ANIMAL SERVICES NEWS

Arizona Department of Agriculture - ASD Newsletter September 2019

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Seasonal Pass Reminders

Fair and show season is here and as you are filling out your seasonal pass applications, don't forget to return last year's pass. Seasonal passes are good for 12 months after the issued date and need to be returned at the end of the show season or termination.

Please return to AZDA by:

- Mail to 1688 W Adams Street, Phoenix, AZ 85007 Attention: Self-Inspection
- Email to selfinspection@azda.gov
- Fax to (602) 542-4290

Also, please submit new seasonal pass applications in a timely manner to allow our staff enough time for processing and for any questions regarding your animals. If you have questions, please feel free to contact Self-Inspection at (602) 542-6407.

Environmental Management for Diseases Spread by Biting Insects

by State Vet's Office Staff

Often in dealing with human or animal diseases, acquiring such a disease comes down to direct contact with an infected individual and ultimately being in the wrong place at the wrong time. There are several diseases however that rely on insects for transmission – these insects are called "vectors" with examples being biting flies, mosquitoes or ticks. With this in mind, we can discuss a few of these diseases; particularly those associated with flies or mosquitoes; and the strategies that may be employed to decrease the chance that these insects will find the immediate environment around your stable or facilities hospitable.

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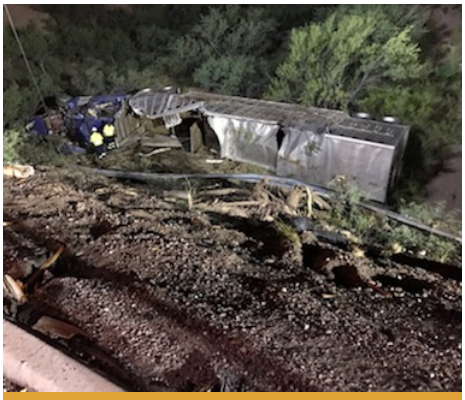

Emergency Response Near Willcox

by Cpt. Richard Shore, Livestock Services Manager

The ASD Livestock Program responded to a cattle truck turned over along I-10 on July 26th, 2019 at about 6:30 pm. ASD responded to a request from the Department of Public Safety, they had a truck that rolled with cattle on board. The truck rolled down an embankment causing the cattle to be thrown from the trailer. Officer Jake Woehlecke responded along with local cowboys, and the cattle were removed from the roadway. The driver of the truck had to be flown into an area hospital due to his injuries. Due to injuries, some of the cattle had to be humanely euthanized. The remainder of the cattle were gathered by the cowboys the next day. The owner contracted the cowboys to remove them from the thick brush. The continued cooperation between local ranchers, law enforcement and AZDA is shown here by the quick response. Without these partnerships, the ability to render aid, get traffic moving, and assist livestock, needs could be delayed. A special thanks to all Officers, first aid members, and local volunteers that assisted with this accident.

Food Safety Training

by Rick Mann, MPI Manager

In early August, ASD Meat and Poultry Inspection Program (MPI) inspector, Jessica Veo, was one of the inaugural participants in the basic Hazard Analysis and Critical Control Points (HACCP) training class put on by Dr. Dan Engeljohn of the University of Arizona (UA) in Tucson, AZ. Dr. Engeljohn is an Assistant Professor of Practice in Animal Science at UA. Also, he is academically trained in Animal Science with meat science/muscle biology and human nutrition specialties. He recently retired after 40 years at the U.S. Department of Agriculture (USDA) in Washington, DC, where he led the development of food safety policy associated with meat, poultry, and processed egg products.

The basic HACCP class consisted of 12 participants, 9 from the Arizona food industry and State government and 3 from UA. The participants completed the first UA certificate-based training on HACCP using a curriculum accredited by the International HACCP Alliance. This 2-day training emphasized the 7 principles of HACCP and records review. Participants also developed a HACCP plan.

Additional certificate-based training on HACCP and preventive controls for human food will be offered during the winter and summer semesters.

For more information on these training classes, contact the UA food safety training certificate programs. Since January 25th, 2000 all official slaughter and meat processing establishments have been required to operate under a validated HACCP plan. This class provides useful information that Jessica will be able to put to use in performing her daily job duties as an MPI inspector.

Standard for Butterfat

by Roland Mader, Dairy/Egg Program Manager

Butterfat, or milk fat, is the naturally occurring fat in milk and is typically expressed as a percentage per milk product. There are established product standards for various dairy products, those are described in the Code of Federal Regulations (CFR) Title 21, Part 131.

The fat content differs between the breeds of cows and can range between 3.2% and 4.9%. For milk that is sold at retail is standardized to,

- Whole milk's milk fat content in 3.25%
- Reduced-fat 2%
- Low-fat milk 1%
- Skim milk traditionally has 0 to 0.5% milk fat
- Heavy cream is cream which contains not less than 36 percent milk fat
- Light whipping cream is cream which contains not less than 30 percent but less than 36 percent milk fat
- Light cream is cream which contains not less than 18 percent but less than 30 percent milk fat
- Half-and-half is the food consisting of a mixture of milk and cream which contains not less than 10.5 percent but less than 18 percent milk fat.

