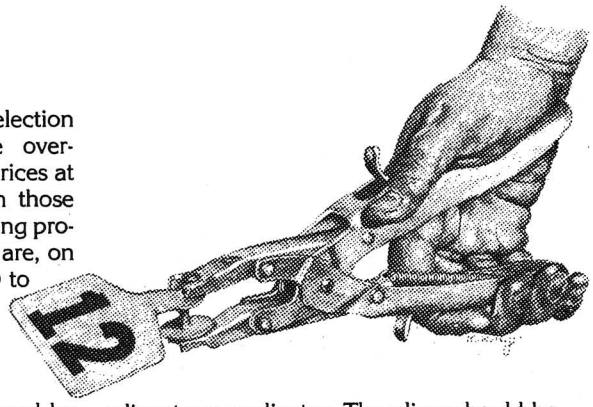
Livestock Identification

From ancient times to modern, livestock identification has served two important purposes—first, to establish ownership of an animal and, second, to identify that animal as an individual within a herd. Following is a brief description of several types of identification, from the historic brand to the not yet fully developed ultra-modern electronic identification.

EAR TAGS

by Gene Francis, Extension Livestock Specialist, Kansas State University



The importance of culling and selection in the cow herd cannot be overemphasized, especially with cattle prices at today's levels. In most herds, even those that have been on performance testing programs for a number of years, there are, on the average, ratios ranging from 80 to 120 from the bottom to the top cow in the herd.

The first prerequisite for any performance program is animal identification. Plastic ear tags are used by the largest percentage of cattle producers for this purpose.

Fortunately, many companies have been working to develop a dependable tag, so now tags made from durable materials in colors that make reading easy, inks with dependable longevity and easy-to-use application tools are available at reasonable prices.

In working with both commercial and purebred herds during the last 12 years, I have learned some do's and don'ts in the use of plastic ear tags.

Color

According to research, yellow tags with black numerals are the most readable. Some operators like to use different colors to identify sires or cow age; however, it should be noted that red and white tags tend to fade or discolor.

Application Tools

Many companies are changing to a pliers-type applicator. The pliers should be designed so a person with an average-sized hand can hold them easily and so the tag can be easily disengaged from the pliers after application.

Type of Hole in Ear

Experience has demonstrated that, due to less irritation from tag movement, a round hole enlarges less than a slit-type hole, and a number of companies are changing to that type of tag. Several companies also are offering a tag with male and female sections that can be applied with pliers, then recovered and reused, resulting in less ear tag expense.

Number Size and Shape

Prenumbered tags with block-type numbers are very difficult to read if tags get the least bit soiled; therefore, most herd owners prefer to purchase blank tags and then number them with the largest numbers possible. The fewer numbers per tag, the more legible the numbers. Sire of the calf can be indicated by a letter in the upper portion of the tag.

Location in Ear

Tags placed in the ear as close as possible to the head are less likely to be lost; thus the round hole in the ear becomes important. Tags placed higher in the ear have a tendency to become covered with hair, making them illegible.

Several companies offer over-the-top-of- or on-top-of-ear tags. These have the advantage of being located in the toughest part of the ear; also, the on-top-of-ear tags may be numbered on both sides for reading ease.

Inks

Much improvement in inks has been made in the past several years. It is usually advisable to use the ink put out by the company manufacturing the tag. Ink bottles are usually difficult to use, but some very satisfactory felt-tip pens are available and will work on a number of different company's tags. In numbering tags, ink should not be used sparingly. Some inks can be set more rapidly by placing the freshly numbered tag in cool water for 10-20 seconds. And, remember, most new tags have some kind of coating that should be rubbed off before the ink is applied.

Temperature

Plastics tend to become hard and brittle in cold weather so, if at all possible, tags should be kept warm to prevent breakage at application time.

BRANDS

by Ann Gooding

The western ranges. Cowboys, a roundup, a chuckwagon. A calf, roped and held by the fire. The hot iron. A branding.

Brands, historically associated with the old west, remain a part of ranching today. Now brandings may include a chute or calf-table, the iron may be electric, the chuckwagon may have been replaced with a pickup. But the principle is still the same. To identify livestock.

