Dairy Session I

"TQM, Milk Quality and Mastitis"

Moderator— Jerry Harness

The Quality-Minded Dairy Practitioner

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The concept of providing quality service to dairy clients has always been a hallmark of the veterinary profession. Whether your practice provides primarily individual cow and emergency services, or whether your primary aim is preventive medicine, or if you involve yourself in production medicine, dairy practitioners try to provide quality service that best fits client needs.

A new era of "quality assurance" is a concept infiltrating all levels of society; our clients are part of this quality consciousness. Total Quality Management--TQM--is the buzz word in today's American business management philosophy. While agriculture has traditionally been slow to adopt new business strategies, beef, pork, poultry, and dairy producers and their representative commodity groups are requesting and demanding our involvement in their quality assurance programs.

It is possible that we need to change our philosophy and approach to veterinary practice. We all have paradigms--internal patterns, models, or sets of rules from which we think and work. These built-in influences establish boundaries from which we react and perform. While we have built successful practices from past experiences and performance, we need to "change our paradigm" and resist being satisfied with past success. We need to examine the TQM concept to see how dairy practitioners might be a bigger part of quality consciousness.

Quality can be defined as "conformance to requirements." Someone sets standards; the product or service than meets those specifications. Quality then is a value, a philosophy, and a system within which there is a conscious effort to meet goals or requirements. Crucial questions are: who sets standards and exactly what are the required levels of performance?

Standards are always established by customers. The dairy practitioner's customers are our clients who expect us to assist at a calving at 2:00 AM, or who want us to palpate 300 cows in a morning, or who want us to rework a ration. But while clients are easily recognized customers, we have others. The dairy industry--processors, manufacturers, and regulators--who insist that we work with dairy producers to eliminate residues in milk and maintain drug use records are less visible, yet equally important customer; do we recognize their demands to "conform to requirements"?

Our ultimate customer is the consumer. Her demands for safe, wholesome dairy products are what we and our dairy farmer clients must satisfy. "The customer is always right" has never been truer or more important to us in the veterinary profession. Our paradigm--that we provide veterinary service that we think is best or that we have been successful with till now--may need to change. We need to listen to consumers communicate their requirements in the market place, through surveys, special interest groups and the media; we need to recognize their legitimate concerns and adapt to a new set of requirements.

Dairy practitioners have opportunities to contribute to TQM movement. Although voluntary, the Milk and Dairy Beef Quality Assurance Program can be credited in part for the reduction in milk residues and reduced consumer concerns about milk quality. Dairy practitioners that participated in the program with their clients or who indirectly elevated the level of awareness and concern about this quality issue are successfully responding to customer quality demands. Other issues of quality conscious consumers are just around the corner. TQM for your dairy clients will require your involvement in other, non-antibiotic meat and milk residue issues, participating in efforts to eliminate animal welfare concerns and working with clients and industry to reduce potential pathogen contamination on farms and

processing plants.

Consultants to the beef, swine, and poultry industries are carrying packaged TQM programs to their clients. One such agribusiness consultant conducted TQM training sessions with the staff of a large calf ranch client. Over six months, he transformed this dairy calf operation from one that was continuously reacting to crises into a stable, successful financially sound, quality operation. As I watched the consultant and his process unfolded, I recognized that he used the skills and experience that most dairy practitioners possess. He organized managed personnel so they established specific, tangible goals for each area of their calf-raising operation. He then showed them how to communicate and organize teams of people to work together to accomplish the goals that were established; teaching, team approach, and developing specific daily routines were keys. Each group monitored their performance, demonstrating to themselves and upper management the quality of their accomplishments. Many dairy practitioners already possess the same experience, skills, and familiarity with their quality principles. Regardless of the size of your clients' operations, providing this type of TQM philosophy is an opportunity for dairy practitioners.

Total Quality Management is a concept that has potential for application in the dairy industry. Veterinarians can look beyond past successes, recognize and identify customers for their services, and participate with quality-conscious dairy clients who are the future of the dairy industry.

Abstract

Nematode burdens and productivity of grazing cattle treated with a prototype sustained-release bolus containing ivermectin

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One hundred and twenty four-month-old Hereford-Friesian cross heifers weighing from 88 to 130 kg were divided into two equal groups. One group acted as a control with each animal receiving one placebo bolus, the other animals received one prototype intraruminal sustained-release bolus designed to deliver approximately 8 mg ivermectin/day for 100 to 120 days. The boluses were administered the day before turnout in mid-May. Each group was grazed separately for 167 days on pastures contaminated with parasitic nematode larvae including the lungworm *Dictyocaulus viviparus,* and the gastrointestinal worms *Ostertagia ostertagi, Cooperia oncophora* and *Nematodirus helvetianus.* Parasitic disease did not occur in the ivermectin-bolus group, but the control group required anthelmintic treatment to control parasitic gastroenteritis at 111 and 154 days after turnout. Up to the 111th day after turnout, the peak mean nematode egg and larval counts per gram of faeces in controls was, respectively, 564 epg and 0·5 lpg. Based on faecal nematode egg counts and worm burdens in bolus-treated cattle removed from pasture at 119 days after turnout and bolus function studies, it was concluded that ivermectin delivery from the prototype bolus ceased between 95 and 98 days after administration. However, unlike the controls, the treated cattle did not develop parasitic gastroenteritis at any time. Their faecal nematode egg output was significantly ($P<0·01$) lower (<1 epg) compared to the controls and lungworm larval output zero during the functional life of the bolus. The faecal egg and larval outputs continued low until the end of the trial. In addition, the nematode contamination of the pasture grazed by the bolus-treated cattle remained low throughout the grazing season compared to the control pasture, even after cessation of ivermectin delivery. By 119 days after turnout, the ivermectin-treated cattle had a significant ($P<0·01$) mean weight gain advantage of 28·6 kg over the controls, which was maintained until the end of the grazing season.