

THE VETERINARIAN'S ROLE IN WHOLESOME BEEF PRODUCTION

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Bovine practitioners have long been an essential part of the cattle industry. In today's consumer-driven environment, however, the nature of the cattle business -- and the veterinarian's role in that business -- have shifted. What has always been thought of as the "cattle industry" is now more accurately described as the "food industry." And no matter what aspect of cattle practice you've chosen as your focus, you're really in the business of producing meat for the retail counter.

Viewed from this perspective, it is apparent that the success of any bovine practice is closely linked to consumer demand for beef. Beef consumption in the United States has slipped dramatically in recent years -- from a high of 94 pounds per capita in 1976 to its current level of 67.3 pounds per capita.

Declines in beef consumption can be attributed to several major concerns, including:

- *the cost of beef -- nearly twice that of pork and three times that of poultry for comparable servings;

- *the healthfulness of beef -- information, and misinformation, abounds linking red meat consumption with various health concerns;

- *the environmental impact of beef production -- with concerns ranging from groundwater contamination to destruction of wildlife habitat;

- *the social acceptability of beef consumption -- due to heightened public concern about humane treatment of livestock; and,

- *the wholesomeness of beef -- concerns about residues and hormones are most common, but blemishes and tissue damage caused by improper injection technique or rough handling of animals also have the potential to undermine consumer confidence.

These issues are not going to go away. Consumers have high expectations about food safety, and when those expectations are not met, they are more likely than ever to take action. And as society moves further and further away from its rural roots and its emotional attachment to the cattle culture, sustaining consumer demand for beef will be an ever-increasing challenge.

What role does the bovine practitioner play in addressing these issues and sustaining consumer demand for beef? And what can the veterinarian do to help producers maximize profits and minimize losses? These questions must be addressed if we are to be successful players in the food business.

The answer lies in the relationship between the veterinarian and the producer. The veterinarian has a valuable service to offer that can help the producer remain profitable. That service is professional experience, expertise and advice in animal health programming. By moving from being a provider of products to being part of the management of the operation, the veterinarian can help increase efficiency and profitability for the producer. The producer's success is essential to the veterinarian's success.

For a veterinarian who wants to move from a traditional "fire engine" or "sick cow" crisis-management practice to a more appropriate, and meaningful, role as a member of the management team of a feedlot, dairy or cow-calf operation, there is no better opportunity than that offered by a beef quality assurance program.

These programs, which are now in place or in development in nearly every state in the U.S., need the knowledge and expertise in animal health that veterinarians bring. An effective quality assurance program requires a true

partnership between producers, allied industry, state and national associations, and the veterinary profession.

Quality assurance programs are not just the "right thing" to do -- they are critically important to the continued economic success of the cattle industry. For some time, we suspected that quality defects in carcasses were costing cattle producers money. Now, we know that is true. More importantly, through the National Cattlemen's Association National Beef Quality Audit, conducted under the direction of Dr. Gary Smith of Colorado State University and Dr. Jeff W. Savell of Texas A&M, we can identify what those defects are and how much they are costing the industry.

The NCA audit showed that various problems and defects cost the industry \$279.82 for every steer/heifer slaughtered in the U.S. during 1991.

Beef quality assurance programs can help reduce those defects and the costs associated with them -- thus, increasing profitability. At the same time, bovine practitioners can help clients address major concerns that negatively impact consumer demand for beef.

SURVEY METHODOLOGY

NCA's National Beef Quality Audit-1991 consisted of three phases. Phase I was face-to-face interviews with retailers (supermarket meat-management personnel), purveyors (wholesalers to the food service industry), restaurateurs (hotels, restaurants and fast-food franchises), and packers. For each group, a list of their "Top Ten Concerns About the Quality of Beef" was developed, as follows:

TABLE A: Quality Defects Identified in Phase I - National Beef Quality Audit

RETAILERS

1. Excessive external fat
2. Excessive weights/box
3. Too high incidence of injection-site blemishes
4. Excessive seam fat
5. Low overall cutability
6. Low overall uniformity
7. Inadequate tenderness
8. Too frequent bruise damage
9. Too many dark cutters
10. Too large ribeyes/loin

RESTAURANTEURS

1. Excessive external fat
2. Too high incidence of injection-site blemishes
3. Excessive seam fat
4. Too large ribeyes/loin
5. Insufficient marbeling
6. Low overall cutability
7. Too many dark cutters
8. Inadequate tenderness
9. Inadequate flavor
10. Low overall uniformity

PURVEYORS

1. Excessive external fat
2. Too high incidence of injection-site blemishes
3. Too large ribeyes/loin
4. Too frequent bruise damage
5. Excessive seam fat
6. Low overall cutability
7. Too many dark cutters
8. Low overall cutability
9. Low overall palatability
10. Low overall appearance

PACKERS

1. Too frequent hide problems caused by brands, insects, parasites, mud, feces, urine
2. Too high incidence of injection-site blemishes
3. Excessive carcass weights
4. Too many bruises
5. Reduced quality due to implants (lower marbeling scores, more ossification of skeletal system, more dark cutters, less tenderness)
6. Too many liver condemnations
7. Too few US Choice carcasses
8. Too many Yield Grade 4 & 5 carcasses
9. Lack of uniformity of live cattle and carcasses
10. Too many dark cutters

Phase II consisted of slaughter-floor and cooler audits in 28 packing plants over a 3-month period. Animals were evaluated for hide defects, bruises, viscera condemnation, head/tongue condemnation, gender, and USDA quality and yield grade.

