

# Beef Cattle: Types of Identification

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Adapted from Carl E. Thompson and Henry W. Webster

## Purpose for Beef Cattle Identification

In the beef cattle industry, identification was originally used to prove ownership. Other permanent identification was required for registration in a breed association. Identification is important in beef cattle herds for effective record-keeping, performance testing, artificial insemination, treatments and routine herd health work. If all animals in a herd are treated alike, then any extreme differences seen must be caused by genetic makeup of the individual animal. Beef Quality Assurance (BQA) assures the consumer of a safe and wholesome product; identification and written records help ensure adequate meat withdrawal times. In 2013, the Federal Traceability Rule required that cattle moving interstate must be officially identified. All of these reasons make identification essential.



the dam, but add an additional number to designate the year of birth for the calf.

## Cow Identification

Cows can be identified in many ways: ear tags, tattoos, brands, or Electronic Identification (EID). The same number could be used for tattoos and brands. When tagging for the first time, record the cow's birthdate or age in your records—if unknown, mouthing can establish age.

## Calf Identification

Identify each calf on the day of its birth. Assign a number and record this along with its birth date, sex, and dam number. Record birth weights in purebred herds, especially for bull calves. If ear tags are used, carefully place them in the ear close to its base and between the ribs of cartilage. Tattooing in addition to ear tags is recommended because it's more permanent.



## Numbering System

A simple system that has been satisfactory for many producers is to number calves consecutively within a year. Use tattoos or ear tags to identify every calf born within a given calving season. The first number (or letter) on the tag or tattoo usually designates the year of birth.

*Example:*

Cow No.	Calf Tag	Calf tattoo
375	1	501
222	20	520

*\*Herds up to 99 animals*

Calf 501 would be the 1st calf born during the 2015 calving season, and calf 520 would be the 20th calf born. Using the first number to represent the year avoids starting with "0" except when starting a new decade. Heifers going back into the herd would be branded with the same number as the tattoo. Some producers identify the calf with the same number as

## Branding

### Hot Iron Branding

Hot iron branding is used for both ownership and individual identification, and as opposed to freeze branding, works equally well on all cattle breeds. Use 6-inch numbers with vents in the "6," "8," "9," and "0." The vents prevent "burn out" of the entire area.

Hot irons can be heated for branding in a number of ways. Electric irons or regular irons heated with propane gas burner or wood fire are often used. Irons should be nearly red hot just before applying the iron. However, they should not be glowing red. Press the number firmly for approximately 8 to 10 seconds. Remove the iron and look for a copper color. If you find a dark or black color, which is burnt hair, reapply the iron and hold until a copper color appears. Clipping the area before branding will allow better contact with the hide and will reduce smoke.

### Freeze Branding

Freeze branding is satisfactory for identifying cows with dark hair coats. The super cold iron applied to the hide kills the pigment-producing cells (melanocytes). New hair growth in the branded area will be white, forming the identification numbers. The advantages of freeze branding over hot iron branding are:

- Less pain and damage to the hide.
- Less equipment required for animal restraint.
- Branded area will be easier to clip in the future (if necessary).

Some disadvantages of freeze branding are:

- Dry ice, alcohol, or liquid nitrogen may be difficult to locate.
- It only works on animals with dark hair.

### Materials and Branding Procedure for Freeze Branding:

- Branding item of copper, bronze, or alloy—4 inches with 3/8 inch or larger face.
- Hair clipper with surgical clipping blades
- Insulated containers for coolant
- Alcohol, acetone, or high-test gasoline plus dry ice (Liquid nitrogen can be used.)
- Chute to restrain animal

Alcohol, 90% pure, is used most widely. Alcohol and dry ice are mixed to form a coolant, which is approximately -90 degrees Fahrenheit. Irons should be completely submerged into the coolant. Irons are cold when large, fast-rising bubbles change to tiny, slow-rising bubbles.

