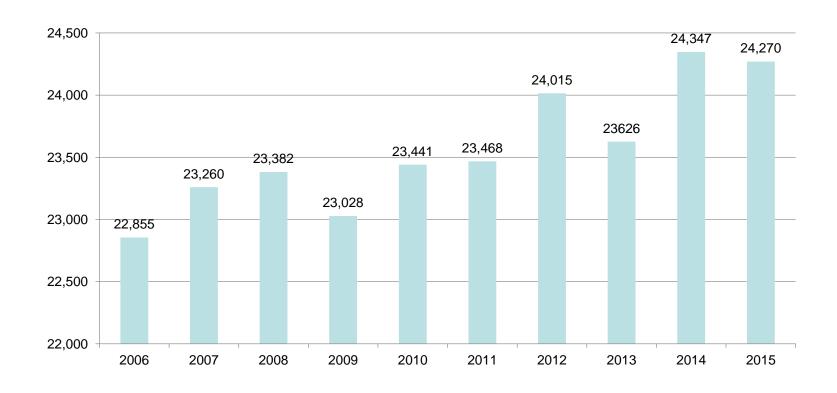
of Dairy Cows in Arizona per USDA's AZ Agricultural Statistics







AZ Milk Production Per Cow per USDA's AZ Agricultural Statistics

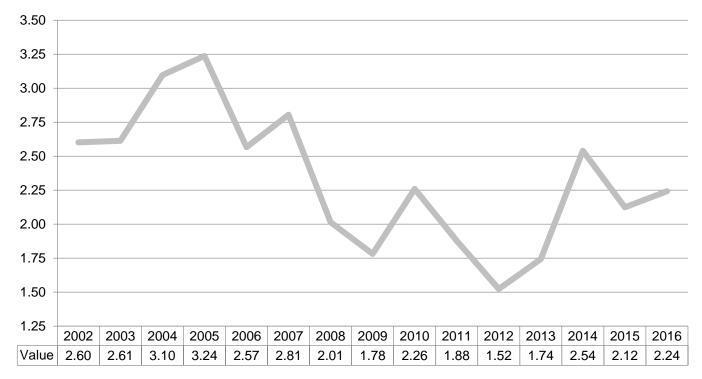




Milk to Feed Ratio- US

Source- UW Madison

- Measures how much feed can be purchased with 1lb of milk
- Historically 2.5 or higher means profit/expansion, 2 or lower means contraction
- 2016 ended at 2 Milk-Feed Price Ratio US



Arizona Dairy Values

- Sales activity very limited
- Saudi style facilities
 - 4 Sales in 2010: \$1,700 to \$2,737 per cow
 - 2015 sale of a Cochise County dairy with very large land base. Isolating dairy on 640 acres of land equates to about \$2,080 per cow
- Older conventional style dairies
 - No recent sales noted.
 - 2014 sale \$1,480 per cow
 - Older sales for \$1,000 to \$1,500 per cow
- Values vary depending land base, replacement facilities and on-site housing



Rental Rates

- Rental rates remain steady
- Conventional dairies
 - \$8-13 per wet head/month
- Saudi style dairies- I've not seen any new Saudi barn rental rates in several years.
 - \$15-\$17 per wet head/month
- Above average cow cooling, on-site housing and calf/heifer facilities command more rent per cow



Dairy Industry Outlook

- 2017 outlook more optimistic
 - Milk futures are higher and feed costs remain low
- Arizona dairy industry continues consolidation trend
- Concerns include changes in immigration policy



