K-STATE Research and Extension | Meadowlark District

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Vaccination Best Practices

We are entering the time of year when weaned calves, fall born babies and the breeding herd receive vaccinations. After attending the Kansas Beef Council's Beef Quality Assurance Training (BQA) a few weeks ago at Holton Livestock Exchange, it seems like a good time to share some of the basic best management practices and BQA guidelines as fall vaccinations happen.

Weaning, working and transporting animals are all stressors. Stressed animals have higher levels of cortisol in their bodies, which can have reduced vaccine effectiveness. Allowing animals time to rest gives the immune system a chance to recover and prepare for responding to the vaccine. Improper handling of vaccine, syringes and needles can also affect the ultimate success of the vaccination. Keen observation and attention to BQA guidelines will lead to best chance of success.

Vaccines should be given in front of the shoulder in the target "triangle" unless otherwise directed by the label. All animal health treatments need to be recorded and documented, either in print or electronically. Read the label and follow directions for use, storage, administration, dosage and other instructions. Pay attention to withdrawal times and do not market animals until this period has passed. Handle vaccines carefully. Do not expose vaccines to conditions outside the labeled temperature ranges, including freezing, or to sunlight. Light-sensitive animal health products should be transported and stored chute-side in a cooler with ice packs, if necessary. Use a towel or divider to keep the products from encountering ice packs, which can cause freezing. Some animal health products can be frozen and thawed safely, but others release endotoxins if they are frozen and thawed, which can be harmful and cause serious complications, including death.

If the vaccine or animal health product needs to be mixed, mix only what can be used in an hour or less. Some products are viable for a limited time once mixed, so mixing and using as you go helps ensure effectiveness. Use caution when shaking/mixing animal health products, even when instructed to "mix well" by the label. Shaking vigorously can damage the product, releasing endotoxins. The best way to mix it is to roll it between your hands, swishing it around in the vial, both clockwise and counterclockwise, and turning it upside-down several times.

Syringe management is critical as well. Label and have separate syringes assigned for specific products. Inadvertently mixing animal health products or subjecting products to cross-contamination from syringes can have harmful consequences. Never mix animal health products in the same syringe to reduce the number of injections. Anytime the vaccine gun is not being used, it should be stored in the cooler, or at a minimum out of the sunlight. Sanitize syringes and reusable equipment using boiling water or steam. Do not use detergents or disinfectants to clean syringes, as these products may leave a residue that can damage or destroy animal health products on the next use.

Always use a new, sterile needle when drawing up animal health products, to avoid product contamination left in the bottle. Never reenter a bottle with a used needle. Change needles every 10-15 head and/or every time a syringe is refilled, or if the needles are contaminated, dull, develop a bur, or bend. Needles are cheap, compared to the cost of vaccines and animal health.

Many of the best management practices referenced here come from the National BQA program guidelines. K-State has an excellent publication titled *"Proper Handling and Administration of Cattle Health Products"* MF2603 To learn more about BQA visit: https://www.bqa.org/resources/manuals