Winter 2021

Veterinary Medical Loan Repayment Program

The State Veterinarian’s office receives complaints from livestock owners all over Utah that there are not enough food animal veterinarians, and that they often have to wait weeks for routine veterinary care like pregnancy checking and brucellosis vaccinations. There are few new veterinarians willing to work on livestock, and high student loans are preventing many from moving to rural areas. In the past, UDAF has tried to make it easier for livestock owners to access veterinary care through programs like the brucellosis technicians. However, because the FDA will soon require prescriptions for all antibiotics and the risk of foreign animal diseases like African Swine Fever is increasing, it is important for livestock owners to work closely with veterinarians to protect their herds from common and uncommon diseases.

The USDA Veterinary Medical Loan Repayment Program (VMLRP) pays up to $75,000 ($25,000 per year) towards the loans of veterinarians willing to work in underserved areas. Every year, Utah is allowed to nominate to six underserved areas in the state. Areas are chosen based on factors like the number and types of livestock, the number of veterinarians, and the population. This year, based on these factors and input from livestock owners and veterinarians, the following five areas were nominated:

- Tooele and Juab Counties
- Emery and Carbon Counties
- Duchesne and Uintah Counties
- Sevier and Sanpete Counties
- Millard County

Veterinarians who are interested in receiving one of the awards must apply to the program between February and April 2021. Veterinarians must agree to work in the underserved area for at least 3 years, and those applying for one of the five nominated areas in Utah must work with livestock at least 12 hours per week. USDA will announce the recipients of the awards in September, 2021.

VMLRP receives an average of 150 applications per year and only gives out 48 awards nationwide. A panel of veterinarians reviews the area nominations and the veterinarian applications and tries to match high-need areas with veterinarians who are the best fit for that area. Because there is a lot of competition for these awards, it is important for veterinarians to have a well-written application that showcases how they are a good fit for the underserved area.

For more information on the VMLRP, visit [https://nifa.usda.gov/program/veterinary-medicine-loan-repayment-program](https://nifa.usda.gov/program/veterinary-medicine-loan-repayment-program). If you would like to see an area nominated in the future, please reach out to the State Veterinarian’s office.
UDAF Aquaculture Program

The UDAF Aquaculture program has four primary functions: 1) license private aquaculture and fee fishing facilities; 2) grant health approval to in-state and out-of-state aquaculture facilities; 3) issue entry permits for aquatic animals entering the state and 4) serve on the Fish Health Policy Board and Utah Water Quality and Health Advisory Panel.

Licensing
There are four types of aquaculture licenses issued by UDAF: 1) Aquaculture for live sales (i.e. stocking into private ponds); 2) Aquaculture for food sales; 3) Fish processing plants; and 4) Fee fishing facilities. The Division of Wildlife Resources (DWR) licenses public aquaculture facilities, institutional aquaculture, display aquariums, private ponds, non-commercial aquaponics systems, and private stocking of public waters. The Aquaculture program coordinates with UDAF Regulatory Services for licensing fish processing plants and activities that involve food sanitation or food processing. UDAF must consult with DWR on the species allowed at UDAF licensed aquaculture facilities. UDAF checks purchases and sales at licensed facilities to make sure the species are allowed and that stocks were obtained from Health Approved facilities.

Health Approval and Other Inspection
Aquatic animals that are raised as food or stocked into aquaculture facilities, fee fishing operations, private ponds, etc. must come from Health Approved sources. Health Approval is based on annual sampling of each species at a facility for specific diseases and parasites, including: Infectious hematopoietic necrosis, Infectious pancreatic necrosis, Viral hemorrhagic septicemia, Oncorhynchus masou, Spring viremia of carp, Epizootic hematopoietic necrosis, White spot syndrome, Yellow head, Taura syndrome, Infectious hypodermal and hematopoietic necrosis; Whirling disease, Bacterial Kidney Disease, and Asian tapeworm.

