



Texas Agricultural Extension Service

The Texas A&M University System

Dehorning, Castrating and Branding

Successful cattlemen do everything they can to make their cattle worth more on the market. Proper dehorning, castration and branding are standard practices that add value to calves to be marketed.

Dehorned calves headed for the feedlot take up less bunk space, are less likely to injure other cattle and do not prevent other stock from feeding properly. The dehorned calves look more uniform, feed better and bring a higher market price.

Advantages of castrating include fewer nuisance problems and easier handling. Branding cuts down on lost calves and provides a trademark for the ranch's good quality cattle.

Dehorning, castrating and branding all have one other characteristic in common; they are most successful and less stressful to young calves than to animals at weaning or older.

Sanitation Precautions

It is critical that instruments used in castration and dehorning be kept clean and be disinfected thoroughly before each use. This helps prevent infected wounds and the spread of infectious diseases such as anaplasmosis, bluetongue and leukosis. The operator's hands also should be kept clean.

Disinfectant mixed in a bucket of warm water should be available to rinse off the instruments. The instruments should be allowed to soak in this bucket between uses on different animals. A second bucket should be available to help keep the operator's hands clean.

There are several good disinfectants available, such as chlorhexadine (nolvasan), lysol, various quaternary ammonium preparations (Roccal[®], dairy utensil cleaners) and chlorine preparations. Each has certain advantages and disadvantages. Iodine is a good skin antiseptic, but it is corrosive to instruments. Kerosene, which occasionally has been suggested, has no disinfectant qualities. Consult your veterinarian on specific disinfectants.

Applying antiseptics to the calf's skin before castration or dehorning is of little use unless the hair is shaved and the area scrubbed with soap several times prior to applying the antiseptic.

Dehorning Methods

Bloodless Dehorning

Because horn tissue is formed in the specialized cells in the small ring of skin encircling the horn button, bloodless dehorning seeks to destroy this ring. To be successful, these methods must be performed before significant horn growth has occurred.

Dehorning liquid with a colodian base dries to form a rubber-like covering that is not easily rubbed or washed off. The liquid should be applied with a brush or swab. Calves up to 10 days of age can be dehorned with this material.

Dehorning paste is applied to the horn button with a small wooden paddle. Prevent paste from contacting other skin areas on either the calf or the operator.

Caustic soda or potash also is called "caustic stick." Clip hair around the small, undeveloped horns or buttons. Next, wrap one end of the caustic in paper or cotton. The operator should hold the caustic by the wrapped end and moisten the open end. Rub the moist end on the undeveloped horn and the skin immediately surrounding it. Skin adjacent to the treatment area should be protected by applying petrolatum. Two or three applications of caustic are necessary and the treated area should be allowed to dry after each application—this should take only a few minutes. Thorough applications will prevent further horn growth.

Protect treated calves from rain for a few days following the treatment to prevent the caustic soda from washing onto the face area and causing chemical burns.

Most **electric dehorning** tools have a cupped attachment. The horn tissue is burned by placing the cup over the horn buttons. This method is bloodless but must be done when the calves are young and the horns very small. The burning application must be applied liberally to destroy all potential new horn tissue. The skin usually will be copper or bronze colored when the treatment is completed.

Mechanical Dehorning

The objective of this method is the surgical removal of the horn and a small ring of skin encircling it. The horns may be surgically removed from any age or size of animal, but the potential complications increase with the animal's age. The instruments used must be kept sharp by filing or honing, especially when dehorning adult animals. The bone tissue should be cut rather than just crushed or cracked. Damaged bone tissue is prone to infection.

Spoon dehorners are used on small calves to cut or gouge out horn buttons. Some ranchers use a heavy knife to cut off the horn buttons, followed by a caustic stick to coat the edges.

Tube dehorners are used on calves up to 4 months old. Tubes come in various sizes. Use one that fits the base of the horn. The horn is gouged out by a turning action. This is an excellent method for removing horn buttons.

Dehorning saws usually are used when mature animals are dehorned to avoid crushing or cracking the bones of the skull. The blade of a dehorning saw is especially designed for cutting bone and horn tissue. A fine-toothed, stiff-backed carpenter's saw also can be used. Make the cut about one-half inch below the junction of the horn with the skin to prevent horn regrowth.

It will reduce stress on mature animals if a local anesthetic is used to block the nerves that supply the horn area. These are prescription drugs, however, and must be administered or prescribed by a veterinarian.

Special concerns with wounds produced by mechanical dehorning methods include hemorrhage, infection and fly blow.

Hemorrhage (bleeding) is of little concern in young calves and usually requires no treatment, although many producers apply "blood stopper" chemicals.

