



## Milk Math

by Jeff Black, Dairy Program Manager

What do you get when you add up the second ranked milk production per dairy herd in the USA (49,536,060 pounds/year) with the fourth-most milk per cow (24,680 pounds/year) and the number ninth ranked new milk production (138 million pounds) in 2017? Then, divide this milk production into 14 major production facilities?

$$(x + a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k}$$

The result is the Arizona Dairy Industry!

Arizona milk producers rank 13th in total US milk production (between Iowa and Indiana) and number 2 in cows per herd. In 2017, the state produced over **5 billion pounds** of milk! Although the number of dairy farms in the state have fallen by 20 in the last 10 years, production has increased by 834 million pounds per year in the same period. The average herd size has increased from 1,331 cows to 1,782 since 2006. For perspective, the national average dairy herd size is 234 (up from 147 in 2006).

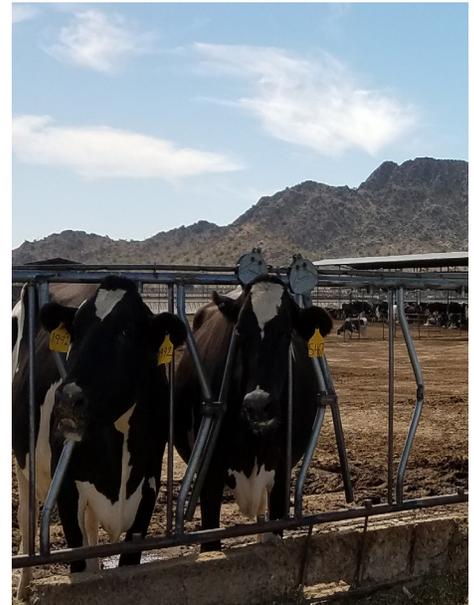
Arizona processing plants take in most of this production and

make it into a wide variety of products. Besides bottling fluid milk, processors in Arizona make products including cheese, yogurt, sour cream, ice cream, butter, cream, half & half, buttermilk, lactose free milk and a variety of dry milk products. These products are sold locally, across the country and around the world. The International Dairy Foods Association (IDFA) estimated that the total economic impact of dairy products produced and sold in Arizona, for 2016, was **\$7.60 billion**. This number includes a direct economic impact of \$2.09 billion and 14,883 directly related jobs. If you include suppliers to the dairy industry and indirect impacts, add 28,024 more jobs to the total. State tax revenues for direct dairy impacts are estimated at \$293.33 million.

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Top: Towers of bottled milk at a local plant; Bottom: Milk samples taken by a dairy inspector



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## Milk Math *cont. from page 1*

The Dairy Program, of the Arizona Department of Agriculture, is tasked with regulating the dairy industry in Arizona. State dairy inspectors conduct all inspections, pasteurizer testing, sampling of dairy products, personnel and equipment evaluations and other activities in regulating and supporting industry needs. Additionally, the program conducts the Interstate Milk Shippers ratings that allow milk and milk products to be sold across state lines.

**Three (3)** dedicated and busy inspectors complete the work of the Dairy Program to protect the public's health and to support the needs of this billion dollar enterprise.

Statistical Sources: *Hoard's Dairyman* (March 25, 2018) USDA Nat'l Agricultural Statistics Service; *Progressive Dairyman* (February 2017) USDA Milk Production Report; *International Dairy Foods Association* 2016 "Making a Difference with Dairy."



## Exhibitor Spotlight: Paige Hamilton



Paige is 16 years old and her parents are David and Terri Hamilton. She is from Maricopa County and a student at Buckeye Union High School. Paige has been a member of FFA for three years and has done projects in Market Steer, Breeding Heifer, Market Goat, Rabbit, and Chicken.

**Q: What other activities, sports, or clubs do you participate in?**

I am not currently involved in any sports, but I just finished being on the Meats Evaluation Career Development Event for FFA.