Arizona Nut Crops

Thomas Schorr
Farm Credit Services Southwest





Young and Old Pecans

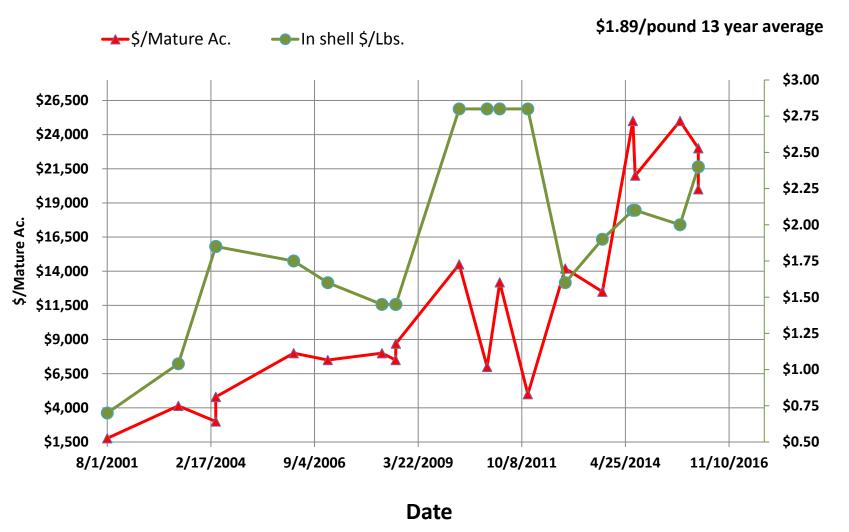




Pistachio Trees



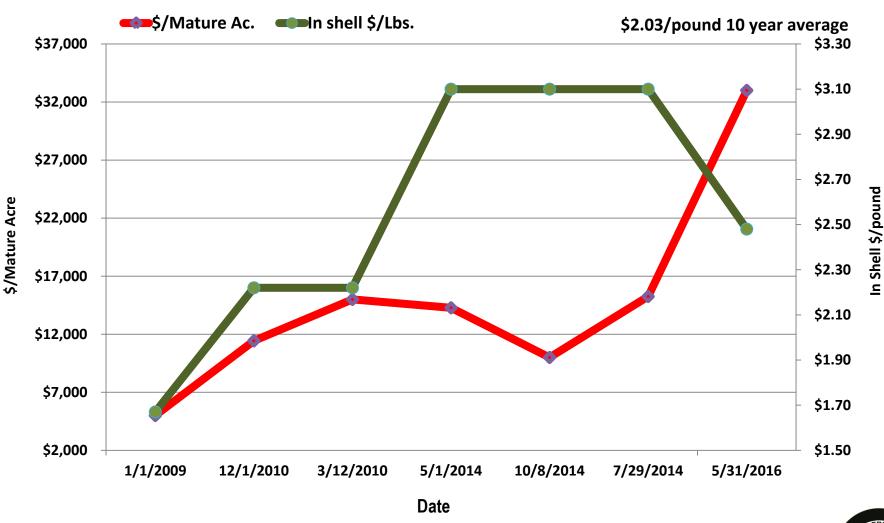
Pecan Sales



In shell \$/Lbs.



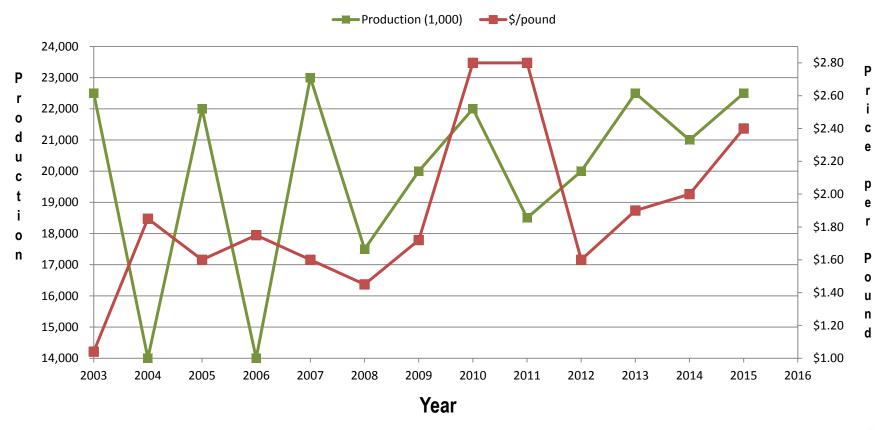
Pistachio Sales





Arizona Pecan Price per Pound & Production per

Year
Pecan Statistics Improved Varieties





Arizona Pecans

- ➤ Arizona is the 4th largest producer of Pecans in the US averaging over 20 million pounds per year of utilized production
- ➤ This is 1/2 of the production of the 3rd largest producer which is New Mexico. Georgia Produces nearly 50% of total US improved variety nuts
- There are 20,000+- acres of pecans in Arizona with 13,500 acres bearing age



Arizona Pecans

- ➤ There will likely be 27,000 to 30,000 planted acres by 2020 with 20k acres bearing
- ➤ 1/3 of the plantings are in the Cochise County (Elfrida, Kansas Settlement, San Simon and Bowie) with other plantings noted in Pima, Pinal, Maricopa, Yavapai and Graham Counties
- Most pecans planted 2,500-4,200 feet with good air drainage

Arizona Pecans

- ➤ 400-500 accumulated chilling hours in late fall to end of February required, 32-45°F ideal range
- ➤ Good mature production averages from 1,800 to 2,500 pounds/acre in-shell with breakeven prices being roughly \$.90 to 1/lb (in-shell). Best orchards may average 2,700+ lbs/acre
- ➤ Pecans are alternate bearing. Primary varieties are Westerns and Wichita's, Indian varieties increasing
- Primary challenge: matching up an adequate water supply with other elevation and climactic conditions



Arizona Pistachios

- California is the largest pistachio producing State with 302K acres of which 233K acres are bearing
- ➤ Arizona has a very limited amount of Pistachio acreage with 4,300+- acres total. Mostly in Cochise County, lesser acreages in Graham & La Paz County (Wenden-Salome)
- > Roughly 1,900 acres are mature bearing
- ➤ There are several thousand more acres which have been cleared or are in process in Cochise/Graham Counties mainly in the Bowie-San Simon area (Cochise) and Bonita (Graham)



Arizona Pistachios

- ➤ Desired climate: similar to Pecans but Pistachios use less water and can tolerate lower quality water. Chilling hours required are reportedly 500+- hours between 32 and 45°F, November-February
- ➤ Good mature production exceeds 2,800-3,000 lbs/acre with a breakeven price of \$.70-\$1.00/lb
- Pistachios are alternate bearing similar to pecans
- Same challenges exist for water supply and climate as with pecans



Market Expectations for local Pecans and Pistachios

Continued profitability for the foreseeable future. Pistachio plantings primarily in California may eventually put downward pressure on prices. China is a big nut buyer; downturns in that economy place pressure on nut prices. Cyclical commodity prices with 2015 being a down cycle for pistachio price at \$2.48/pound, down from \$3.10 in 2014. Pecans trended up during the same period from \$2.20 to \$2.40/pound.