

General Session III

“Where Are You Planning to Be in Practice in the Year 2000?”

Moderator: John Fetrow

Food Safety and the Food Animal Veterinarian: What You Need to Know

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In a world of few certainties, one thing remains as a given. The food safety concerns of consumers, reflected in and fired by the media will not go away. No amount of science education and appropriate communication will blunt the contentions of consumer activist groups and the knee jerk, emotional reactions of state legislatures and our Congress. Example after example bears this out; Alar, DES, cranberries, sulfa in milk and hormones in beef. One has only to review the organic food section of the 1990 Farm Bill to recognize that the general public as expressed through the Congress wants its food supply to be free from chemical residues. A portion of the public is willing to pay more for food that is thought to be free of residues and/or grown naturally. This coalition of consumer activists, environmentalists, and natural food groups possesses sufficient power and appeal to ensure passage of organic labelling and production standards. The concerns about drug residues will not go away. We can't wish it away; we can't legislate it away; we can't educate it away.

This conclusion is presented without even acknowledging the impact of modern technology which has the capacity to identify a miniscule amount of animal drugs present in our food. As we have seen in the congressional hearing following the *Wall Street Journal* article on animal drug residues in milk, the concern was that there was any residue present not that there was only one or two parts per billion found.

If chemicals and drug residues in milk and meat products are unacceptable by the legislators, consumer activists, and thus, the regulators; and if legislation and regulation continues to be written and enforced to this end, what are the alternatives for the milk and meat producers and the veterinary profession? Only one, produce milk and meat that are residue free. This obvious simplistic statement mocks any other “realistic” alternative. While the statement appears to be unrealistic considering all the problems we face with animal diseases, overabundance of drugs available, producer attitudes about the necessity for

chemical and drugs for efficient production, there is no question we must select “NO RESIDUES” as the only solution to our problem.

Within the last several years the acronym HACCP has become the buzz word for the quality control program for food production from farm to market to the grocery shelf. HACCP or Hazard Analysis and Critical Control Point System is based on the concept of finding the weakest link in the chain or identifying the points in a system at which the Murphy's law will prevail. One could also ask where is the machine most likely to break down? The application of this concept and its principles in the food production industry has proven effective in assuring food quality.

An axiom that is well accepted in the food industry is that processing will not improve the quality of food. The quality of food is determined at the point of production and any handling or processing subsequent to harvest, slaughter, or milking can only preserve the inherent quality, not improve it. Thus, the veterinarian's efforts must assist the producer in maintaining quality and not contribute to its degradation.

Another critical factor that must be recognized is that the farmer is producing food; not milking cows, not fattening steers, not producing farm income. The recognition must be made that a fattened steer is people food. This way of thinking has and will change the quality of our milk and meat products. One example of this subtle, or maybe not so subtle, change is the effort by the pork industry in its “white meat” program. Note the swine producers are not swine growers but “white meat” producers.

The livestock owner's request of the past, “Doc, do whatever you can so I can get her to market” is no longer a valid approach to producing food. How many times in the past has the practitioner hoped that the cow he kept on her last legs so she could be marketed wouldn't end up in his hamburger? This change is critical for the production of quality food and residue-free milk and meat.

What factors are necessary for quality food and assur-

ance of food safety? It requires the right attitude and application of scientific principles expressed in up-to-date management practices focused on producing people food of the highest quality. The quality assurance programs that are being developed and installed in the dairy, veal, and beef industries are expressions of these principles.

As we examine these programs and test them for their validity and effectiveness for preventing residues, there are several basic points that must be considered.

1. Drug residues occur only in those animals that are injected or given drugs. Accidental ingestion of drugs in the beef and dairy industry is extremely rare.
2. There are critical control points in the chain of events and situations that surround the drug residue problems in animals. The factors involved in the drug residue problem are:
 - (A) The diagnosis of the abnormal condition or disease.
 - (B) The decision whether or not to use a drug(s).
 - (C) Who makes the decision to use drugs and what is the selection criteria?
 - (D) The drugs available for use.
 - (E) The identification of the animal and recording of information on drug administration and cautions.
 - (F) The skills and knowledge of the individual administering the drug.
 - (G) The decision to market milk or meat from the treated animal by whom.

In this simplified list, the first critical control point is the decision to administer a drug. In our production systems the most knowledgeable individual to make this decision is the veterinarian. The veterinarian is the one with the background to not only select the "least risk" drug but also to decide if administration of a drug with residue potential is necessary or warranted. The scientific knowledge of the veterinarian must overcome the pressures by the producers who have urged, "Doc, better give her a shot". The question most critical to this control point is, "Does this condition require medication?" not "What type of

medication shall I give?" Often in the past the practice of using drug treatment to overcome the difficult task of diagnosis has prevailed. Certainly the demands of the producer for a quick or sure cure have influenced the amount and frequency of drug treatment. It is an obvious conclusion that it is the veterinarian's responsibility in the control of drug residues to ascertain if medication is required. This responsibility is paramount. No medication, no residue.

The second most critical control point is the decision almost exclusively made by the producer to market the milk or meat from the animal that has been medicated. This decision point which should be based on the advice of the veterinarian, fortified with the drug treatment records and animal identification, is the *most* common cause of drug residues. Meat and milk withholding times that have not been followed is the leading cause of residues. This may be due to a number of reasons. Poor records of treatment and poor animal identification are the most frequently cited. This is also influenced by the accuracy of the dose, skill in administering medication, and other factors that impact on the drug's fate in the animal.

Each weak link in the chain of events in drug medication contributes to drug residues. In each circumstance it is the veterinarian's responsibility to evaluate each link by applying the HACCP principle. Remember Murphy's Law, if something can go wrong, it will!

For example, it must be anticipated that explicit, well written instructions for the literate farmer will not be followed by the illiterate milker. The list of items that can go wrong is almost endless. However, a good HACCP or quality assurance protocol, customized for each production unit, will take these factors into account.

Animal drug residues in milk and meat must be a concern of every bovine practitioner and must remain so as long as residues are present. The veterinary profession must play an active role in the solution of the problem. Veterinarians possess the required scientific knowledge and the commitment to food safety. If we are to remove the food safety issue from the consumer activist and from the congressional agenda and avoid the ever increasing control and regulation of our profession, each food animal practitioner must accept his responsibility in obtaining a residue-free food supply.