**Q: What awards have you won as an exhibitor?**

Being in FFA, I have gotten my Greenhand and Chapter Degrees. I was able to go to nationals in Indianapolis for dairy judging.

**Q: What are your goals for the future?**

My future goal is to be a veterinarian and a cattle breeder.

**Q: Who has influenced you the most?**

My grandpa, William Arter, has influenced me the most because he's always pushing me to do better and work harder. He is always so encouraging and hopeful I will be successful.

**Q: What does agriculture mean to you?**

Agriculture means a lot to me because without it I wouldn't be here today showing my livestock animals. Agriculture to me isn't just a way of living, but it's also a hobby.



On April 19, Leatta McLaughlin attended Central Arizona College's (CAC) Annual Agriculture Advisory Council meeting, which she is a member of. The Council discussed the need for CAC to hire professors as soon as they retire or leave for other opportunities; appoint a Dean so the ag school can have a vote on the budget; and the requirements for qualified individuals to teach community college ag classes. If you would like to support CAC on these issues, please contact DeAnna Diwan at [deanna.diwan@centralaz.edu](mailto:deanna.diwan@centralaz.edu).

## The Growing Niche Meat Market

Demand for specialty meats is growing rapidly in the U.S., with consumer demand for niche meat products often motivated by the belief that natural and organic meats are fresher, have better nutritional value, taste, and long-term health benefits than conventional meats, and that the animals are healthier and better treated than conventional livestock.

Livestock slaughter and processing services are often difficult for ranchers to access. Even with these hurdles the demand from individuals wanting to provide their products to an ever growing customer base here in Arizona requires the AZDA Meat and Poultry Inspection (MPI) program to address the challenge of providing increased inspection of these animals to meet these demands.

For the first quarter of 2018, MPI official establishments slaughtered 215 head of niche meat livestock (beef, pork, lamb) or nearly 9% of all animals slaughtered at our 6 official slaughter facilities. These animals are destined for family dinner tables around the state for those who are seeking an alternative to the conventional meat cuts purchased at their local super market. Additionally, thousands of chickens and turkeys were harvested and sold by local producers. These locally raised meats are available at farmers markets, specialty meat shops and as direct sales from the producers. They are also on menus at select restaurants across Arizona for those wishing to try locally sourced burgers, steaks, and entrees.

## Educating the Community on the Requirements of Team Roping Cattle

The Arizona Department of Agriculture has had to respond to numerous incidents where roping cattle needed to be inspected to leave Arizona. While doing the inspections, we found that these cattle entered Arizona without the required paperwork. This is a friendly reminder of the requirements to bring cattle into our state.

Rule R3-2-606:

Health certificate requirement. This rule requires cattle to be inspected by a veterinarian prior to entering the state of Arizona.

Rule R3-2-607:

This rule requires the health certificate to have an entry permit number issued by the Arizona Department of Agriculture.

If these rules are not followed, the livestock may be quarantined per R3-2-605 causing the owner to have testing done to the livestock satisfying the requirements to enter the state. The livestock will not be able to be moved until all requirements are met.

The Department is available for calls regarding entry requirements at 602-542-4293.

Please see the attachment for beef cattle entry requirements.

## New Employee



Rudy Mejia

AZDA would like to introduce you to our newest Meat and Poultry Inspector (MPI). Rudy started his employment with the Department of Agriculture on April 23, 2018. He will be responsible for MPI in the Northern Arizona area near Holbrook. He will also be assisting with livestock and auction inspections at Valley Livestock Auction. Rudy has been a State employee for 2 years, while working for the Arizona Department of Transportation. Rudy has a desire to work around livestock and we welcome him to our department.

## Egg Expiration Dating

House Bill 2464 Expiration Date of Eggs passed and was signed by the Governor and will be in effect 90 days after close of the legislative session.