Dinner Eggs

by Roland Mader, Dairy/Egg Program Manager

Eggs for dinner? Why not. Following a new trend.

Considering all of the health benefits of eggs, having them for dinner is a great choice. Eggs are a very good source of inexpensive, high-quality protein. More than half of the protein of an egg is found in the egg white. Egg whites also contain vitamin B2 and lower amounts of fat than the yolk. Eggs are rich sources of selenium and vitamins D, B6, B12; as well as minerals such as zinc, iron, and copper. Egg yolks contain more calories and fat than egg whites. They are a source of fat-soluble vitamins A, D, E, K, and lecithin—the compound that enables emulsification in recipes such as hollandaise or mayonnaise. Some brands of eggs now contain omega-3 fatty acids, depending on what the chickens have been fed (always check the box). Eggs are regarded as a 'complete' source of protein as they contain all nine essential amino acids; the ones we cannot synthesize in our bodies and must obtain from our diet.

Fettuccine with Pancetta, Chard, and Fried Egg

As featured by the American Egg Board / Eggs for Dinner

Yield: 12 servings

Ingredients

- 1 tbsp. olive oil
- 4 oz. (1 cup) pancetta, diced
- 8 oz. green chard (1 bunch), chopped
- 1 tbsp. butter
- Salt, as needed
- 2 lb., 4 oz. fettuccine noodles, uncooked
- 12 large eggs
- Grated Parmesan cheese, for garnish, as needed
- Cracked black pepper, for garnish, to taste

Directions

1. Sauté the pancetta in oil until crispy. Remove pancetta and set aside; wipe out pan.
2. Sauté chard in butter until tender. Season lightly with salt. Combine the chard and pancetta; set aside.
3. Cook fettuccine in salted boiling water just until al dente. Drain; toss with chard mixture.
4. For each serving, fry each egg in a pan until whites are set (completely coagulated and firm) and yolks begin to thicken (no longer runny, but not hard). Place 4 oz. fettuccine mixture in pasta bowl, top with fried egg and sprinkle with grated Parmesan and fresh black pepper. Serve immediately.

Environmental Management for Diseases Spread by Biting Insects

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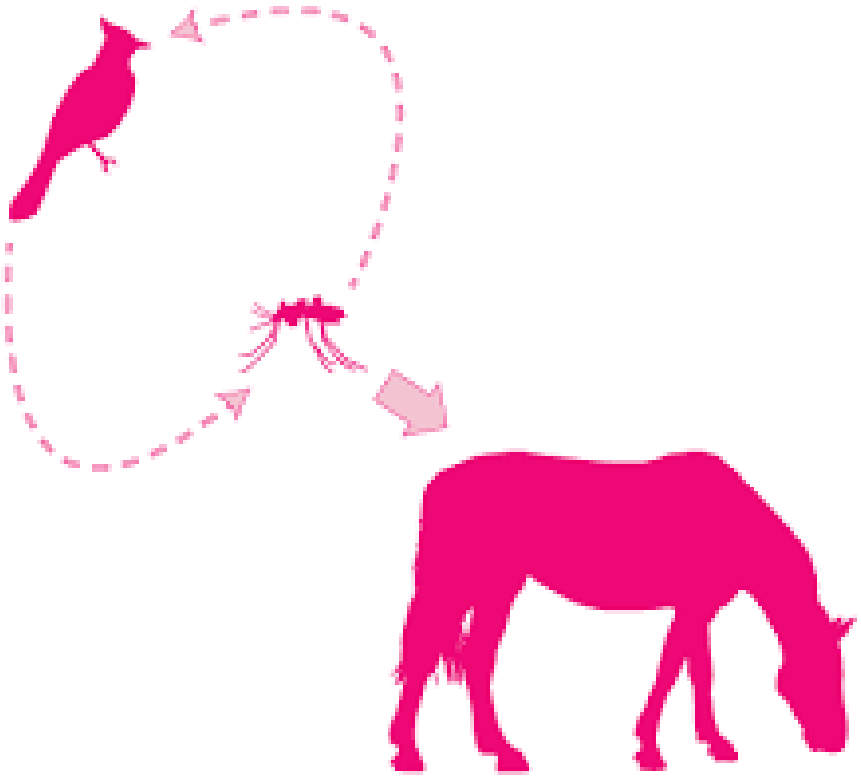

