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FOR IMMEDIATE RELEASE

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## Vaccinations in Cattle

For many cattle operations in Adams County it is time to think about vaccinations if it is not already completed. Most veterinarians and the stuff you read will tell you that the colostrum will protect young calves for the first 3 months against many of the diseases that can cause problems to calves. In this area blackleg is one of the most common things we vaccinate to reduce the risk of losses. However, there is many schools of thought if you sit among a bunch of farmers and discuss the herd health program. Some vaccinate nothing, some vaccinate with one dose, and some vaccinate and then give a booster in a few weeks.

My recommendations are to read the label and talk to your veterinarian. I believe most will tell you the same thing. I believe they will both tell you that a booster is needed for optimal protection. Vaccinations are not 100 percent protection, but I would take my chances with everything being vaccinated, including a booster, over no vaccination at all.

When buying the vaccine, discuss and/or read to know what you are getting. There are several vaccines that provide protection against blackleg. Some of the vaccines protect against other things like tetanus for example. If you are running calves through the chute to vaccinate, you might also be taking care of other issues like castration. Many castrate with bands. If you castrate with bands you probably would be wise to use a vaccine with tetanus included. Yes, it is available. I have used it for years, and it is available from your local veterinarian.

Now that you have the idea, one shot to protect against blackleg and tetanus. It might cost a little more, but you can buy a bunch of it for the price you would forfeit if you had one dead steer due to lockjaw. I mean it is pennies per calf and no more time, just one injection. So, now think about timing. How fast will that vaccine protect a calf from ANYTHING? I can tell you it takes a few days, probably a couple of weeks or more. So if it really would take 2 weeks should you castrate the same day you give the vaccine? Would you be better off giving the first round and then castrating 2 to 3 weeks later when you give the booster? How much do you know about tetanus, blackleg or other similar calf diseases? The following was in the Beef Blog this week from Heather Thomas.

Several serious livestock diseases are caused by a group of bacteria called clostridia. Cattle can be protected against the most common ones with seven- or eight-way vaccines, but tetanus is generally not included in those vaccines.

Clostridia can produce deadly toxins that may kill the animal if they get into the bloodstream. Toxins of different types of clostridia vary in their effects and the way they gain access to the bloodstream. These bacteria multiply in the absence of oxygen — such as in a deep puncture wound where the bacteria are not exposed to air, in bruised tissue with compromised blood supply or in certain conditions within the digestive tract.



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When they multiply, these bacteria release deadly toxins faster than the body can mount a defense, unless the animal was previously vaccinated, often causing sudden death.

Andrew Niehaus, clinical associate professor for the College of Veterinary Clinical Sciences at Ohio State University, says several vaccines combine protection against most clostridial diseases: blackleg, red water, malignant edema, black disease and enterotoxemia (gut infection) caused by *C. perfringens* types C and D.

“Some include protection against tetanus (Covexin® 8 by Merck is an eight-way vaccine that includes tetanus), but many do not, and a separate vaccine may be needed for tetanus. Tetanus is included with perfringens in a combination vaccine referred to as C, D and T,” Niehaus says. Tetanus can occur in any animal if anaerobic conditions in the tissue create a favorable environment for bacterial growth. “We see this sometimes in calves castrated by banding, as the scrotal tissue dies. Necrotic tissue provides an excellent environment. This is when clostridial organisms produce their deadly toxins,” he explains.

Cows that have retained placenta or metritis may also get tetanus because there is rotting material in the uterus. Most of the time, we don’t worry about cows with retained placenta because they eventually shed those membranes and everything is fine. However, there is risk for tetanus because of the anaerobic environment loved by clostridial organisms, Niehaus explains. The typical history of tetanus in those cows is that they start to show signs of the disease about three weeks after calving. Often they do not show any signs of illness leading up to when they get tetanus. If the cervix closes down, they may not even have vaginal discharge.

“Every case of tetanus that I’ve seen in cattle has been one of those two situations — either a calf with a banded scrotum or a cow that had retained placenta. The clinical signs of tetanus include muscle stiffness; the disease is called lockjaw because the animal can’t open its mouth. A cow may bloat because the rumen has accumulated gas, due to inability to swallow and eructate (expel gas from the rumen),” he explains.

“When you attempt to pass a stomach tube to relieve bloat, you discover that you can’t open the mouth because the jaw muscles are rigid. If you look at the eyes, the third eyelid is frequently more prominent than usual, and pulled up over the eyeball,” Niehaus says.

Treatment is usually ineffective by the time an animal shows signs of tetanus, and it may be impossible to save the animal. To provide protection against tetanus, you usually have to give a separate vaccine — most commonly the C, D and T combination, he says. It is important to read the label on the vaccine because tetanus is not included in many of the seven- or eight-way clostridial vaccines.

### **Dates to Remember**

- July 3            Southern Ohio Ag and Community Development Meeting at Cherry Fork Gym at 6:30 p.m. to discuss grant programs for 2018-2019.
  
- July 5            Southern Ohio Ag and Community Development Meeting at Southern Hills CTC in Georgetown at 10:30 a.m. to discuss grant programs for 2018-2019.

July 8-14 Adams County Fair

July 9 Pesticide Testing at the Old Y Restaurant at noon. Pre-register at 800-282-1955 or <http://pested.osu.edu>