



THE ANGUS LINK

by **BILL BOWMAN**, director of commercial relations, American Angus Association

Identification and tracking

As we look at the beef industry – not only in our country, but also around the world – we see identification (ID) and source verification becoming much-discussed issues. State cattlemen’s meetings, educational seminars, the recent National Cattlemen’s Beef Association (NCBA) convention and many mainstream media have devoted time, effort and space to explore some form of a national ID system for the beef industry. We at the American Angus Association have attempted to stay abreast of these issues, looking toward future changes in the programs and services we offer to producers using Angus genetics.

Identification becomes a major part of the vision as we realize that we are not just ranchers, but food producers. Our industry has begun a new era with a mind-set of being more than just cattle raisers, more than mere producers of beef; we are now also businessmen providing meals for a consuming public. With this new enthusiasm and sense of responsibility, we have created a desire to know more about the cattle we are producing and, ultimately, how we can create a desirable eating experience. Additionally, consumers may want more and more information about the food they intend to purchase.

The need

We are entering a new realm as our industry experiences technology breakthroughs that will allow us to better predict consumer satisfaction and the value differences related to the end product. The challenge to tie this information back to the ranch level and to the genetics that are responsible for that consumer experience – good or bad – is not a simple or inexpensive one.

The collection of carcass data in packing plants has been a time-consuming, costly, manual process. However, the results have been considered worthwhile as we make genetic selections and shift management decisions based on the accumulated information.

In a perfect world, we would be able to put a tag in a calf at the ranch of origin and to collect pertinent data throughout its life, including its end-product value. Once that information was gathered, it would be fed back to the commercial producer who raised the calf and to the seedstock producer who

provided the genetics, creating an integrated system of efficient beef production.

The challenge

Who are we dealing with? Fig. 1 illustrates an industry hurdle. A fragmented beef industry made up of so many small producers, many of whom do not rely on their beef herds for their livelihoods, challenges us to create a practical, economical system that can be used by all producers.

Identification is a crucial element for accurate information flow and for source-verification programs. Historically, ID methods have relied on traditional visual ID systems, such as tags, brands or tattoos. These systems or techniques work well within the animal’s original environment, but once ownership changes hands, these ID methods may not work as well.

New technologies

There are several new technologies being used for ID purposes in cattle.

- Biometric ID, such as retinal imaging and iris scanning, is a new approach that may be more applicable for use in humans than in animals.
- DNA sequencing can provide unique identification for an animal, but it still does not allow for easy transfer of the ID from one industry segment to the next.
- Optical character recognition (OCR) uses the same concept as a document scanner to read information on an ear tag, but it is limited by the scanner’s ability to read in typical livestock-handling situations.
- Bar codes on tags have been tested and used in some systems. The use of bar codes and readers (like we may be accustomed to seeing in grocery stores) are cost-effective means of ID, but read range and keeping the bar codes clean are problems in most livestock environments.
- Radio frequency identification (RFID) has become one of the more widely discussed and used methods of electronic identification today.

All of the aforementioned technologies can be lumped under “electronic ID,” but for our discussion purposes, we will use the term EID to mean RFID.

Various forms of EID have been tested around the world. Initial research several years ago used implants to administer the microchip.

Fig. 1: 1999 U.S. beef cows, 33.5 million head in 843,230 operations

79%	of cow herd owners have fewer than 50 cows and account for 29.9% of all beef cows.
12%	of cow herd owners have 50-99 cows and account for 19.1% of all beef cows.
9%	of cow herd owners have 100 or more cows and account for 51% of all beef cows.

Boluses placed in the animal’s stomach also have been used. Both of these methods present problems because, unless it is known the EID is in the animal, the device may go undetected as it moves to the next segment of the industry.

The microchips implanted in tags are the most widely used today and present the best alternative for employing the technology across the industry. Equipment currently reading EID tags in packing plants and feedlots will drive usage of EID tags at the ranch level in the near future.

Beyond the pencil and pad

ID becomes important for two reasons.

First, handling data and maintaining its integrity are crucial in ID systems. From a purebred standpoint, breed associations have maintained ancestral records and performance information on the cattle in their registries. Strides are being taken to follow these genetics into the commercial industry where progressive producers will use individual data management.

Electronic management of these data, both at the seedstock and commercial levels, is continuing to grow. Fig. 2 shows the number of registrations and performance data submitted by breeders to the American Angus Association via electronic methods is at an all-time high.

By eliminating a point of data entry with the electronic transfer, accuracy increases. The future of EID and the possible further automation of data collection that may eliminate another data-transfer point are exciting for producers.

Fig. 2: American Angus Ass’n electronic submissions as a percent of total submissions

	August 1999	June 2000
Registrations	5.6%	18.88%
Weaning weights	3.1%	27.13%
Yearling weights	7.1%	34.25%

Second, identification is crucial for improved quality management and source-verification programs that are of interest to the industry. EID is used in feedlot management systems and to identify and to provide genetic information from the producer to the feedlot and packing segments. The continued growth in the number of branded beef programs and the volume of product sold in this manner will drive the identification process.

Value-based marketing also will spur the use of ID systems to allow producers to capture the value of their genetic inputs. Additionally, source verification may be an important key to enhance current markets and to open new export markets for U.S. beef. Countries around the world are aggressively working on source-verified production, many being far ahead of the efforts in the United States.

National ID vs. EID

Talk of source-verification programs brings about the discussion of a possible national ID system. In looking at national ID vs. EID, there are key differences to consider.

An important distinction is that the national ID system and electronic ID are two entirely separate issues: (1) We can have national identification without EID, and (2) using EID does not imply or necessitate a national ID system.

A national ID number can be a unique number (much like our Social Security numbers)

that stays with an animal throughout its lifetime. The dairy industry has assigned such unique numbers for several years from an internationally recognized system – the American ID (AID) system – which uses a three-character country-code prefix (such as USA) followed by a 12-digit number.

The future

As we look to the future and consider the effect that identification and tracking may have on the beef industry, there are some key questions to ask. Are the costs at an acceptable level? Who pays for a system? How do we make it functional? How do we get it in producers' hands? What is the proprietary nature of the data and information, and who has access to it?

Concern exists about the potential of a national ID system. Will traceback to the ranch level become a reality? Will a national ID system be voluntary or mandatory?

We must look at the use of an identification system and EID as an opportunity to improve the beef industry. Improving information flow to assist in better production decisions and building consumer confidence will be keys to unlocking the future of our industry.

Association programs

Some of the programs on which we at the Association are focusing are ones we feel will

be excellent precursors to some of the identification concerns we have discussed. The Angus Resource Clearinghouse Network (ARCNet) has allowed producers a simple mechanism to begin transmitting both genetic and management information on the feeder cattle and replacement females they are selling. This information is available on the Angus Web page at www.angus.org.

The Angus Beef Record Service (BRS) is a detailed recordkeeping system that also is capable of storing an EID number and a unique identification number on animals to enhance the process of source verification and value-based marketing. Individual performance data and the analysis of herd production measures will allow producers enrolled in the Angus BRS to use benchmark comparisons to monitor and to direct changes for increased efficiency and profitability.

We will continue to keep you, the producers of high-quality Angus-influenced genetics, informed of new and improved technologies and their application to our industry. If you are interested in receiving more information about the Angus BRS or ARCNet programs and how they can help your operation, please give us a call.