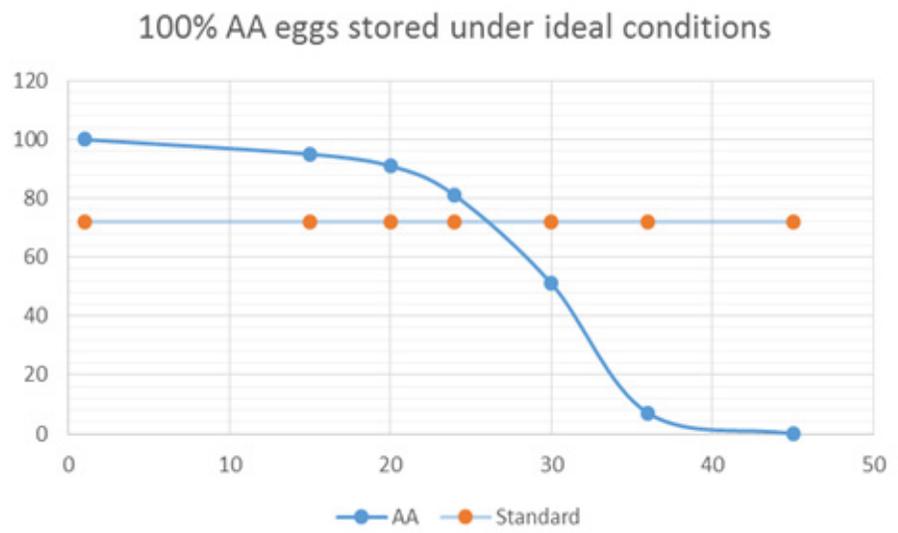
What it means: This law allows an egg producer to print a longer expiration date on Grade A eggs. Grade A eggs are allowed to remain available for sale for up to 45 days after they were packed. That's nearly twice as long as currently permitted. The expiration date for Grade AA has not been changed and remains 24 days.

The cartons of Grade A eggs with a 45 day expiration date will be marked "Best By" or "Use By" and are not allowed to have the current terms of "Sell By" or "Buy Thru" as a prefix to the expiration date.

The highest quality of eggs available is Grade AA, this is followed by Grade A, and the lowest consumer grade for consumer eggs is Grade B. The quality of eggs deteriorate

with time, this is illustrated in the graph from a recent study by the department below.

MARKED GRADE AA, the words "Sell By" or "Buy Thru" followed by a date, including the



The left column is the number of AA eggs in the sample series, the bottom is the number of days. This graph shows that after 25 days, the eggs did not meet the Grade AA standard anymore.

The new law for the expiration date will read as follows:

ARS 3-701

13. "Expiration date" means:

(a) FOR EGGS THAT ARE

month and day, that is not more than twenty-four days after the eggs were candled and that includes the date the eggs were candled.

(b) FOR EGGS THAT ARE MARKED GRADE A, THE WORDS "BEST BY" OR "USE BY" FOLLOWED BY A DATE, INCLUDING THE MONTH AND DAY, THAT IS NOT MORE THAN FORTY-FIVE DAYS AFTER THE EGGS WERE CANDLED AND INCLUDES THE DATE THE EGGS WERE CANDLED.

## Livestock Owners Encouraged to Review Regulations Before Moving Animals

In Arizona with our great weather, many owners bring livestock into our state for recreation during the fall and winter and often moving them back in the spring to the state of origin. Moving livestock can be a burdensome process, which can go much smoother when everyone prepares ahead of time. Regulations for official identification and health documentation (for animals moving between states), are in place to protect the health of the animals and the livelihood of livestock businesses and enthusiasts. Before you even begin getting ready to move your animal, make sure it's healthy by scheduling an appointment with your veterinarian. If you're moving your animal interstate, in or out of Arizona, you must have your veterinarian examine the animal and write you a Certificate of Veterinary Inspection. This document helps animal health officials track animal movements and trace disease if those animals become ill or come in contact with sick animals.

Another important step to take before moving your livestock interstate is making sure they're officially identified if required by federal law. Acceptable forms of official identification varies by species.

If you're moving animals for a livestock sale, or exhibition, you should know the expectations of the event as these may be more restrictive than those that are imposed by the state where the event is being held.