Phase III was a strategy workshop in which lists from the four groups in Phase I were prioritized by participants, based on their individual evaluations, slaughter-floor and cooler audits, and a series of 32 expert presentations on various quality concerns. The result was a final list of 15 quality defects, and a strategy for addressing them.

The 15 quality concerns were:

1. Low overall uniformity of beef
2. Excessive external fat
3. Low overall uniformity of live cattle
4. Price too high
5. Excessive seam fat
6. Overall low palatability
7. Inadequate tenderness
8. Low overall cutability
9. Insufficient marbling
10. Too frequent hide problems
11. Too high incidence of injection-site blemishes
12. Excessive weights/box
13. Excessive live/carcass weights
14. Inadequate understand of the value of closer-trimmed beef
15. Too large ribeyes/loins

The strategy to improve the price/quality/value relationships of beef includes four objectives: (1) attack waste (reduce fat, improve cutability); (2) enhance taste (improve palatability, tenderness and marbling); (3) improve management (reduce injection-site blemishes, hide damage and liver condemnations); and (4) control weight (reduce excessive weight and incidence of too large ribeyes/loins).

Researchers also evaluated financial losses to the producer based on each of these four areas. The total quality loss per slaughter steer/heifer due to problems, defects, shortcomings and shortfalls was an astonishing \$279.82. Losses were broken down as follows:

TABLE B: Dollar Losses (Per Steer/Heifer) Attributed to Specific Quality Defects

WASTE (Total = \$219.25)		MANAGEMENT (Total = \$27.26)	
*Excessive external fat:	\$111.99	*Hide defects	\$16.88
*Excessive seam fat:	62.94	*Carcass pathology	1.35
*Fat in excess of 20% in beef trimmings	14.85	*Liver pathology	.56
*Incorrect muscling & muscle bone	29.47	*Tongue infection	.35
		*Injection site blemishes	1.74
		*Bruises	1.00
		*Dark cutters	5.00
TASTE (Total = \$28.81)		*Grubs, blood splash, calluses, yellow fat	.38
*Inadequate overall palatability	\$ 2.89		
*Insufficient marbling	21.68		
*Maturity problems	3.80		
*Gender problems	.44		
		WEIGHT (Total = \$4.50)	
		Carcasses less than 625 or more than 825 pounds	\$4.50

These areas of financial loss, coupled with other data from ongoing studies of injection site damage, can serve as a blueprint for veterinary involvement in beef quality assurance. By helping clients identify and address specific quality problems, the bovine practitioner becomes a valued advisor providing a valued service to the beef or dairy producer. BQA programs provide an opportunity to demonstrate a practitioner's most undervalued asset -- his or her expertise.

This role has a number of advantages. When the veterinarian's advice and counsel address an area that is costing the producer money, the producer is more likely to appreciate the worth of the expertise -- and more willing to pay for it. This can in turn enhance the veterinarian's overall participation in the management of the operation, and open doors for involvement in planning, diagnosis, product selection, employee training, record-keeping, program monitoring and other functions. That can help create the right environment for producing higher quality beef.

These programs can also help the practitioner address issues of legal responsibility and reduce risks of liability. Increased involvement with the client provides the basis for a valid veterinarian/client/patient relationship that is both a legal necessity, for prescribing certain products and recommending extra-label drug use, and a practical necessity, for planning effective herd health programs.

OPPORTUNITIES FOR VETERINARY INVOLVEMENT

Quality concerns identified by NCA's National Beef Quality Audit provide many opportunities for the veterinarian to offer advice, information and training to producers. Here are some examples:

Concerns in the areas of Waste, Taste and Weight can be addressed, in part, by encouraging clients to track animals all the way through slaughter. Producers should be aware of not only birth weights and weaning weights, but specific carcass characteristics and defects that impact the quality of beef produced. Advice and monitoring of implantation and nutritional programs is also beneficial.

The area in which the veterinarian can have the greatest impact is in Management. Quality defects attributable to management problems cost the cattle industry \$27.26 per head, according to the audit -- or some \$700 million per year.

