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TRACEBACK, VERIFICATION AND ANIMAL IDENTIFICATION ON THE RANCH: “BIG BROTHER OR BEST BUDDY?”

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INTRODUCTION

Ranchers operate in a markedly different environment today than they did just five to ten years ago. As communication and technological advances have evolved, so have opportunities and challenges. Almost instantaneous news stories impact world markets. Food consumers hold food manufacturers to a higher and higher standard as detection methods improve the ability to identify risks. Genetic management and production practices are influenced by better information than ever before possible. These factors combine to bring a new set of circumstances to the ranch gate.

This paper will endeavor to describe the factors, circumstances, challenges and opportunities that revolve around “Traceback, Verification and Identification” and how they apply to beef producers in the United States today. In many cases, the impacts of pending legislation, policymaking and industry acceptance remain to be seen, but it is certain that these issues will continue to impose more and more external influences on ranches and ranchers.

DEFINITIONS AND DESCRIPTIONS

There are a number of terms and programs that should first be discussed. This is certainly not an exhaustive list, nor is it intended to represent the “official word”; rather these are listed to provide a foundation for the topic of this paper.

Traceability – The concept or practice that requires or encourages the implementation of 'best practice' tracking systems.

Source Verification - The ability to trace products from their initial components (for example, from the ranch) through a production and distribution system to the end user.

Process Verification –The U.S. Department of Agriculture's (USDA) Agriculture Marketing Service (AMS) and Grain Inspection, Packers and Stockyards Administration (GIPSA) have developed voluntary testing and process verification programs in response to the market's growing need to facilitate the marketing of agricultural products. (<http://www.ams.usda.gov/process/amsprocesses.htm>)

Animal Identification – The process of designating animals with an identifier (e.g. eartag, brand, back-tag, marking) or a biomarker (e.g. retinal vascular pattern) that allows

recognition and classification. Animal identification facilitates traceback, verification and management procedures.

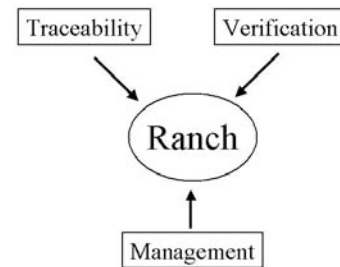
COOL – County-of-Origin Labeling. Legislated in the Farm Security and Rural Investment Act of 2002, more commonly known as the 2002 Farm Bill. One of its many initiatives requires country of origin labeling for beef, lamb, pork, fish, perishable agricultural commodities and peanuts.

Agro-Bioterrorism – The potential threat of terror directed at food production or distribution that became more of a reality following the September 2001 attack on New York City.

USAIP – (<http://usaip.info/>) United States Animal Identification Plan. A proposed national plan to identify livestock premises, lots, groups and individuals.

PRESSURE POINTS

I remember learning something about training horses as a youth. I recall a concept called “Press and Release” that was used to train an inexperienced horse to do what you wanted them to do, either with a halter or under a saddle. This diagram conceptualizes some of the “pressure points” that currently impact ranches involved in beef production. Pressure has mounted (and I believe will continue to grow) from forces that are external to the ranch to improve traceability. Marketing programs that articulate and reward the value-added benefits of verification programs seemed to have generally enhanced calf prices for those who supply to such programs. They are also beginning to play key roles in ranch management decisions and planning (e.g. CAB, Laura’s Lean, etc.).



Some have projected that beef production is developing toward at least two categories of production: Commodity and Specialized. Market signals appear to be rewarding implementation of genetic improvements, source and process verification, and traceability systems. As producers determine if the rewards outweigh the costs of implementation, further changes will occur. Conversely, if changes are not economically sustainable, they are likely to be short lived. Of course, a big factor in these “pressure points” will involve imposed requirements by legislation. As laws are enacted, defined and put into action, the industry will be forced to accept and adapt. This is not unique to the beef industry.

CURRENT ISSUES

Below are some issues that have direct impact at the ranch level. The final outcomes of each of these issues is yet to be determined, therefore, it is important that ranchers keep an eye open for developments as these and related issues evolve. In many ways these have *traceability* as a common theme. Traceability in the food businesses is designed to help ensure such results as:

- 1) Rapid assembly and synthesis of reliable information in food safety incidents;
- 2) Identification of the cause of a problem so that corrective action can be taken;
- 3) Provision of reliable information to consumers about the content, and where appropriate, the source of individual foods, and
- 4) Deterrence or elimination of fraud.