When it comes to actually moving the animals, make sure you are hauling them safely. Use the correct equipment and double check that everything is in working order. Plan and prepare for the unexpected. Have food and water ready for the animals in the event you have a mechanical breakdown. Once you reach your destination you should conduct a quick check to make sure the animals appear healthy and uninjured. Also make sure you are practicing good biosecurity by not sharing feed and water troughs by utilizing your own equipment.

Lastly, when returning home, or introducing new animals into your herd, make sure to follow proper biosecurity precautions. Keep the returning, or new, animals separate from your herd to look for any clinical signs of diseases they could've potentially contracted while away from your farm.

The Arizona Department of Agriculture would like to remind livestock owners to review animal health and movement regulations before hitting the road, whether just across town or across the nation.

## Office of Special Investigations Update

The Office of Special Investigations (OSI) conducted multiple investigations and also assisted the livestock program with their investigations.

There were a total of five cases resulting in multiple citations: (C18021971) Violation of 3-1336 No proper documentation, (C18024029) Violation of 3-1336 No proper documentation, (C18027219) Violation of 13-2910.A4 Cruelty to animals, and (C18027037) threat and intimidation (Information report). The final case was (C18013266) and was closed after being turned down by the Yavapai County Attorney's Office.

## Contact Us

Dairy:  
(602) 542-4189

Dispatch:  
(623) 445-0281

Egg:  
(602) 542-0884

Meat & Poultry:  
(602) 542-6398

Self-Inspection:  
(602) 542-6407

State Vet's Office:  
(602) 542-4293



# Beef Cattle Entry Requirements

## All Beef Cattle Entering Arizona Need:

### Entry Permit Number

- Issued by calling **602-542-4293**
- 8 a.m. to 5 p.m. Mon to Fri AZ Time
- Valid for 15 days
- Contains a "B" and includes month, year, and an assigned series of numbers

### Certificate of Veterinary Inspection (CVI)

- Issued by an Accredited II Veterinarian
- Valid for 30 days
- Copies of CVI must have an original veterinarian signature
- All Official IDs must be listed on CVI or as an attachment

### Official Identification

- **Dairy Breed Steers:** Federal Ear Tag at any age born after March 15, 2013
- **Cows/Heifers:** Orange Bangs Tag or Federal Ear Tag if older than 18 months
- **Bulls:** Federal Ear Tag if older than 18 months



**Note:** Brand inspection requirements remain in effect.

## Specific Disease Testing Requirements

### Tuberculosis:

- Tuberculosis testing is NOT required, unless the State of Origin has a Tuberculosis Quarantine in effect.
- Cattle 3 months of age and older must be tested for Tuberculosis from states that have a Bovine Tuberculosis Quarantine in effect. All cattle must test negative within **60** days prior to entry into Arizona.

### Brucellosis

- Brucellosis testing is NOT required, except for animals from the Greater Yellowstone Designated Surveillance Area (D.S.A.) including parts of Idaho, Montana, and Wyoming.
- Cattle and Bison imported into Arizona from the D.S.A. must test negative including:
  - All Official Calftood Vaccinate Cows/Heifers older than **18** months of age within **30** days prior to entry.
  - Non-vaccinated Cows/Heifers must test negative if older than **12** months of age that are not consigned to slaughter within **30** days prior to entry.

### Trichomonas

- Sample collected by an Accredited Veterinarian and submitted to an approved lab: One negative P.C.R. test (or 3 negative cultures no less than 7 days apart) within **30** days prior to shipment. Bulls must have no breeding activity from test date until arrival.
- Required on all bulls older than 12 months of age.
- Exempt Bulls: Rodeo/Exhibition, consigned directly to slaughter, consigned to a licensed feedlot and castrated upon arrival, branded with an F for feeding and later direct to slaughter, or consigned to a directly to a dairy.

For more information call or email the State Veterinarian's Office :

**602-542-4293** [cvi@azda.gov](mailto:cvi@azda.gov)