Here are some specific steps the veterinarian can take:

To help reduce the incidence of injection site blemishes, train processing and doctoring crews on proper injection site selection, injection technique, needle selection and implanting protocols. Provide guidelines on where to give injections, and how much product can be put in any one site. Stress the importance of sanitation, including the use of transfer needles, proper cleaning and disinfecting of equipment, and using a clean injection site. Demonstrate proper techniques for placing and checking implants.

To reduce bruising -- in itself a \$25 million annual loss to the industry -- show how to restrain animals properly, and counsel producers and crews on humane and careful handling. Check for equipment problems that contribute to bruising, such as inadequate chutes or overcrowded pens. Work with processing crews to reduce the use of 'hot shots.' Discuss with both crew and management the high cost of pulling and treating animals that become ill as a result of the crew trying to work animals too fast.

Hide damage is the costliest factor in the management category. Work with cow-calf producers on branding technique and location. Establish a parasite control program that reduces hide damage due to grubs and lice.

Some veterinarians use a "necropsy class" or similar approach to demonstrate to managers and crew the damage done by poor injection techniques, bruises and ectoparasites.

Reduce liver condemnations through an internal parasite control program that removes a broad spectrum of internal parasites, including liver flukes.

Dark cutters are another costly quality defect. Counsel producers on management techniques such as handling and implants to reduce this risk.

The audit did not specifically address concerns of drug residues and their potential cost to the industry. The veterinarian plays a key role in avoiding this quality problem. Regularly scheduled visits to the ranch or feedlot coupled with a good overall herd health program can help the client avoid health problems that necessitate the use of antibiotics. When disease outbreaks occur, there may be the need for diagnostic work, prescription veterinary drugs, or occasional recommendations of extra-label drug use. To avoid residues, the veterinarian may need to conduct drug or other screening tests. Establishing a thorough record-keeping system to track withdrawal times prior to slaughter is an essential element.

NCA's National Beef Quality Audit offers the astute veterinarian a wealth of information and opportunity to become involved in beef quality assurance programs, both for individual clients and as part of a state or national quality assurance programs. Use it to establish the parameters of an overall herd health program for producers, including beef quality assurance training and guidelines.

THE NEED FOR DAIRY PRACTITIONER INVOLVEMENT

While most quality assurance programs are directed toward the beef producer, veterinarians serving the dairy industry should also be aware of the need to develop these programs in the dairies they serve. Some 20% of the fed cattle supply, and 50% or more of culled cows that are sold each year, come from the dairy industry.

Comments from Larry Hutchinson, DVM, extension veterinarian in University Park, PA, are directed to dairy quality assurance programs, but are equally applicable to the beef industry: "If you're a practicing veterinarian you may be less than enthusiastic about signing your name to a document that attests to drug use and management practices of a particular client. You may view this as an extra burden on an already busy schedule. And you may be concerned about the liability of sharing responsibility for farm drug use practices.

"These are legitimate concerns. But equally disturbing are the possibilities that extra-label drug use may become unavailable to the veterinarian or that increased testing ... will result in more violations. These violations would bring adverse publicity, reduced consumption and increase attempts by producers to find others to share the financial liabilities for residue violations.

"For practicing veterinarians, getting involved ... has several positive spinoffs:

"*Veterinarian becomes the guiding force in all drug use, storage and testing.

"*The practitioner's role becomes one of risk avoidance and product assurance, not the traditional role of damage control that is often associated with sick cow medicine.

"*Extra-label drug use by veterinarians may be retained if responsible actions, ... minimize any abuse of extra-label discretionary use by veterinarians.

"Consumer perceptions of product quality are vitally important to maintaining markets in the 1990s. Product quality is inexorably linked to the economic vitality of the dairy producer and the veterinarians who work with producers."

By working with producers to improve the quality of beef that is ultimately offered to the consumer, the veterinarian helps sustain, and build, consumer demand for beef. In doing so, the veterinarian can become a valued part of the management team of each client's operation, and can help to increase the profitability of that operation, and of the cattle industry as a whole.

Enthusiastic participation in beef quality assurance programs is both an effective and a responsible way to demonstrate to clients that the professional fees they pay for veterinary services provide a significant, positive return on their investment in the veterinarian's time and talents.

SUMMARY

Beef quality assurance programs offer an ideal opportunity for the bovine practitioner to become more involved in the management aspects of beef production. The recent National Beef Quality Audit 1992 conducted by the National Cattlemen's Association demonstrates the financial rationale for producers to initiate these programs, and for veterinarians to participate in them, in every type of operation from cow-calf to feedlot to dairy. The Audit shows an average loss of \$279.82 per slaughter steer/heifer attributable to various quality defects. This figure includes \$27.26 per head loss due to "management" factors including hide defects, bruises, injection site blemishes and liver condemnations. The veterinarian can play a key role in advising clients on these issues. Doing so helps create a "domino effect" of quality beef, more consumer demand, a more stable and profitable environment for beef production, and continued need for veterinary services.

REFERENCES

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