The use of brands dates back some 4,000 years when Egyptians branded their cattle for the same reason stockmen brand today—to establish ownership of an animal regardless of how far that animal might stray.

In North America the history of brands traces to 1521 and Hernando Cortez, who

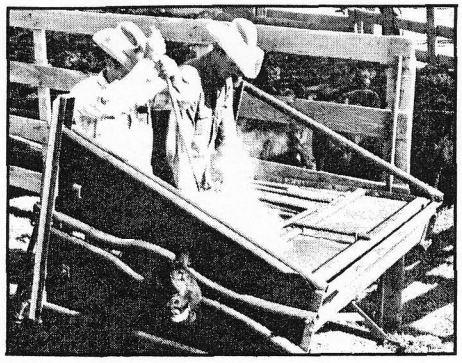
slapped his brand, three Christian crosses, on long-horned Mediterranean cattle he shipped to what was to become Old Mexico.

Official Coat of Arms

Later, Mexican dons branded their cattle with the family coat of arms and, as the cattle industry grew and moved north into Texas, American ranchers adopted this means of identification. Brands became the official coat of arms in the west, as important to their owners as the coat of arms was to European families. Ranches were often identified by the marks applied to the cattle grazing in their pastures. And many a western drama, both on screen and in real life, centered around an animal's brand or lack of one.

California had the first filing system for brands, with early cattlemen there simply filing either a section of hide or a piece of leather marked with their brand.

Brands and branding techniques have remained pretty much the same through the years. The ideal brand is simple, easily applied and easily read. Properly heated clean irons, applied to a dry animal, should result in a good brand; and while clipping hair from the area to be branded is not necessary, it can result in a clearer brand.



Technique

The branding iron should be heated until it is an ash color (this applies to steel irons, not copper), then it must be applied to the hide just long enough to remove the hair and the outer layer of skin, about three to five seconds depending on age, hair cover, iron temperature. At this point the brand should be the color of saddle leather. Light or "hair brands" tend to disappear; deeper than necessary brands result in blotched sores that not only take too long to heal but often result in bad brands.

An iron, according to the International Livestock Brand Conference, should be at least 4 inches high for use on calves, at least 5 inches on larger livestock. Irons should have a thickness or face of 3/8-1/2 inch, with any sharp edges filed or ground off. A thin iron should not be used, since it can cut deeply, leaving a narrow scar that can be easily covered by hair.

Modern Irons

Today the fire-heated iron is not alone on the market. Modern technology has produced electric branding irons. According to L&H Manufacturers, a Mandan, N.D., firm that makes them, electric irons will heat in about 90 seconds and will maintain a constant heat, requiring only a 110-volt outlet.

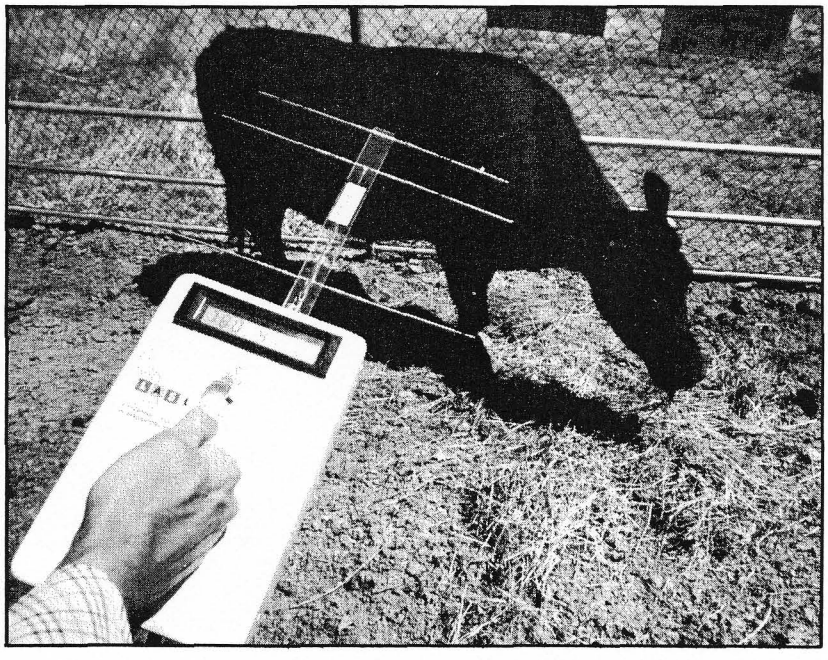
Also available are freeze branders, another type of branding tool which, since freeze brands are not recognized as legal brands in many states, are used mainly within herds to identify individuals.