COOL. Country of Origin Labeling has been and will likely continue to be a hotly debated topic. Lobbying, Listening Sessions, and debate have had an impact on this legislation. On 27 October 2003, the USDA issued the “Proposed Rule on Mandatory Country-Of-Origin Labeling”. On 6 November 2003, the Senate struck down a provision of the House Agriculture Appropriations bill that would cut off funding to implement mandatory country-of-origin labeling for meat, thus moving COOL closer to required implementation. There is an open comment period through 29 December 2003. See <http://www.ams.usda.gov/cool/index.htm> for more detail and to comment.

Under the current proposal suppliers (i.e. ranchers in this case) must provide origin information to buyers (i.e. packers who in turn sell to retailers). According to information in an overview of the proposed legislation, “The retailer is not required to verify the accuracy of the information provided by the suppliers, but will be responsible if they use erroneous information that they should have suspected was incorrect.” The industry already understands that packers will require necessary and accurate information from feedlots and ranches, or the value of their animals will be less (e.g. letters sent to producers from the large packers alerting them to this.)

The cost/benefit of COOL remains to be seen as the industry continues to grapple with this legislation. However, it seems apparent that the bar has been permanently raised and U.S. beef producers are going to be asked to stand behind their cattle more than ever before required.

U.S. Animal ID Plan (USAIP). This current national initiative has the objective of “Protecting American animal agriculture by safeguarding animal health is vital to the well-being of all U. S. citizens.” According to the plan, “It promotes human health; provides wholesome, reliable, and secure food resources; mitigates national economic threats; and enhances a sustainable environment. Essential to achieving this goal is an efficient and effective animal identification program. Building upon previously established and successful animal health and animal identification programs involving many animal industries, an industry-state-federal partnership, aided by the National Institute for Animal Agriculture (NIAA).”

At its 107th Annual Meeting in late September 2003, the United States Animal Health Association (USAHA) accepted the draft U.S. Animal Identification Plan (USAIP). The plan defines the standards and framework for implementing a phased-in national food animal and livestock identification program. A sixty-day comment period, ending December 31, 2003, is now open for all interested individuals and groups to present their input and suggestions. A copy of the Plan is available at www.usaip.info.

The United States has the advantage of perspective when it comes to developing a national ID program, since it has been able to evaluate the strengths and weaknesses of national ID systems in such countries as Canada, Australia and the European Union. The current plan was built on the rapport and consensus of industry and regulators who have worked to establish common ground. The key features of the plan are:

- 1) Focus on animal health protection
- 2) Driven by the need for a rapid response to a disease threat (48 hour traceback goal).
- 3) Phased in approach – start with the basics
- 4) Establish national standards
- 5) Flexibility to meet industry and animal health needs.

The following table from the Draft Plan (Version 4.0, September 29, 2003, p. 31) outlines the implementation “phases” under consideration.

Summary of Major Milestones																																																
Activity	2003												2004												2005												2006											
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12						
System: National Premises System	Partial Operation												Fully Operational National Premises System																																			
System: National ID DB	Partial Operation												Fully Operational Nat'l ID DB																																			
Implementation of Animal Identification Numbers - AIN Tags	AIN Tags Available												AIN used with all new ID Devices																																			
Compulsory ID: Livestock in interstate commerce	Comp. ID: Interstate																																															
Compulsory ID: Livestock in commerce	Intra Comm																																															
	2003												2004												2005												2006											

The USAIP Draft Plan outlines producer responsibilities that are proposed for complete implementation by July 1, 2006. Although this is still in draft form, it appears to be moving quickly toward acceptance and implementation. Homeland Security issues, along with marketing and disease surveillance are combining to make this a “hot topic” in Washington. Watch for livestock ID to appear during the 2004 Presidential Campaign as a talking point for the current administration’s responsiveness to security and disease.

The following is excerpted from the USAIP Draft Plan, p. 46.

VI. H. Producer Responsibility

VI.H.1. Premises Registration

The owner of the premises, or person designated by the owner of the premises must register their location(s) and must keep the required information current. All individuals who own or lease livestock are responsible for having a US Premises Number for the holding location(s) of their livestock.

VI.H.2. Animal Identification

USDA/APHIS shall promulgate appropriate regulations effective July 1, 2006 to place the legal responsibility on the producer to have any animal or lot of animals properly identified under the USAIP. The regulations shall clearly indicate that the producer holding¹ the animal(s) at the current premises must be held solely responsible for ensuring that each animal or lot of animals is properly identified when required prior to its movement. Producers are urged to utilize identification methods described in the USAIP as soon they become available.