UDAF collects samples from licensed facilities that want Health Approval to sell live animals and sends the samples to laboratories for testing. UDAF evaluates laboratory reports and issues Health Approval to in-state commercial facilities and all out-of-state facilities that ship live aquatic animals to Utah. Since UDAF licenses commercial aquaculture facilities, UDAF also conducts inspections to verify that facilities meet DWR requirements, including sterilization of salmonid species and freedom from aquatic invasive species.

Entry Permits
The Aquaculture program issues entry permits for live aquatic animals that are being shipped to Utah. In 2020, 322 entry permits were issued for 1,801,788 fish eggs, and 1,666,766 aquatic animals that entered the state. UDAF ensures that the aquatic animals originate from Health Approved facilities and the receiver can legally possess the animals.

Fish Health Policy Board and Other Committees
The Fish Health Policy Board (FHPB) has seven members with representatives from UDAF, the DWR, private aquaculture and sportsman’s groups. The FHPB manages applications for variances to Aquaculture and Aquatic Animal Health Rule and reports on prohibited pathogens findings. UDAF also attends Utah Water Quality and Health Advisory Panel meetings and provides input on consumption advisories due to mercury or other contaminants.
Lumpy Jaw and Woody Tongue

Lumpy jaw and woody tongue in cattle are a common reason for meat inspectors at slaughterhouses to condemn cattle heads. Lumpy jaw is caused by the bacteria *Actinomyces bovis*, woody tongue is caused by *Actinobacillus lignieresii*, and together they are referred to as “Acti”. *Actinomyces bovis* also causes fistulous withers and poll evil in horses. These bacteria can be found in the mouth of healthy cattle, and only cause disease if there is damage to the gums, teeth, or tongue. The damage is usually caused by wire, sticks, foxtails, or rough feed like low quality hay or scrub.

In cattle with lumpy jaw, the bacteria invade the bone of the jaw. The immune system reacts, causing destruction of the bone with new bone growth around the outside of the infection. The jaw continues to lose bone and create new bone until the jaw looks like a sponge. From the outside, it looks like a large hard lump is growing on the side of the jaw. The infection may reach the surface of the skin and look like a large abscess with pus coming out. If the infection spreads into the sinuses or nose, the animal may have trouble breathing.

While the infection causing lumpy jaw can be treated with some antibiotics or sodium iodide, the lump will not shrink. Because of the sponge-like appearance of the bone, the jaw is very weak and can break easily. Affected animals often have trouble eating because their jaws no longer line up for chewing and the teeth in the area may become loose.

Woody tongue only affects the soft tissues of the head like the tongue. Often, the tongue becomes hard, swollen, and painful and sticks out from the mouth, and the animal will have trouble scooping up food to eat. Other signs of woody tongue include drooling, ulcers on the tongue, and weight loss. Because woody tongue does not affect the bone, the tongue should go back to its normal shape after treatment.

Bottle jaw, caused by fluid in the tissues under the tongue, can look like woody tongue. However, bottle jaw is much softer than woody tongue, and when you poke your finger into the swollen area, it leaves an indentation for a short period of time. Bottle jaw can be caused by heart failure, diseases that cause the body to lose protein (like worms, Johne’s disease, or kidney disease), and malnutrition.

At slaughter, meat inspectors check the lymph nodes in the head and the rest of the body for signs of Acti. If the infection has spread to the lymph nodes, the inspectors can see white to yellow granules or thick pus. If there is no evidence of acti in the lymph nodes, the head is condemned, but the tongue may be passed for food. If acti is found in lymph nodes outside the head, the whole animal is condemned. Acti looks very similar to tuberculosis, so the inspector may send the lymph nodes to a laboratory to confirm that the animal does not have tuberculosis.
Biosecurity Principles

Recently, the National Poultry Improvement Plan (NPIP) published 14 Biosecurity Principles aimed at minimum management practices and principles designed to prevent the introduction and spread of diseases like viruses and bacteria onto a farm. These principles were developed with much thought and professional input. Although they are intended for commercial poultry operations, these principles would benefit any livestock, horse, or poultry operation. We invite you to review these principles and incorporate any or all that would be appropriate for your individual operations. These principles are summarized here.