In older calves and adult animals, uncontrolled hemorrhage can result in severe weight loss or death. There are two or three main arteries that supply the horn area and their bleeding should be stopped. The arteries can be pulled and twisted until they break under the subcutaneous tissues which then will provide pressure and a base for clot formation. The arteries can be cauterized with a hot iron or the arteries can be tied off with a string tied around the horn base to apply pressure for 24 hours. Blood-stopper chemicals should not be placed down into an open sinus as they may cause serious complications.

Infection usually is a problem only when the animals have matured enough to develop a "horn" (cornual) sinus, and dehorning then leaves the open hole down into the sinuses of the head. It is very difficult to provide adequate drainage for this area of the head and

infection, once established, often results in a serious, long-term sinus infection.

The open hole into the head can be covered with gauze or cotton to keep out debris. Take care that no hay is thrown on the animal's head at feeding time and protect the dehorned animal from rain and dust storms until the open sinus has completely healed over. Keep blood stopper and fly sprays out of the open sinus if they are used around the wound.

Fly blow is a problem during the warm months and can be prevented by application of a fly spray or smear that will last for a week. In some areas, repeated applications may be necessary.

Castration

Calves from a few weeks to 8 months of age may be castrated without serious consequences. Older animals are more difficult to restrain and usually bleed more, so greater care must be used. If a calf is not castrated before 8 months, he may become "staggy," which is objectionable in the feeder and market steer.

Bloodless Castration

An **elastrator** is a forceps-like instrument used to slip a strong elastic band around the scrotum down to its attachment at the groin. The pressure exerted by the rubber band shuts off the blood supply to the scrotum and testicles, causing them to slough off. It should be used before 1 month of age. Possibilities of tetanus (lockjaw) and the lack of cod development are disadvantages of this method.

The elastrator also can be used to castrate calves physiologically without removal of the testicle. In the process, the testicles are forced as close to the abdomen as possible, and the rubber band is placed on the scrotum below the testicles. The animal's body heat is high enough that the testicles will not produce viable sperm cells, but the growth response from testosterone and other male hormones produced by the testicles continues. These calves will have a normal sex drive and may become staggy. This method of castration should be done before calves are 6 to 8 months old.

The **burdizzo** is often used for bloodless castration of older calves and can be successful if properly applied. The "cord" above the testicle is isolated to the side of the scrotum and the heavy burdizzo clamp is applied over it with the skin intact. The clamp is closed and left in position for approximately one minute. This crushing of the blood and nerve supply to the testicle causes sufficient impairment to result in a shrunken, non-functional testicle. The same procedure is applied to the opposite testicle.

It is very important that no damage or injury occur to the penis, which some operators occasionally have mistaken for the cord. As there is no break in the skin of the scrotum, there is no external bleeding. This is an

advantage in areas where screwworms are troublesome. Steers so castrated usually develop larger and fuller cods by the time they are marketed. This is considered desirable by some cattlemen.

If the operation is performed too hastily, the cord may not be completely crushed and the steer is likely to develop stagginess later on.

Surgical Castration

The testicles can be removed surgically from any age bull, but the risks and potential complications increase greatly with age. Surgical castration can be performed with the calf standing in a chute and the tail held up over the back for restraint; lying on a calf table; or stretched out on its side on the ground. The most important considerations are cleanliness, hemorrhage control and providing adequate drainage.

The scrotum is opened to expose the testicles. This can be done by cutting off the lower one-third of the scrotum, but this may result in the wound closing too quickly so it does not provide adequate drainage.

Another method for opening the scrotum is to push the testicles up in the scrotum toward the abdomen and insert the knife into the side of the scrotum below the testicles. It should extend completely through the scrotum and out its opposite side. The scrotum is then cut into two halves from there out on the bottom. This type of incision is less likely to heal closed too quickly.

Once the scrotum is opened, the next step is proper removal of the testicles. They should be grasped and extended while pushing back the connective tissue surrounding the cord to free it adequately. On very

young calves, the testicles can be pulled out gradually until the cord breaks. On older calves, this may result in excessive bleeding or hernia development. The cord may be "scraped" to reduce these problems. This involves grasping the testicle and stretching the cord while scraping on the cord with a knife. Scrape toward the abdomen to allow for gradual separation of the cord tissues and vessels.

An emasculator is a good instrument for removing the testicle with a cutting blade, while at the same time crushing the blood vessels to control hemorrhage. The cord is extended and the emasculator applied with the crushing jaw toward the abdomen of the calf. Use of the emasculator is especially important when castrating older calves. In mature bulls, the blood vessels of the cord should be tied off with surgical gut suture before the testicle is removed.

Branding

Register your brand because it is your trademark. A good brand on your good calves is your best advertisement. The brand usually is placed on the calf before weaning time. Although the hot iron method of branding is the most common, electrical branding irons are becoming popular. Branding liquids are discouraged. They lead to blurred brands and wounds that are difficult to heal.

A recent development is a calf branding table. This places the calf in a convenient position to be branded, vaccinated, dehorned and castrated. A branding table is placed at the end of the chute and calves are run in one at a time.