When proper identification requires an USAIN tag, the tag must be properly attached to the individual animal prior to the animal leaving its current premises or at the location of an approved tagging site.

The new regulations will permit approved tagging sites for producers to utilize if facilities are not available to permit animals to be properly identified at current premises, provided such movement is approved by the appropriate state animal health authority. An approved tagging site is a location that has applied to and been approved by USDA/APHIS to provide this service. In such situations, animals must be moved to the authorized facility directly from their herd of origin without commingling with other animals.

Auction markets are not required to tag animals that arrive at their facility untagged; however, they are not prevented from applying to become an approved tagging site if they desire.

¹*Pertains to the individual who owns the animal. For leased animals the person leasing the animal is responsible.*

Source and Process Verification. The USDA offers both Certification and Verification programs for the beef industry. Certification programs have enables products to differentiate themselves in the marketplace with the goal of adding value by “brand-name” recognition. A list of current USDA Certified Beef Programs is shown at the end of this paper.

The USDA also administers a process verification program designed to allow producers, suppliers, processors and retailers to designate their product as having conformed to a specified process in producing the product. This verification requires a detailed auditing process that authenticates conformance and establishes “trust”. Sort of a “Good Housekeeping Seal of Approval” approach.

USDA Process Verified Program <http://www.ams.usda.gov/lsg/arc/prover.htm>

The USDA Process Verification Program provides livestock and meat producers an opportunity to assure customers of their ability to provide consistent quality products by having their written manufacturing processes confirmed through independent, third party audits. USDA Process Verified suppliers are able to have marketing claims such as breed, feeding practices, or other raising and processing claims verified by the USDA and marketed as "USDA Process Verified." The USDA Process Verified program uses the International Organization for Standardization's ISO 9000 series standards for documented quality management systems as a format for evaluating documentation to ensure consistent auditing practices and promote international recognition of audit results.

One example of a recent USDA verification program is the Beef Export Verification program.

Beef Export Verification (BEV) Program – Beef Export Verification is one example of a recent verification program (August 2003) that has caught the attention of the world market for U.S. beef. There are currently 10 eligible slaughterers, 73 eligible slaughterer/processors and 41 processors that have been verified by AMS for this program. Those eligible represent a cross-section of large and small companies, including the “Big 3”. It appears that this “Union Card” is becoming necessary to compete on the world market is enabling other countries an added level of confidence that eligible companies have met the “standard”.

USDA Beef Export Verification (BEV) Program <http://www.ams.usda.gov/lsg/arc/bev.htm>

The Audit, Review, and Compliance Branch has been assigned responsibility for reviewing and approving companies as eligible suppliers of meat and meat products for labeled according to USDA Beef Export Verification (BEV) Program.

ARC Branch personnel conduct regular audits of participating suppliers according to ARC 1030 Procedure, USDA Beef Export Verification (BEV) Program. Beef suppliers must request eligibility under an approved documented Program and must ensure all products intended for use in such Program meet the requirements outlined in ARC Procedure 1030.

Eligible suppliers are included in the Internet publication, Official Listing of Eligible Suppliers of the USDA Beef Export Verification (BEV) Program. Only eligible suppliers listed in the Official Listing may supply product labeled as meeting the requirements of the BEV Program. Products produced using an approved Program are eligible to be issued a Food Safety Inspection Service (FSIS) Export certificate, which includes the statement, "The shipment contains only meat and meat products that were derived from cattle slaughtered in the U.S.".

Agro-Bioterrorism. The events of September 11, 2001 have had a worldwide impact. Dramatic steps to minimize terrorist risk have been made by the Department of Homeland Security and are reaching more and more closely toward the ranch. This initiative has heightened the awareness of cattle and food production system vulnerabilities both within the food industry and federal government.

A high-level advisory panel known as The Gilmore Commission reports to President Bush and Congress concerning the capabilities for responding to terrorist incidents in the U.S. homeland involving weapons of mass destruction. Former Virginia Governor James S. Gilmore, III, chairs the 19-member Gilmore Commission. In the December 2002 Gilmore Commission report, a specific recommendation was made that USDA “institute a standard system for fair compensation for agriculture and food losses following an agroterrorism attack. Further the report suggests “Such things as larger payments for breeding stock need to be made clear so as to encourage farmers to come forward if there is an outbreak.”

