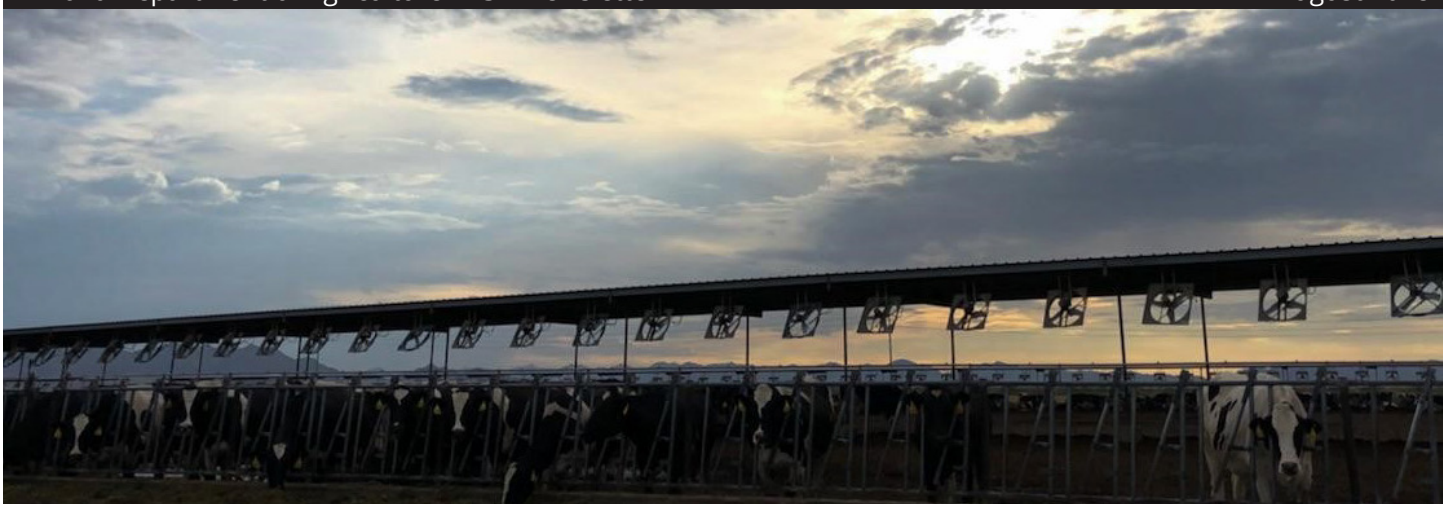
ANIMAL SERVICES NEWS

Arizona Department of Agriculture - ASD Newsletter August 2018



Livestock Self-Inspection Reminders

- Self-inspection certificates must be completed prior to the livestock leaving your premise.
- You can order a new self-inspection book when you are down to your last 5 certificates.

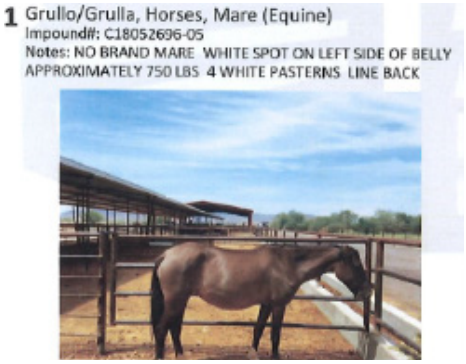
Please call (602) 542-6407 with any questions.

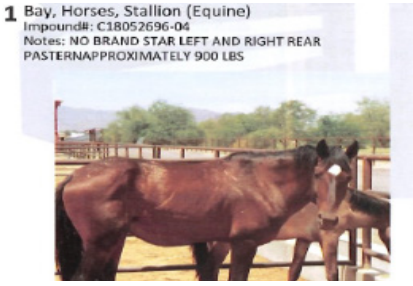
Office of Special Investigations Update

The Office of Special Investigation (OSI) assisted Scottsdale Police with a neglect case which involved two neglected horses and resulted in one arrest with multiple felony charges. OSI also continued to assist a Federal agency with its ongoing investigation.

AZDA Stray Sale

The Arizona Department of Agriculture has recovered five stray horses from the Sahuarita area. These horses do not appear to have had much or any handling in the past. They will be up for auction to the highest bidder on 08/04/18 at 12:00 noon. The auction will be held at Arizona Livestock Auction at 23300 West Broadway Road in Buckeye, AZ. The horses will be sold after all other livestock and usually will not start until 3:00pm or 4:00pm. If there is a smaller amount of livestock, the auction may start sooner so be there early.





