Vaccinations— Let's "Shoot" Straight!

Every good cowman knows that, used properly animal health products such as vaccines, dewormers, and antibiotics, play a vital role in reducing the toll that disease and parasites can take on his cattle. He also knows healthy cattle mean more money in his pocket at the end of the year.

However, vaccinations can cost him money if not done properly. A study by Colorado State University for the NCA's Beef Safety Assurance Task Force estimated that injection site blemishes caused a $46,051,869 loss for the beef industry in 1991 or $1.74 per every steer/heifer slaughtered.

These blemishes caused by muscle scars and lesions resulting from irritated and damaged tissue, do NOT present a food safety concern, but they do represent a quality control defect in the product and an economic loss for the industry. In the NCA study, injection site blemishes were the second major concern after excess external fat of purveyors, restauranteurs, and packers.

Research data showed a high incidence of tissue irritation resulting from intramuscular (I.M.) injections of 7-way and 8-way clostridial bacterins (vaccines) and certain I.M. injectable antibiotic products. Seven-way clostridial vaccine given in the muscle between the hooks and pins at branding can cause scarring (gristle or tough spots) at slaughter. The scars require a lot of trimming, and that has caused a decline in demand for top butts and even the whole top sirloin.

A good herd manager can reduce loss by following a few simple procedures:

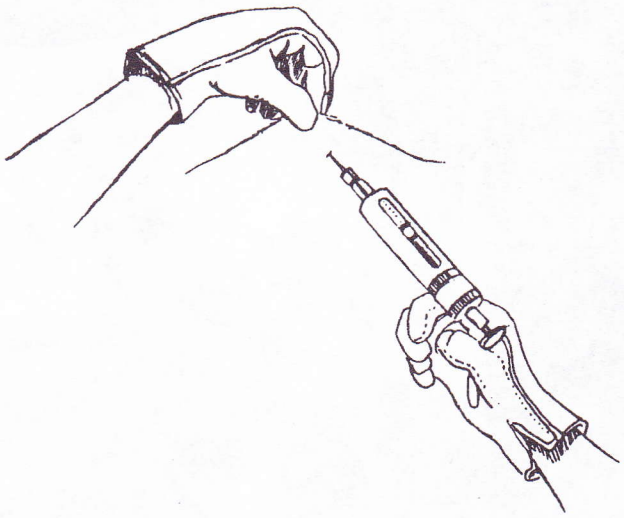
1. Always read the label.

Products work most effectively when they're used as specified on the label. To get the best possible immune response, reduce the chance of reactions and minimize the risk of residues, look for these instructions: the proper dosage; timing, route of administration; warnings or indications; withdrawal periods,; storage and disposal requirements; and shelf life. Using products in ways that are not specified on the label can be a factor in drug residue problems.

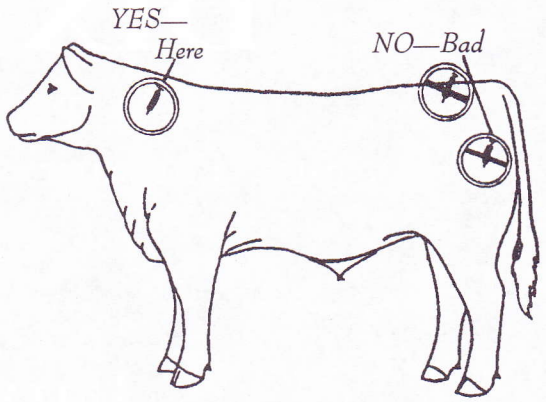
2. Stay away from the muscle.

Some products are given intravenously, orally or intranasally, but the most common routes are intramuscular which means injecting into the muscle; and subcutaneous (SUB-Q), which means injecting just under the skin. Generally, bacterins or killed products can be given subcutaneously. Modified live virus products should be given intramuscularly, because this is a more

Suggested Tenting Technique



Injection Site Locations - Yes/No



favorable environment for the virus to reproduce and reach the animal's lymphatic system. Some products offer a choice of administration route. Whenever possible—and if it's specified on the label—use the subcutaneous route.

3. Choose the best site.

The best site is not always the one that's fastest and easiest to get to. It's the site where the product will be most effective, with the least possible risk of damage to valuable cuts of meat. NCA recommends that all clostridial bacterins be given subcutaneously in the neck region, preferably using the "tented" technique. (see illustration).

4. Use multiple injection sites.

When giving multiple injections, be sure the injection sites are at least several inches apart. For maximum uptake and effectiveness, don't put more than ten cc's into any one site at a time.

5. Use the correct size needle.

Using the correct size needle will help ensure that vaccine gets into the animal's system properly. The selection depends on the size of animal being vaccinated, and the route of administration.

A 16 or 18 gauge needle is recommended for SUB-Q and I.M. injections. One-half to 3/4 inches in length is usually adequate for SUB-Q administration. One to one and one-half inches is usually adequate for I.M., depending on where the injection will be given and the size of the animal.

6. Other tips for proper injection.

Sanitation is essential. It can reduce the risk of spreading infection from one animal to another, reduce the chance of contaminating the vaccine, and reduce injection site reactions.

Don't go back into a vaccine bottle with the same needle you use to vaccinate.

Change needles frequently, at least every 10 to 15 uses, or every syringe-full of vaccine. If a needle develops a bend or a burr, discard it immediately, as it will tear the tissue. If you lose a needle, get it out even if you have to call a veterinarian. Do not ever try to straighten a bent needle. It is the one that is most likely to break off in the animal.

When using killed vaccines, keep a saucer or sponge of disinfectant or alcohol nearby and wipe off the needle after each use. DO NOT disinfect needles between uses when using a modified live vaccine, as the disinfectant can destroy the vaccine. Injecting cattle during wet weather increases the chance of contaminating the injection site.

Do not vaccinate late in the feeding period. Check with your veterinarian or on the label for the proper time.

7. Know the products you're using.

Muscle scars and lesions result from irritated and damaged tissue. Require that suppliers/manufacturers provide you and/or your veterinarian with sufficient documentation showing that the chosen injectable animal health products do NOT cause tissue irritation.

Remember, you are responsible for the quality of the beef you produce, so "shoot", but "shoot" straight. ■