Cows are usually branded on a dipped area on the rump, quarter, or side. Before applying the brand, clean the clipped area with a brush or cloth dipped in alcohol. Then apply the cold iron and hold firmly for 45-60 seconds. When the iron is removed, the brand area appears frozen and stiff. After thawing, the area becomes swollen, slightly red in color, and readable. In a matter of weeks, the branded area sloughs off, and white hair will appear within 30-60 days.

### Tattooing

Tattooing is a fast, permanent, and a very reliable means of identifying cattle, but it cannot be read from a distance. Even when using ear tags, you should tattoo in case an ear tag is lost. Tattoos should be used with other means of identification, such as brands, tags, or neck chains, so that you can always go back to the tattoo if other numbers are lost or not legible.

When tattooing clean the ear with a cloth to free it of wax. Then with the tattoo pliers (applicator), press the numbers or letters into the ear between the ribs. Press

firmly and penetrate the ear as deeply as possible. Remove applicator and rub tattoo ink into the punctured ear with a toothbrush. A well-placed tattoo is legible, permanent for the remainder of an animal's life and can be used as a backup for all other identification. As you evaluate milk production, ease of calving, weaning weight, average daily gain, reproductive efficiency, age, and health, you must make some decisions about the animal.

This makes animal identification the first step in improving the beef cattle production. Only after cattle are identified can the second step—establishing breeding and calving seasons—be considered.



### Electronic Identification Systems

Electronic Identification systems (EID) are becoming more common. These systems use radio frequency to collect signals from devices attached to or implanted in the animals. They are beneficial since they can be used in dusty, muddy, and wet environments. EID systems do not replace the visual identification of cattle, but do provide fast and accurate identification of animals when linked to certain management databases. EID systems can significantly reduce manual data entry. Several different types of reader systems are available and function very well. The most common would be a simple wand reader with which you scan the animal's EID and the wand stores that data or sends that information to a computer system/scale head. In situations that require large amounts of cattle being weighed often, a panel reader can be useful. Panel readers are mounted on chutes or gates and automatically log animals as they come through the working facility.



Transponders (tags) can be either passive or active. Passive transponders are charged with energy from the signal received by the read antennae. Active transponders are charged by an internal power source which may also collect cow information such as animal activity. Communication between the antennae and transponder can be either a half duplex system, where the reader sends a signal and waits to receive another signal from the transponder, or a full duplex system, where the reader

waits to receive information from the transponder while submitting a continuous signal.

While there are many benefits of EIDs, there are some challenges as well. Tags need to be properly installed in order to work correctly. Some materials such as metal rails, motors, fluorescent lighting, and electric fences can interfere with the antennae's ability to work properly. Failure of information read can occur due to mud, animal posture, excessive animal speed, and broken or missing transponders. If you have more questions or concerns about using EIDs, contact your Extension Agent.

## Official Identification

With the Federal Traceability Rule, effective March 11, 2013, cattle that are moving interstate (between SC and another state) must be officially identified and have a Certificate of Veterinary Inspection (CVI, "health certificate").

You should check with the destination state for what identification is accepted. Many states no longer accept tattoos or brands as official identification.

The rule does not apply to animals remaining or moving within the state.

Official ear tags should have a US shield on the tag:

- AIN is 15 digit "840" tag; EID tags will have this numbering. "840" is designated for USA.
- National Uniform Ear tagging Series (NUES) will indicate the state that the tag was originally placed. For example, if the tag reads, 56ABC1234, we know that it was originally placed in South Carolina. South Carolina is designated as "56". These are usually metal tags and referred to as "brite tags".
- It is unlawful to remove official ear tags

These ear tags are required for:

- All sexually intact cattle 18 months of age or older
- All dairy cattle, including dairy males
- Cattle of any age used for rodeo, recreational events, shows and exhibitions

For more information, see

[www.clemson.edu/public/lph/ahp/index.html](http://www.clemson.edu/public/lph/ahp/index.html) in Animal Health Programs or contact your area Extension Livestock and Forages Agent.

## Summary

Animal identification is an important management tool for livestock and an integral part of the federal disease control program. Animal welfare should be considered when choosing a method of identification and every effort should be made to use methods that cause less pain and distress for the animal.