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AZDA Stray Sale

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Livestock Heat Stress

It's that time of year again where triple digits are upon us and heat stress to our horses and other livestock is a legitimate concern. There are a number of factors that contribute to an animal's ability to regulate their body temperature. Firstly, a physiologic fact is that given the smaller surface area to body mass ratio of livestock species, they are more capable of storing core body heat and reducing external losses. This is a great adaptation for living in colder climates, but not so great here in Arizona. In response to core body temperature becoming too high, mechanisms kick in to help promote heat loss. These mechanisms include things like increased blood flow to the skin and surface of the animal to promote conductive heat loss, sweating and panting (respiratory rate over 32 breaths per minute) to promote evaporative heat loss and behavioral responses such as decreased athletic exertion to minimize heat production, shade seeking behavior and increased water intake. If these mechanisms are insufficient to control the body temperature within the normal range (99-101 F for horses), heat exhaustion and heat stroke can occur. Hot and humid weather (for example the Arizona monsoon season) significantly reduces the effectiveness of evaporative mechanisms for heat loss. Particularly in horses, this kind of environment contributes to a condition known as anhidrosis whereby the ability to sweat is essentially lost.

The period when environmental and temperature triggers initiate heat dissipation mechanisms can best be thought of as the period of heat stress since a stress is placed upon the animal and it is attempting to compensate. This heat stress period can be considered to occur between body temperatures of 102-105 F. Once the compensatory efforts begin to fail, the stages of heat exhaustion and heat stroke are entered. Signs of heat exhaustion and heat stroke include lethargy, dizziness, excessive sweating followed by lack of sweating, recumbency and unresponsiveness. In this state, organ dysfunction occurs due to dehydration and electrolyte imbalance and loss, and the inability of the heart to pump enough blood around the body to meet the demands of organs. If the animal cannot be sufficiently cooled and medical intervention is not sought, death will rapidly ensue.

Being aware of the signs of heat stress and the normal behavior of your horse will help you to help them. Average water consumption in cool environments will vary between 8-10 gallons per day, but in hot climates or with exertional activity, this can approach upwards of 20-25 gallons per day!!! Always make sure your animals have unencumbered access to plenty of clean, fresh water. Electrolytes lost through sweat can be replaced or supplemented

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Beef Cattle Temperature Humidity Chart

Temperature (°F)	Relative Humidity (%)											
	30	35	40	45	50	55	60	65	70	75	80	85
100	84	85	86	87	88	90	91	92	93	94	95	97
98	83	84	85	86	87	88	89	90	91	93	94	95
96	81	82	83	85	86	87	88	89	90	91	92	93
94	80	81	82	83	84	85	86	87	88	89	90	91
92	79	80	81	82	83	84	85	85	86	87	88	89
90	78	79	79	80	81	82	83	84	85	86	86	87
88	76	77	78	79	80	81	81	82	83	84	85	86
86	75	76	77	78	78	79	80	81	81	82	83	84
84	74	75	75	76	77	78	78	79	80	80	81	82
82	73	73	74	75	75	76	77	77	78	79	79	80
80	72	72	73	73	74	75	75	76	76	77	78	78
78	70	71	71	72	73	73	74	74	75	78	76	76
76	69	70	70	71	71	72	72	73	73	74	72	75
	Temperature Humidity Index (THI)											

Normal <75	Alert 75-78	Danger 79-83	Emergency >84

Livestock Heat Stress

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with electrolyte pastes, powdered electrolyte feed supplements, salt blocks or having a separate water bucket with electrolytes added to it (sort of like Gatorade). If possible, supplying shade/shelter to your animals can help significantly lower their temperature in addition to a breeze or hanging some fans in front of their stalls. Misters can also be considered to help lower surrounding air temperature and promote evaporative cooling. Horses and livestock except for swine can be hosed down to help cool them off as well. Ventilation is an important factor to consider especially when transporting horses. Make sure windows are down and roof vents are up when hauling horses or other livestock and avoid stopping for lunch when you have animals in the trailer. Without that airflow moving through the trailer, temperatures will rise rapidly. If you do plan on working your horse or moving livestock around, try and do that in the early morning hours and avoid working animals in the hottest part of the day between 11AM and 5PM. Sun burn is also a risk for horses or livestock with unpigmented (pink) skin around their eyes, nose or mouth. Application of sun screen lotion (careful not to get in the animal's eyes) or having the horse wear a fly mask can help protect skin from harmful UV light. Finally, seek veterinary treatment for any concurrent diseases or conditions such as anhidrosis or Cushing's disease in older horses which may impair the animal's ability to handle heat. You would be surprised how much better many horses will do coping with the heat when the underlying disease or condition is treated and under control. In the end, if you feel hot, your horse or other livestock feels hotter! Do what you can to make them more comfortable.

Egg Program Presents at the Women in Agriculture Conference

The Egg and Egg Products Control Program was requested to participate in the presentation of Arizona Department of Agriculture's regulatory programs at the Women in Agriculture Conference held in Tucson, AZ on July 13th. Along with the Livestock Inspection Program and the Weights and Measures Services Division, the Egg Program were represented by Licensed USDA Graders: Teresa Ruiz, Destination Inspector; Stephanie McHaffey, NPIP Representative; and Jenny Pack, AZDA/USDA Coordinator and Shell Egg Grading Supervisor. Included in the attendance at the Women in Agriculture Conference were Licensed Graders Mindy Scott, Tabita Mader, and Joselyn Orona.

