

# Make it Count

## Basics make herd vaccination more effective.

by *Deana Hardee, DVM*

Vaccination is a cornerstone of any effective herd health program. Much time and cost can go into vaccine planning, selection and strategy. Working cattle for vaccination also can be labor intensive, whether hiring a crew or working with recruited family and friends.

This effort and cost should not be in vain because vaccines were stored or handled inappropriately. So, when planning for vaccinations consider some basic vaccine handling dos and donts.

**DO store vaccines at the appropriate temperature.** The appropriate storage temperature for most vaccines is 35° to 45° F. While this range will satisfy the requirements of most vaccines, always store according to label directions. Vaccines should be kept in a reliable refrigerator that is routinely checked. Avoid putting vaccines in the door of the fridge where temperature fluctuates the most. An in-fridge thermometer is an inexpensive way to monitor temperature.

**DON'T expose vaccines and filled syringes to extremes** in the environment. Allowing vaccines to warm can impact the effectiveness of the vaccine. Freezing is also harmful and can damage both modified-live vaccines (MLV) and killed vaccines. Storage after mixing, transporting or while in use should also be considered.

Additionally, avoid direct sunlight. Using a cooler in the field or chute-side is necessary.

**DO read the label.** The vaccine label is very useful for understanding the type of product, specific indications

and withdrawal times. Mix vaccines according to directions, being careful to avoid excessive agitation. Use a gentle swirling or rolling motion instead of shaking. When administering modified-live vaccines, diluent is mixed with a powder or cake to activate the vaccine.

**DON'T reconstitute more doses than needed.** After mixing, vaccines should be used within two hours. Mix only what you can expect to use within an hour or mix as you go. Delays can happen and vaccine efficacy may be compromised. Any leftover vaccine should be discarded.

If you have made it this far in the article, we commend you! The first five people to email [livestockmm@merck.com](mailto:livestockmm@merck.com) and provide a valuable tip learned from this month's Handle on Health will receive a free Merck vaccine cooler. (The subject line should be "Hereford World" and must be received by July 1, 2022.)

**DO protect vaccines from contamination.** Always use a clean needle when filling a syringe from the bottle. Don't refill a syringe from the vaccine bottle with a needle that was previously used to administer vaccine to an animal. When administering two or more vaccines, plan on marking or labeling vaccine syringes so they are not inadvertently refilled or mixed with a different product. It's a good practice to change needles every 10 head at minimum. A contaminated (dirty) needle can lead to injection site lesions. Excessive use of the same needle can cause the needle to weaken and become at risk of bending or breaking. Additionally, frequent needle changes can aid

in limiting the potential spread of bloodborne pathogens. After each use, sanitize syringes using only hot water.

**DON'T use soaps and disinfectants** as they can leave residues, which may cause damage to future vaccines. Allow syringes to dry and store them in a clean area until it is time for the next use.

**DO train employees.** Make vaccine education for all employees a priority. Explain and reinforce protocols for proper vaccine handling and administration. Explain why each vaccine is being used and the significance of the vaccine protocols.

**DON'T assume everyone understands the importance** of vaccine handling and care.

**DO consider the animal's physiological state prior to vaccination.** For effective immunization, cattle must be healthy to respond to vaccination. Take steps to reduce stress. An animal's ability to mount an immune response can be lessened by concurrent illness or immunosuppression.

**DON'T vaccinate unhealthy, sick animals** or animals in chronic stress situations.

**DO reach out to your local veterinarian.** Don't hesitate to ask questions. When planning your herd health program, consider these dos and donts.

**DON'T let one of these obstacles hinder the vaccine's ability** to provide protection to your herd, negating the hard work and time you invested. **HW**

**Editor's note:** Deana Hardee is a technical services veterinarian at Merck Animal Health. Copyright© 2022 Merck & Co., Inc., Kenilworth, NJ, USA and its affiliates. All rights reserved.