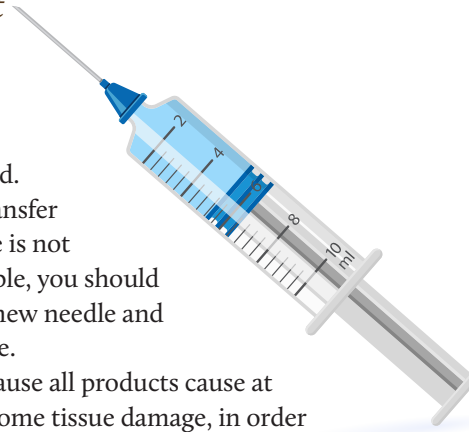


VETERINARY CALL

by Bob Larson, Kansas State University

Vaccine Storage and Handling

Proper storage and handling of vaccines is just as important as selection for cattle producers.



Producers and veterinarians routinely vaccinate cattle to help prevent and control disease. However, vaccines can fail to protect cattle or even cause harm if the products are stored or handled improperly anytime between being manufactured and injected into an animal.

Both hot and cold temperatures can quickly cause enough harm to a vaccine to make it unable to provide protection. Sunlight can also cause rapid loss of effective protection.

Producers and veterinarians have essentially no control over the manufacture, storage and shipment of vaccines prior to arrival at the veterinary clinic or ranch. Thus, it is important to deal with reputable companies that have strict quality control procedures in place and will stand behind their products.

If you receive vaccines on a hot day and the shipping box does not have a cold ice pack, you should not accept the vaccines. Similarly, if you receive vaccines that have been frozen, they should also be rejected.

Once received, your vaccines should be refrigerated until they are placed into an insulated cooler for transport to the working chute. A possible weak link in the handling chain is a storage refrigerator that does not consistently remain between 35° Fahrenheit (F) and 45° F,

as recommended on many labels.

In fact, several recent studies found anywhere from 25% to 76% of the refrigerators used for vaccine storage on livestock operations failed to maintain appropriate temperatures throughout the storage period. I recommend producers place a thermometer near the refrigerator door (the doors are most likely to have temperature extremes), and check it regularly.

When you are ready to vaccinate cattle, it is important to read and follow all instructions on the label. Do not mix vaccines in the same bottle or a syringe if they were not intended to be mixed together. Do not remove more doses from the cooler than you will use in less than 30 minutes.

While it is important to clean syringes between each use, cleaning and disinfecting detergents can easily destroy the ability of vaccines to work effectively. Most veterinarians recommend syringes be cleaned only with boiling water. Always use a brand new needle when drawing vaccine out of a bottle, because previously used needles are likely to contaminate the contents.

For rehydrating the freeze-dried portion of a modified-live vaccine with the provided liquid, ideally, a double-sided transfer needle should

be used.

If a transfer needle is not available, you should use a new needle and syringe.

Because all products cause at least some tissue damage, in order to meet Beef Quality Assurance (BQA) guidelines, all vaccines labeled for subcutaneous (sub-Q) injection should be administered under the skin in the neck region. If a vaccine label requires that the product be given in the muscle (IM), it should only be injected in the neck muscles. The other route vaccines are currently administered to cattle is by being squirted into the nose — which clearly meets BQA guidelines.

Vaccines are a valuable tool to control disease risk in cattle herds. However, in order to gain the full benefit of a vaccination program, the products chosen should be handled carefully from the time of manufacture until they are injected into your cattle. **AJ**

Editor's note: Robert L. Larson is a professor of production medicine and executive director of Veterinary Medicine Continuing Education at Kansas State University.