The freeze brander relies on extremely low temperatures created in the iron with dry ice and alcohol or liquid nitrogen. The cold iron must be very carefully applied to the hide for as long as 50 seconds for calves and 60 seconds for cows. About 22 days after application, the hair that was under the iron will fall out, and white hair will replace it.

Information courtesy of "Better Brands for Livestock," International Livestock Brand Conference.

ELECTRONIC IDENTIFICATION

by Ann Gooding



Brands, ear tags, tattoos—all serve a purpose in livestock identification. But in the next few years, they may be replaced by, or at least used in conjunction with, a sophisticated technical system—electronic animal identification.

According to Dr. Dale M. Holm of the Los Alamos Scientific Laboratory (LASL), this system when perfected and in operation should provide the livestock owner with an instant reading on the animal—its breeding, performance data, temperature, general health, vaccination record, other pertinent information.

Dr. Holm is a spokesman for LASL, the Los Alamos, N.M., laboratory that developed technical aspects of the electronic identification system under the auspices of the USDA Animal and Plant Health Inspection Service along with the Energy Research and Development Administration.

How It Works

Simply stated, the electronic system

identifies animals and measures their temperatures from a distance of about 10 ft. (Further development is expected to increase the range to 20 or 30 ft.) To do this, a transponder is implanted under the animal's skin, near its backbone and behind its withers. The transponder is encoded with an identification number and contains a temperature-sensing element. A microwave beam emanating from a hand-held antenna powers the transponder, and that same antenna picks up identification and temperature signals.

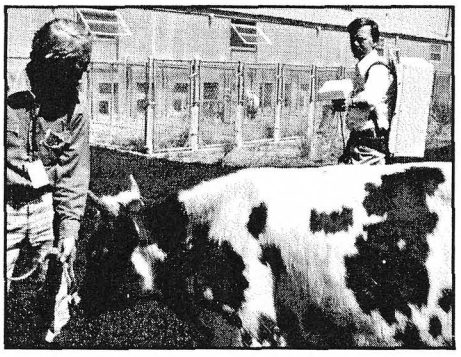
Presently, transponders are implanted surgically but, as the system is developed more fully, an implant gun probably will be devised. Data indicates that the implanted object is not a threat to the animal's health.

According to reports from LASL, electronic identification should be able to serve a multitude of purposes in the livestock industry, playing an especially important role in disease control and prevention. Since there is an established relationship between fever and disease, temperature readouts should enable the livestock handler to monitor disease problems, resulting in early detection, minimizing losses. And by using the identification system, the task of tracing diseases to their source, an important tool in disease control, would be simpler as well as faster than it is now.

False Impression

As use of electronic identification and temperature monitoring becomes widespread, it is predicted that disease incidence may appear to increase. This will not be the case. What will be increasing is sensitivity of detection, and the long-term effect should be a greater number of healthy animals arriving at the market. And each of those animals can be carrying their own health record—complete, accurate and available instantly.

Disease isn't the only deterrent to livestock productivity. Stress also presents



a problem. Since temperature changes also indicate stress in individuals, the system can be used to monitor each animal's stress tolerance as well as call attention to stress-producing management practices.

Temperature measurements also can be interpreted to detect ovulation, making the electronic system a tool for determining optimum breeding times.

Electronic identification could play an important role in another area, that of performance records. Not only could feed intake and weight gain be measured by the system, but detailed accurate records could be instantly available on each animal.

