



**COLORADO STATE UNIVERSITY
EXTENSION**

Colorado State University Extension
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For Immediate Release

March 31, 2022

Handling and Use of Cattle Vaccines During Processing

As producers begin to plan processing this spring, the proper handling and use of vaccines is imperative to their effectiveness. Minor mistakes can be costly in the future if vaccines are mis-handled. Vaccinating is the main focus during processing, especially calves, as they are beginning to lose the passive immunity they gained from intake of colostrum. Working with your veterinarian to develop a vaccination plan that fits your herd needs is the first step. Determining which vaccinations are the most beneficial to your cattle herd and meet your production practices can help save time and money. Once those are identified, the proper storage and handling of vaccines can directly affect the vaccines effectiveness.

All vaccines and animal health products have directions for proper storage on the label. Following those will keep new and unused vaccines viable. Where many producers make mistakes are when vaccines are being used in the branding pen or at chute side. The priority should be to protect vaccines from the conditions that can damage a vaccine: improper temperatures, sunlight, and contamination.

A good place to start is to protect the temperature of vaccines. Many vaccines need to be kept cool, below 40°F but above freezing. Using coolers to store vaccines, including what has been drawn into a syringe, can protect from temperature damage. There are commercially made coolers for branding

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pen and chute side storage but putting together your own is not difficult as long as it can provide stable temperatures. Since most vaccines are liquid based, they can handle being taken in and out of storage but should not be left out and should be placed back into proper storage when not in use.

Sunlight is another damaging condition, specifically ultraviolet light (UV). Viruses and bacteria in a vaccine were meant to live inside of an animal and not exposed to sunlight. UV light can break them down and can render a vaccine ineffective. Vaccines come packaged either in boxes or tinted bottles to protect from UV light. Many syringes come with tinted barrels as well to protect from UV light. Coolers for temperature controlled storage will also protect from UV light.

Contamination of vaccines is also possible. When using a vaccine, having clean needles and syringes can prevent contamination. Many vaccinations need to be mixed before use and transfer needles are available to make this process easier. This would be the first possibility for contamination. Any needle that goes into a vaccine bottle should be new and clean. When vaccines are being drawn up, producers can use new disposable syringes or clean reusable repeating syringes.

Reusable syringes should be cleaned properly before use. Proper cleaning process involves emptying out unused vaccine and rinsing out the syringe a minimum of three times with clean water above 165°F. There are two points to keep in mind with reusable syringes. Do not use soap for cleaning of reusable syringes. It is also advisable to not use a reusable syringe that has had antibiotics in it for vaccines administration. Residuals of antibiotics or soap in a syringe could contaminate a vaccine making it ineffective.

A few more things to remember when administering vaccinations. Administer injections in the injection triangle of the neck to prevent future carcass damage. If multiple injectable vaccines are to be given, space them at least a hands width apart. Use appropriate needle size for viscosity of the vaccine

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and appropriate needle length for subcutaneous or intramuscular administration. Replace syringe needles every ten to fifteen head and every time you change pastures or groups of cattle. And safely dispose of used syringes and needles to protect yourself and others from possible needle stick injuries.

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