1. Biosecurity responsibility
   - A good biosecurity plan should be developed, spelling out farm-specific procedures and practices.
   - A Biosecurity Coordinator should be designated who understands the plan and ensures that employees, vendors, and other visitors comply, especially during disease outbreaks.
   - These plans are should change and adapt as needed.

2. Training
   - All employees who enter the animal areas must be trained on these site-specific procedures and follow them closely.
   - Any new employees must be trained before they have animal contact.

3. Line of Separation (LOS)
   - The LOS is a boundary separating animal areas from other areas of the farm like offices, parking areas, and feed storage. The biosecurity plan should clearly outline the procedures to be followed by employees, visitors, or suppliers when entering and leaving animal areas.

4. Perimeter Buffer Area (PBA)
   - The PBA surrounds the animal areas and the plan should clearly outline the procedures to be followed when entering and leaving this area also.

5. Personnel
   - The biosecurity plan should address procedures and personal protective equipment (PPE) that should be used for employees as well as procedures and PPE for non-farm personnel. This may include boots, coveralls, and footwear washing stations.
   - The plan should also have specific procedures for personnel that have had recent outside contact with other animals before entering the PBA (e.g. people who work on poultry ranches who own backyard poultry.)

6. Wild birds, Rodents, and Insects
   - There should be control measures to prevent contact with wild birds, their feces and feathers. Wild birds can carry and spread many diseases, including avian influenza, salmonella, and rabbit hemorrhagic disease.
   - The plan should also contain control programs for rodents, insects, and other animals.
7. Equipment and Vehicles
   - The plan should include procedures for cleaning and disinfection of equipment and vehicles, or restrictions for sharing of equipment where applicable.
   - Vehicle access and traffic patterns should also be defined.

8. Mortality (Dead Animal) Disposal
   - The plan should address how frequently dead animals are removed, how they are stored, and pest control during disposal.
   - The plan should also address procedures for handling dead animals in a way that minimizes the risk of disease spread to or from other farms.

9. Manure and Litter Management
   - Manure and spent litter should be handled in a way that prevents disease spread.

10. Replacement Animals.
    - Purchased animals should only come from reputable sources with similar health and biosecurity standards.
    - Vehicles used to transport animals need to be regularly cleaned, disinfected, and inspected.
    - Biosecurity protocols need to be in place for animal transport.
    - New arrivals should be housed separately and quarantined for at least 21 days before contact with other animals on the farm.

11. Water Supply
    - Drinking water should come from a contained supply such as a well or municipal system.
    - If surface water is used, the water should be treated to reduce the risk of disease.

12. Feed and Replacement Litter
    - Feed, feed ingredients, and litter should be protected from exposure to and contamination by wild birds, rodents, insects and other animals.
    - The plan should also address feed spills.

13. Elevated Morbidity and Mortality (Increased Sickness and Death)
    - The plan should address expected rates of sickness and death and actions to be taken when higher than normal sickness or death loss are seen.
    - The plan should include contact information for the State Veterinarian's office to report suspected cases of reportable diseases. The Utah Reportable Disease List can be found at [https://ag.utah.gov/documents/ReportableDiseaseList.pdf](https://ag.utah.gov/documents/ReportableDiseaseList.pdf)

14. Auditing
    - Auditing is a review of the biosecurity plan and any associated records by UDAF or USDA. In the event of a disease outbreak, only farms with approved biosecurity plans will be able to move animals or animal products off their farms. There is more information about biosecurity plans and requirements in the Utah Secure Food Supply plans, which can be found at [bit.ly/UTAnimalEP](bit.ly/UTAnimalEP).

Check out the Animal Health Program website at [ag.utah.gov](ag.utah.gov)!