Weight Monitoring

Weight monitoring of individuals would be useful in feedlots, indicating when an animal is ready for slaughter, minimizing waste by minimizing the number of cattle allowed to get overly fat.

In the early 1970s, animal electronic identification was no more than a new concept. Now it is a technical reality. Field testing is the final step and, according to Dr. Holms, LASL is negotiating to secure commercial equipment. However, he adds, USDA had expected private enterprise to help take responsibility for some of the costs, and at this point there's little indication that's happening. Consequently, the project's progress probably will not be so rapid as originally had been anticipated.

Since the system is complex and has infinite possibilities for use, the Livestock Conservation Institute created a subcommittee, the National Livestock Electronic Identification Board (NLEIB), to provide a communication forum and authoritative body for the system's users, developers and manufacturers. Members represent major livestock interests in this country.

The board is concerned with the commercialization of a system suitable for use throughout the livestock industry. Specifications for a national system have been established, and successful field testing is the board's immediate goal. Use of the system, once it is established, is expected to be widespread within 10 years even though it will be voluntary.

A 15-minute color movie, "Electronic I.D., The Missing Link," is available from LASL on a short-term loan basis. Contact Dr. Gary Seawright, P.O. Box 1663, M.S. 544, Los Alamos, N.M. 87545.

TATTOOS

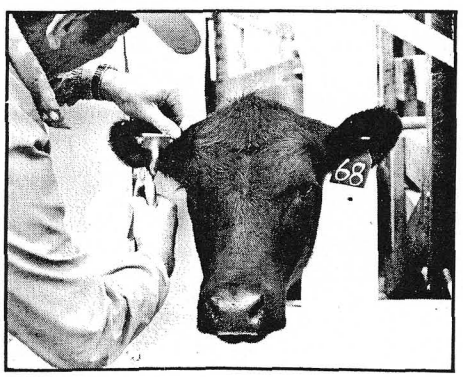
Tattooing, a form of identification required on each animal prior to registration with the American Angus Assn., involves applying a permanent number in the animal's ears. Since the brucellosis tattoo uses the middle lobe of the right ear and the ear tag, the middle lobe of the left, this identifying number should go on the upper lobe of both ears.

Tattooing is done with pliers that have removable digits and tattoo paste (equipment is available through the association) following the procedure outlined:

1. Clean ear lobes with alcohol or Pine Sol. This insures that the tattoo paste can penetrate the skin.
2. Rub paste on the upper lobe. Although this is optional, some breeders feel that some of the paste may be carried into the skin by the tattoo digits. And for best results, use fresh paste, not paste that has been frozen.

Test for Accuracy

3. Choose numbers, then test them on cardboard for accuracy.
4. Position pliers parallel to ear ribs in the upper lobe, making sure there's no hair in the way. Then press firmly.



5. Rub additional paste into the needle holes until they are filled and any bleeding has stopped. Some breeders recommend blunting the needle tips to increase the size of the holes and to reduce bleeding.

Tattoo equipment should be kept sterile—dirty equipment can transmit wart viruses and other diseases.

Record keeping is simplified if, when choosing a numbering system, the tattoo is incorporated into the animal's registered name and herd number. An Angus tattoo must be the same in both ears and it may not exceed four characters, applied in a single line. Numbers and letters may be used—but special brand marks, joined or backward letters, bars, diagonals, symbols, punctuation marks are not acceptable. No two animals of the same sex in the same herd may be registered with the same tattoo.

Age to Tattoo

More satisfactory results will be achieved by waiting until a calf is three months old before tattooing. Tattoos should be checked at weaning, and checking is essential before showing or selling an animal. If a tattoo is unreadable, the breeder of that animal may re-tattoo in a different lobe, notifying an association representative. However, if a tattoo is wrong, the tattoo should not be altered. Rather, the registration certificate should be sent to the association for correction.

Incidentally, hard-to-read tattoos may be more legible if a flashlight is pressed to the outside of the ear, behind the tattoo.

Excerpted from American Angus Assn.'s "Tattooing, How to Make It Work."