

Administration of Medication and Transporting Cattle

Our topics for this week are:

- Administering injections to cattle
- Giving oral medications to cattle
- Treating feet of cattle
- Treating a cow's mammary gland
- Transporting cattle

ADMINISTRATION OF MEDICATION

Injections

Subcutaneous

Subcutaneous injections in cattle are usually administered on the side of the neck.

Intramuscular

Intramuscular injection sites for cattle are restricted to the anterior neck area only, in accordance with Beef Quality Assurance guidelines. The injections are given about 4 inches below the top of the neck and 4 inches in front of the shoulder.

Injections should not be given to cows in alleyways or chutes by reaching through narrow spaces in between bars or planks. Injections should be given in a way that prevents the cow's movements from suddenly withdrawing from the injection. The back of the hand with the syringe should be laid on the cow's neck and held there until the cow quits moving. The hand and syringe are then rotated and the injection is performed.

Administration of Oral Medications

Giving tablets (*bolusing*) or liquids (*drenching*) to cattle is achieved with head restraint and a balling gun or drenching syringe, respectively. Sufficient restraint usually requires a restraint chute for adult cattle. Calves may be crowded into an alleyway and treated individually.

To administer oral medication to cattle restrained in a chute, its halter is removed if it is wearing one. A handler places his left hip next to the cow's head while bringing his left thigh underneath the right side of its jaw. The handler places his left arm over its head, behind and under its ear, and runs his hand down underneath the cow's left mandible. Care must be taken to keep the handler's head as far from the cow's head as is practical. An oral syringe, a gag, or speculum is put into the right corner of the cow's mouth with the handler's right hand. If necessary, the left hand is used to open the mouth by sticking the hand in the corner of the mouth and pushing up on the palate.

Balling guns are syringes for solid medication called boluses. Prior to using a balling gun, the handler should check it for rough or sharp protrusions or edges and file them smooth. To administer oral medication to a group of calves, the calves are crowded together and the handler wades backward while catching calves and drenching them. Their packed bodies provide

the restraint. Chalk markers are used to identify ones previously treated. While standing beside a calf or straddling it, the handler puts his thumb into a corner of the calf's mouth at the interdental space and presses the tongue with the thumb while squeezing the lower jaw to open calves mouth. The handler must avoid putting his fingers into the back of the mouth where they could be bitten by the calf's upper and lower premolar teeth. The other hand places the balling gun or oral dose syringe into the mouth and over the hump the tongue. The plunger on an oral dose syringe must be pushed slowly to prevent the liquid from being sprayed into the trachea. Mouth speculums (*Frick speculums*) are placed in the mouth in a similar manner to oral syringes. These are cylindrical tubes that are protective conduit for passing soft stomach tubes. As the stomach tube is presented to the back of the cow's mouth, the cow's nose needs to be lower than its poll to reduce the possibility that the stomach tube can enter the trachea.

Trimming Hoofs and Treating Feet

Whether, or how often, hoofs need to be trimmed depends on the surfaces cattle have to walk on. Foot problems and lameness is common in dairy cattle, particularly in their hind feet. Examination, trimming, and treatment are often needed. There are several methods of trimming possible and different means of restraint, including lifting one leg at a time with a rope, casting with ropes, or tilt tables or rotary chutes. Tilt tables and rotary chutes are the most effective and safest for both the cow and the handler.

Mammary Examination and Treatments

Mammary examination and treatments in dairy cows require restraint in stanchions. Resistant cows must be restrained in squeeze chutes with a headgate. The tail jack hold or hock hobbles may be needed to control kicking.

TRANSPORTING CATTLE

Because of its relative novelty to the cattle, it is more difficult loading well-handled cattle into a truck or trailer than into an alleyway and squeeze chute. As with other aspects of cattle handling, allowing extra time to accomplish the loading with minimum stress is desirable. Stress causes muscle to become dark and tough. If the cattle are going to marked "dark cutters", they are less valuable. Cattle that are stressed defecate more often, drink less, and lose weight which also makes them less valuable at their destination. Stress lowers their immune responses to infectious organisms and put them at risk for infectious diseases.

Cattle trailers should be adaptable to ensure sufficient ventilation, wind protection, and cover for protection from excessive sunlight or inclement weather. Loading ramps should have solid sides, be one cow wide, and not exceed 20 degrees incline. Steps with 4 inch rise are preferred to cleats. If cleats are used, the distance between cleats should be about 8 inches. No gaps should be left between the transport vehicle and the ramp sides before loading. The loading ramp should be positioned so that cattle do not face sunlight when loading.

Cattle should never be transported if they have not been watered and fed recently. Access to water should be provided up until 2 hours prior to loading and to grass hay until the time to load. Legume hay or grain rations should be avoided. They are more likely to cause scours (diarrhea) and in turn, slick footing.

The transport compartment should be clean and have bedding provided that reduces the risk of slippage. The cattle should be packed for transport close enough to reduce chance to fight

or fall but not so closely as to cause overheating. Partitions should be used to eliminate excess space. Cattle from different herds or pens should not be mixed during transport to minimize fighting. Different sized cattle should be sorted and loaded into trailer compartments by similar weight. Adult bulls should be transported in separate individual compartments. Cattle should not be transported with other species.

Freshened cows (producing milk) must be milked out prior to being transported. If dairy cattle are in transport for 12 or more hours, they should be unloaded, milked, and fed and watered. Calves that have a dry navel and are able to walk may be transported, if they can remain dry and the temperature is not less than 60°F. Cows in late pregnancy should not be transported. If transport is unavoidable because of natural disasters or need for veterinary care, they should be in individual compartments with enough room to lie down. Cattle that are lame at a walk should not be transported. Those with fever should not be transported for anything other than veterinary care.

If transporting cattle in cold weather, they should be checked for signs of cold stress, such as eating bedding material, frozen nasal secretions, or shivering. If signs of cold stress occur, further travel should be delayed if adjustments to the transport vehicle cannot be done to improve protection from inclement weather.

U.S. Code 49, Chapter 805, Section 80502 requires that animals cannot be transported more than 28 hours without stopping for food, water, and rest for at least 5 consecutive hours.

Now let's recap the key points to remember from today's episode:

- 1. Intramuscular injections in cattle should only be given in their neck muscles.**
- 2. Frick speculums are used to protect soft tubes going through the mouth to the rumen.**
- 3. Trimming of the feet of cattle is best done with them on a tilt table or in a rotary chute.**
- 4. All cattle transported for 28 hours must be allowed to stop for food, water, and rest for at least 5 consecutive hours.**

More information on animal handling is available in my book, *Animal Handling and Physical Restraint*, published by CRC Press. It is also available on Amazon and from many other fine book supply sources.

Additional information is available at: www.betteranimalhandling.com

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.