“BIG BROTHER ?”

George Orwell’s novel titled 1984, written in 1949, describes a future society where “Big Brother” censors everyone’s behavior, even his or her thoughts. Fear of loss of freedom has lead some in the beef industry to wonder about issues related to traceability, verification and animal identification and to ask such questions as: “Traceback for what purpose and for whom?” The freedoms that have made the United States such a great country must be protected and the constitutional rights must be assured for the privileges we hold dear to continue. That is what makes our country different from most of the rest of the world. In matters of traceability and verification it is critical that American Cattlemen are involved in the process so that freedom is not compromised.

At the same time, there is a need for cattlemen to accept responsibility for matters they have influence on. For example, if regulations develop regarding “traceback for litigation,” an appropriate response is, “If you are innocent, what’s the problem? If you are guilty, you should be punished.” From my perspective, most cattlemen accept this. However, it is only fair that producers are only held responsible for what they have control of. Herein lie the principles that surely will be debated as these issues continue to unfold.

Cattlemen have and will respond to concerns of the undue cost burden from mandated programs:

One current example concerns County-of-Origin-Labeling. In the USDA Overview of COOL (Power Point Presentation available at the USDA COOL website) released on 27 October 2003 under comments about the “Effects on the Economy” it quotes a study from the Economic Research Service stating that:

- “Annual costs to the economy after a 10-year adjustment period are estimated at \$138-\$596 million reduction in consumer’s purchasing power.”

Numerous articles have reported the estimated cost of COOL:

- “Cargill Foods...oppose...county-of-origin-labeling, which they said could cost the world’s largest privately-held company between \$40 million to \$50 million per plan to track animals to the box.” *Meatingplace.com by Daniel Yovich, 9/30/03.*

The United States Animal Identification Plan Draft of 29 September 2003 outlines the preliminary projections for financial requirements for the ID program during Year 2 to Year 6 to be over \$545 million. Certainly this half-billion dollar cost will have an impact on ranchers either directly through increased costs associated with the program and/or governmental allocations from taxes.

Ranchers have had a “Legacy of Autonomy” since the first Longhorns grazed the western ranges. They have prided themselves for not being part of “government subsidies” – even though crop subsidies have had a dramatic indirect impact on feed prices. This “Legacy

of Autonomy” likely explains why there has been and will continue to be opposition to certain policies and programs for traceback, verification and animal identification.

“BEST BUDDY ?”

Market Premiums

In contrast to concerns about “Big Brother,” numerous examples exist that support “Best Buddy” outcomes from traceback, verification and animal identification. Several marketing programs have reported substantial premiums as a result of certification, verification and assurance initiatives.

Certified Angus Beef

- “This year [2003] 11,500 licensees [of Certified Angus Beef products] worldwide sold 585 million pounds of CAB products at \$2.3 billion, garnering premiums for Angus producers via pull-through demand.”
- “USPB [US Premium Beef] alone has paid over \$17 million in CAB premiums.”
- “Collectively, CAB-licensed packers were paying more than \$25 million in annual grid premiums for the brand by 2000.”

CAB at 25 by Steve Suther, November 2003 Angus Journal, p. 98.

Export and Food Safety Markets

From January through September 2003 the value of world exports of beef was nearly \$2.4 billion. Exports to Japan represent a majority of US beef exports. Currently the demands of the Japanese for traceability of meat products exceed the requirements currently in place in the United States. It has been estimated that traceability in the Japanese export market may have up to a \$.06/lb value to the U.S beef industry. Additionally, and new company, VeriPrime, Inc. has projected that restaurants and retailers will pay \$.05/lb for a database designed to trace the source of a food-borne illness anywhere in the food chain (*Meatingplace.com by Bill McDowell 9/18/03*).

Secure Source Verification

Optibrand, Ltd., LLC has developed a “Secure Source Verification” system that uses the unique retinal vascular pattern of the retina to identify animals. This “biomarker” coupled with GPS provides a tamper and fraud resistance system to positively verify identity, location, and time at that location for animals used in food products. Optibrand promotes the value that comes from “identifying the animal, not identifying the identifier.” The marketplace will determine what the actual value of this system is to various segments of the production chain.