The Egg Team set up three candling stations where each station had a dozen of grade AA eggs to candle. The participants were shown how to check the air cell using the air

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Egg Program Presents at the Women in Agriculture Conference

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cell gauge. To make it interactive, we replaced 1 egg with a lesser grade quality and the participant who determined the correct grade won a prize. We were able to explain carton labeling, julian dating, different grades of eggs based on air cell, and what we look for when grading eggs. This presentation allowed us an opportunity to showcase what we really do to protect and deliver a quality agricultural product to the community.

Keeping industry running: Dairy Program's industry sealer certification.

Pasteurizers are essential to dairy processing plants and without them no product, with a few exceptions, can be processed. Milk and milk product pasteurizers are required to be tested for proper function and all of the public health controls have to be sealed by a dairy inspector to prevent changes to the settings. Without the regulatory seals in place, the pasteurizer may not be used. This is an important step in maintaining a safe milk supply for everyone.

Pasteurizers are complex machines with several failsafe systems, but like many machines, they may break down or require unexpected maintenance. What can a dairy plant do if a pasteurizer breaks and a dairy inspector is unavailable?

- Not produce any product? - This is not a good option for most dairy processors.
- Repair the pasteurizer, resume production, and hold the product until the pasteurizer is properly tested and sealed? - Also not a good option for a dairy processing plant.

Sealed thermometer of a HTST pasteurizer

- Have a certified industry sealer on staff? - This may be the best option for a dairy processing plant. There is no need to hold product and business is not impeded.

A certified industry sealer is an employee of the plant that attended a training class at the Department and was evaluated by a dairy inspector to properly perform a series of required pasteurizer tests. This option is available to a dairy plant and allows them to test and temporarily seal their own equipment after it was repaired or adjusted. A dairy inspector will visit the plant within 10 days and retest the equipment and reseal with the official seal of the Arizona Department of Agriculture.

Food Safety Verification Practices

The AZDA Meat and Poultry Inspection (MPI) program inspectors make unannounced daily visits at all 24 official state inspected establishments. The inspectors perform direct observation and records reviews to verify the establishment is in regulatory compliance with all Sanitation Standard Operating Procedures (SSOP) and Hazard Analysis and Critical Control Points (HACCP).

In addition to the hands on inspections performed by the inspection staff, is the micro-

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Food Safety Verification Practices

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biological testing performed by the establishment and the Meat and Poultry Inspection program to confirm the food safety system is working as designed - producing a safe, wholesome meat product for the consumers of Arizona.

Establishments perform testing of product and Food Contact Surfaces (FCS) in Ready To Eat (RTE) facilities for Listeria Monocytogenes (LM) or Listeria Species. Ground beef establishments perform routine testing for E coli 0157:H7. Slaughter plants are required to test carcasses of slaughtered animals for a 13 week period beginning the first full week of June each year for generic ecoli. Additionally, AZDA takes samples as requested and submits them to the Arizona Department of Agriculture Laboratory (SAL) for testing.

MPI inspectors take RTE product samples bi-monthly to test for Listeria Monocytogenes and Salmonella. Increased testing is performed every 4 years at RTE establishments by submitting 5 product samples, 10 FCS and 5 Non FCS to be tested for LM from each establishment. Ground beef establishments are also tested bi-monthly for E coli 0157:H7 and Salmonella. High volume ground beef grinders, those that produce 1000 lbs or more per day, are also tested

for Salmonella each day they grind until 11 samples have been tested each year. Plants that produce beef trim that is destined for grinding are tested twice a year for E coli 0157:H7, unless they slaughter the animals that the trim comes from in which case they are tested 3 times per year for E coli 0157:H7 and non 0157 STEC's. Finally, animals at slaughter facilities are screened for Violative Residue (drugs) when a suspect animal is slaughtered or for surveillance. In fiscal year 2018, 705 samples were submitted to the SAL by MPI with all results being negative.

What happens if we receive a positive test result? If the pathogen is considered an adulterant per regulation, the affected product lot is treated with a lethality step to kill the pathogen or it is destroyed for human food purposes. Corrective actions are performed by the establishment and follow up sampling is performed by the Department to verify the establishment is back in compliance, has control of its food safety system, and can produce a safe product. If the lot of product was shipped and is in commerce a recall would be initiated for the affected product.

If the pathogen is not considered an adulterant, the facility will address the cause of the positive test result and perform corrective actions along with follow up testing to verify they are back in control of their food safety system.

Contact Us

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Licensing:
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Meat & Poultry:
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Self-Inspection:
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(602) 542-4293