

April 27, 2015
 FOR IMMEDIATE RELEASE
 David Dugan
 OSU Extension Educator, Agriculture and Natural Resources
 Adams/Brown/Highland Counties
 Ohio Valley Extension Education Research Area

Take Care of Your Vaccines (and Livestock)

I have talked about the use of vaccines in this column in the past, but with cattle prices where they currently are, we need to revisit some of the little things. One of the little things that we need to keep in mind is the refrigerator that is most likely the old one from the kitchen that made its way to the barn when a new one was bought for the kitchen. If this is the case, does this old fridge keep things at a consistent temperature?

There are several things that can lessen the effectiveness of vaccines, but storage is very important. Maintaining temps in the correct range is critical for peak performance. Digital thermometers are pretty common today, and they are not expensive. They are really cheap if they are used to determine your cold storage is not up to snuff for the hundreds of dollars of vaccines that you have stored in that old fridge. Even cheaper if you consider you administer ineffective vaccines and lose a calf or two. The digital thermometers will record a range. That is what you need to know.

Below is a checklist of things that are worth looking over. Often some of these things are overlooked or not thought to be important. You may want to consider ALL of these like a link in a chain. One weak link and you establish the strength of the chain. So, in a nutshell you can do all of these things right except one and your efforts will be for nothing. This is not one of those deals where 3 out of 10 is good like a hitter in baseball, or even 9 out of 10 if you are shooting free throws. This needs to 10 out of 10 all of the time.

Here is the list that was in recent article in the Beef Blog and prepared by Dr. Ron Clarke on behalf of the Western Canadian Association of Bovine Practitioners.

- Discard containers if rubber seals appear to be compromised, or labels can't be read or are outdated.
- Avoid soaps and disinfectants when cleaning syringes. Boiling water and sunlight are the most effective options.
- Virtually all vaccines used in large-animal veterinary medicine should be stored out of sunlight and maintained at between 35 F (2 C) and 45 F (7 C).
- Vaccines should be stored in a designated refrigerator. Storing jugs of water in the refrigerator can help prevent temperature fluctuations.
- Vaccines should be kept in original packaging, and the boxes rotated so newer product with the latest expiration date are used last.
- Food and beverages should not be stored in the vaccine refrigerator.
- Maintain the cold chain during transport. Vaccines should be kept in an insulated cooler. Frozen



ice packs or refrigerated packs should be used as needed to maintain the correct temperature range. Monitor the temperature in the cooler and note it immediately before and after transport. A layer of insulation should be tucked between the vaccine boxes and ice packs to prevent freezing. And the cooler should be kept in the passenger cab of the vehicle.

- For lyophilized vaccines (vaccines with a freeze-dried puck), only use the diluent provided with the vaccine. Generally, diluents do not need to be refrigerated, but it is usually more convenient to keep them in the refrigerator with their corresponding vaccine.
- Use a new, sterile syringe and needle or transfer needle to mix vaccines. Do not reconstitute vaccines until they are needed.
- Mark vaccine syringes to prevent “mistaken identity” because many vaccines look similar in the syringe. It’s critical that you avoid using the same syringe to administer MLV and killed vaccines, as the adjuvant in killed vaccines can reduce or eliminate the efficacy of many MLV vaccines.
- Beef Quality Assurance (BQA) recommends using disposable equipment such as single-use needles where possible. Reusable syringes should be heat-sterilized by boiling prior to use.
- Consult your veterinarian about proper sanitation techniques before sterilizing equipment. Improper sterilization can reduce the effectiveness of future injections and result in infection at the injection site. Dr. Dee Griffin, Great Plains Veterinary Center, Clay Center, Nebraska, has a great instructional video on how to clean and sterilize reusable syringes. (Goggle: BQA Tip: How to Clean Syringes | WI Beef Information Center).
- Research has proven microwaves are an effective way to sterilize needles and plastic syringes. Metal vaccine transfer needles can be heat sterilized in the microwave if they are fully submerged in water or well wrapped in wet paper towels.
- Veterinarians deal with the issues of syringe maintenance, equipment and product choices every day. Seek their advice.

Dates to Remember

Pesticide Testing Private or Commercial Pesticide Testing available at the Old Y Restaurant at noon on Monday, May 11. The test is offered on the second Monday of every month except October. Go to <http://pested.osu.edu> or call the Ohio Department of Agriculture at 800-282-1955 to register for the testing opportunity.