Develop a Good Flock Health Program with Your Veterinarian

by Melanie Barkley, PSU Extension Educator

A good flock health program should begin with a discussion with your veterinarian. In addition to this discussion, it is important to remember that other animal welfare factors, beyond a health program, will impact the health of sheep in the operation. These aspects as well as others should be considered.

For example, nutrition during late pregnancy will have a direct impact on the amount and quality of the colostrum a ewe produces which in turn impacts the health and vigor of newborn lambs. Ewes should also be in average body condition (BCS of 3) to help prevent issues with pregnancy toxemia.

However, as part of the health program, producers should consult their veterinarian about a vaccination program. A ewe vaccination program stimulates the immune system in the ewe, causing her to build the necessary antibodies to provide passive immunity to her lambs through colostrum. Thus, a ewe vaccination program is the first line of protection for the newborn lamb.

Vaccinations allow sheep to build immunity to common diseases present within a flock. Producers and their local veterinarian can design a vaccination program that best protects the flock from diseases on the farm. Many producers may only vaccinate for a few diseases while others prefer to vaccinate for a larger number. At the very least, producers should vaccinate with C, D and T to prevent overeating disease and tetanus. Additional vaccines can be included if other diseases are present on the farm.

To begin developing a good vaccination program, producers should understand the different types of vaccines, proper vaccine handling and proper injection techniques.

Vaccine Types

There are two different types of vaccines available.

1. ***Killed vaccines*** are made from viruses or bacteria that are no longer active. This type of vaccine stimulates the animal's body to produce antibodies which prevent the animal from getting the disease if the animal is exposed. These vaccines can be given to pregnant animals because there is a low risk of the animals developing adverse reactions to this type of vaccine. This type of vaccine is stable for a longer period of time. Animals vaccinated with killed vaccines develop an immune response more slowly and to a lesser degree than animals vaccinated with modified live vaccines.
2. ***Modified live*** vaccines utilize a live virus. Modified live vaccines have been treated so that the disease viruses will not cause the disease but will allow the animal to produce immunity to the disease. This vaccine type must be used within a short period of time after mixing. A word of caution; modified live vaccines do have the potential to cause abortions, and associated problems, in bred females that have never been vaccinated with a modified live vaccine.

Handling Vaccines

In order for vaccines to work properly, they must be handled properly! Properly handling the vaccine from the time it is purchased until the time it is administered to the animals will ensure the best immunity. There are handling differences between the two vaccine types, so be sure to follow the label directions.

When buying vaccines, purchase them from a reputable vendor that will deliver a high-quality vaccine. Most vaccines should be stored in a refrigerator between 35 and 45 degrees F. Heat can make the vaccines ineffective, so they should not be allowed to warm up to room temperature at any time. Also, be sure that the vaccines do not freeze. This could also make them ineffective.

If you buy vaccines that need mixed, use only the rehydrating solution packaged with the vaccine. Determine how many animals you need to vaccinate and only mix enough to vaccinate that number. Any leftover vaccine should be thrown away as it loses its effectiveness during storage. For some vaccines, this could be as quickly as one to two hours after it has been rehydrated.

If vaccinating a large number of animals, you may need to use a cooler to keep vaccines cool until the task is completed. Pre-cool the cooler and then place a cold pack inside to maintain temperature. Place the vaccine in the cooler and place the cooler in an area out of direct sunlight. Again, follow label instructions.

Injection Techniques

Medication labels are considered legal documents. Therefore, producers should always follow label directions for dosage and route of administration when working with medications. Most products recommend either an intramuscular (IM) injection, that places the product directly into the muscle, or a subcutaneous (SQ) injection, that places the product between the muscle and the skin. Subcutaneous injections should be preferred because it causes less damage to any muscle tissue that may be harvested for meat.

All IM injections should be given in the neck, while SQ injections may be given in either the neck or under the skin in the flank of the animal. The graphic below shows where injections should be given. Basically, the injection should be placed in front of the shoulder, above the spine that runs along the bottom of the neck and below the cartilage that runs along the top of the neck.

In addition to proper injection site, all product labels list a withdrawal period. A withdrawal period ensures that medication residues are no longer present in food products harvested from treated animals. Withdrawal periods are more typically found on antibiotic medications.

A good vaccination program helps to prevent diseases in a flock and should be part of other disease prevention measures. Always consult your veterinarian to design a flock health program that fits your individual farm situation.

The triangle on this sheep's neck indicates the area where IM or SQ injections should be given.