Genetic Improvement

Future Beef Operations entered the scene a couple of years ago based on the premise that information flow up and downstream would drive change toward cattle that would produce value to the market. Future Beef developed a Genetic Improvement Strategy that “recognized the power of identification and proper use of genetics” to meet the demands of their primary customer. Through the use of data tracking and information feedback, FBO set out to develop a highly sophisticated genetic improvement strategy with forecasts of “...calf management incentives...up to \$45 to \$60 per head” for calves and additional “...bonuses of \$25 to \$40 per head for cattle that perform[ed]...” in the feedlot and as carcasses. The demise of FBO resulted from many factors, but their impact on the calf market in the summer and fall of 2001 was evidence that ranchers were willing to respond to systems based upon data and information. Other data driven programs will continue to test the marketplace to determine the value of genetic improvements based on feedback of progeny performance.

Animal Disease Surveillance and Containment

It has been estimated that one cow diagnosed with BSE in Canada in May 2003 had an immediate \$1 billion negative impact on the Canadian beef industry. A vigilant animal disease surveillance program in the United States is vitally important to safeguard our industry. Traceback, verification and animal identification are the foundation of programs set up to monitor and contain animal disease outbreaks.

Homeland Security

The risks associated with Agro-bioterrorism were mentioned previously. This issue does not appear to be going away and in fact by all indications will escalate in the future. Politicians have and will use this in campaigns to emphasize the need for a safe, secure food source in the United States.

Non-Tariff Trade Barriers

I recently heard it said, “Traceability is becoming the Non-Tariff Trade barrier of the decade.” The discovery of BSE in North America has opened an avenue for other countries to put pressure on the U.S. to enhance methods for tracing and verifying the origin and management of animal derived foods. A science-based system will provide a method for minimizing the impact of these barriers.

SUMMARY

A quote from a September 2003 article by John Maday titled “Multi-Tasking” in *Drovers Journal* by Neil Hammerschmidt, then CEO of the Wisconsin Livestock Identification Consortium (*Drovers*, Sept 2003, p. 21) summarizes and encapsulates several points in this discussion:

“Some producers might see the national [Animal Identification Program] as an inconvenience or an intrusion. They also should recognize that, if they must identify

their cattle, they can try to make the system work for their own benefits. It's like a motorist realizing, "As long as my SUV came with GPS for safety and security, I might as well use it to find my way around town."

USDA Certified Beef Programs
Individual Specifications and Contact Information
(See <http://www.ams.usda.gov/lsg/certprog/certbeef.htm>)

Angus Upper 2/3rd Choice or Higher

- [Certified Angus Beef](#)
- [Mopac's Steakhouse Angus Beef](#)
- [Alliant Foodservice Angus Program](#)

Angus Multi-Tiered (Prime, Upper 2/3rd Choice, Low Choice, and/or Select)

- [American Foods Group - Black Angus Reserve Beef](#)
- [Creekstone Farms Black Angus Beef](#)
- [Elkhorn Valley Packing Angus Beef](#)
- [Premium Gold Angus](#)
- [Simplot Black Angus Beef](#)
- [Washington Beef, Inc., Angus Beef](#)

Angus Choice

(Small⁵⁰ or Higher)

- [Excel Corp. Angus Pride](#)
- [Farmland Angus Beef](#)
- [Tyson's Classic Angus Beef](#)

(Small⁰⁰ or higher)

- [Misty Isle Farms Natural Black Angus Beef](#)
- [Swift Premium Black Angus Beef](#)
- [SYSCO Butcher's Block Angus Beef](#)

Angus Select

- [Swift Angus Select Beef](#)

Brand Name Specification

- [Nolan Ryan's Tender Aged Beef](#)

Hereford (Select - Choice)

- [Certified Hereford Beef](#)
- [Red Oak Farms Premium Hereford Beef](#)
- [Ridgefield Farms Premium Hereford Beef](#)

**Non-Breed Specific
Upper 2/3rd Choice or Higher**

- [Del Monte Meat's Certified Premium Beef Program](#)
- [Excel Corp. Sterling Silver](#)
- [Farmland Certified Premium Beef](#)
- [IBP Chairman's Reserve Beef Program](#)
- [Swift/EA Miller, Chef's Exclusive](#)
- [Swift Premium Classic Beef](#)
- [SYSCO Butcher's Block Reserve Beef](#)

Non-Breed Specific Multi-Tiered

- [Oregon Trail Beef](#)

Non-Breed Specific Utility or higher

- [American Foods Group - Angus Preferred](#)

Process Verified

- [PM Beef Group Ranch to Retail TM Branded Product Line](#)
- [Red Angus Assn. of America](#)