Eastern Equine Encephalitis Transmission. Credit: Courtesy horsedvm.com

For diseases such as the Equine Encephalitides (Eastern Equine Encephalitis, Western Equine Encephalitis) and West Nile Viral Encephalitis, the transmission of the disease involves a reservoir of disease in the environment (generally bird species that are infected with the virus) and transmission to horses or humans is through a mosquito bite. Depending on the species of mosquito involved they may lay either single eggs or many eggs in rafts in stagnant water. Eliminating sources of stagnant water on your farm or in your stable will eliminate the breeding grounds for mosquitoes. Stagnant water sources can include old tires or stock tanks that collect rainwater, irrigation canals that have limited flow through them for long periods between irrigation cycles and any other debris or ruts that can collect water. After a heavy monsoon or irrigation of a pasture, animals should not be permitted on the soft ground as the hoof prints that are left can collect stagnant water and are more than enough to permit mosquitoes to breed. Any standing water should not be permitted to remain for more than 4 days based on the time required for mosquito eggs to develop into adults. This period also ties into irrigation practices.

For farmers or ranchers that also do some cropping or haying, over-watering resulting in full soil saturation preventing timely absorption should be avoided. Croplands that are irrigated should have a continuous slope to a lower corner of the field to collect wastewater into a drainage ditch at the end of an irrigation run. If there is a watering hole for animals on the property, the sides should be graded fairly steeply and vegetation removed from around the periphery to make it less favorable for mosquitoes and the depth should be at least 3 feet. Fish which feed on mosquito larvae can also be stocked in watering holes and in large stock tanks to feed on any mosquito larvae which may develop.

In addition to the water sources, understanding mosquito behavior can also aid in minimizing contact with your animals. Mosquitoes are most active during the dusk hours and having your horses stalled up during these times in a stable may help. Additionally, mosquitoes don't handle flight in a light breeze very well so having excellent flow-through ventilation or even better, fans that are constantly blowing air through the barn or at feeding stations can help deter the insects from landing on your animals. One important note on utilizing fans is that they need to be blown free of dust regularly to prevent the electric motors from overheating and contributing to a barn fire.

Vesicular Stomatitis Virus is a disease affecting both horses and cloven-hoofed animals such as cattle, sheep, goats, and swine. Vesicular Stomatitis is of significant importance because of the similar clinical signs of illness (fluid-filled vesicles on the tongue, lips, gums and at the coronary bands, prepuce and teats, sloughing of skin around the muzzle and lesions in the

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Environmental Management for Diseases Spread by Biting Insects

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Credit: Courtesy Spalding Labs

ears) that are indistinguishable in the field from economically devastating diseases such as Foot and Mouth Disease which predominantly affects cloven-hoof livestock. Flies (particularly biting midges or flies such as Black Flies, Sand Flies, Face Flies, & Horn Flies) are the main vectors associated with this disease. In contrast to mosquitoes, Black Flies will only lay their eggs in clear, running water and don't tolerate stagnant or polluted water at all. In light of this, prevention of exposure to midges is centered mostly on ensuring that your horses or livestock are stabled at times of peak feeding activity by the midges (mid-morning and dusk or throughout overcast days or avoiding shaded areas).

Excellent manure management to avoid high concentrations of waste near animal holding facilities is critically important for fly control. Spreading that manure in a thin layer over fields at a distance to the animal pens or regular pickup of manure (weekly) by a waste management company are also good strategies to decrease the attraction of these flies. Furthermore, any wet or soiled animal feed or bedding material should be removed frequently as the decomposing or fermenting hay and straw will also serve to attract flies.

"Fly predators" are a type of biologic control being a species of wasp that feeds on fly larvae in manure piles that may be employed to reduce the fly burden in an area. Utilizing fly sheets and fly masks may also be very useful in horses. Prudent use of approved pyrethroid/ permethrin based fly repellents and regular application to the face, ears and belly or legs will also help deter the insects. Application of fly repellents should also be timed strategically with the application just before peak activity of the insects. In a barn / stable situation, automated environmental fly spray misting systems that are on timers can be quite effective. As with mosquitoes, the midges dislike any breeze and excellent ventilation or fans can prevent the midges from landing on and successfully feeding on the animal. For Vesicular Stomatitis, if affected animals are identified, on-site quarantine and avoiding any other healthy animals from using common water troughs or tack or feed pans and excellent hand-washing practices between handling animals are critical to minimizing the spread of this disease.

Equine Infectious Anemia is another disease that is commonly spread by biting flies – in this case, tabanid flies such as the common Horse Fly. As with Vesicular Stomatitis, fly control in the form of frequent application of chemical fly repellents, fly sheets and fly masks, manure management and prompt removal of soured feed or soiled bedding are crucial to mitigating contact between horses and these insect vectors.

With these strategies in mind, you as a horse owner or livestock producer can better manage the risk of insect-transmitted disease on your premises.

Contact Us

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(623) 445-0281

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(602) 542-0884

Licensing:
(602) 542-3578

Meat & Poultry:
(602) 542-6398

Poultry Disease Hotline:
1-888-742-5334

Self-Inspection:
(602) 542-6407

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