In this presentation, I draw upon my own work and experiences as Dairy Public Affairs lead for Monsanto and Elanco as well as peer-reviewed research published by others in working in this area. I will also incorporate survey work done by Deloitte, Nielsen, Center for Food Integrity and others to demonstrate the public’s values as they relate to dairy management practices. Management practices on the dairy farm have traditionally been done in a manner consistent with the owner’s desires and the “standard of practice” of the day. Consumers were primarily interested in the price and taste of food, and accepted that food was safe. In the past many consumers had a connection to the farm through a relative or neighbor. They trusted the person who was the caretaker on the dairy or farm and accepted that they managed the animals appropriately. In many cases they had been on that farm. That relationship led to a level of trust which is not present between most consumers and producers today. Today, many consumers do not have a direct connection to the farm. These consumers are subject to asymmetrical information with regard to food production. That is to say, they cannot see it, feel it, and touch it. This creates a need for them to get their information from other sources. Couple this with the fact that many consumers are interested in value drivers beyond price taste and convenience. They are interested in multiple areas of the food production process. They hold all participants in the food production chain responsible for everything from animal well-being to environmental impact to food safety. Marketers in food companies, grocery stores and restaurants have responded to that consumer interest in several ways. These include the advertising direction taken, process labeling of foods, and setting specific demands on suppliers. This session will explore how we arrived at where we are today with regard to management practices on dairy farms. It will look at the impact public perceptions has on the practices we use today, and how that perception may impact what management practices dairy producers will be able to utilize in the future. It will also propose ideas and methods to potentially impact those public perceptions in ways that benefit the producer and the consumer.

Key Words: public, marketing, practices

Environmental sustainability in dairy production. V. Moreira* and B. LeBlanc, 1LSU Agricultural Center School of Animal Sciences, Baton Rouge, LA, 2LSU Agricultural Center School of Plant, Environment and Soil Sciences, Baton Rouge, LA.

Dairy farming is a highly complex and demanding activity. Dairy farmers’ responsibilities include crop, animal and business management, as well as their interactions. Because of that degree of complexity, skilled managers often rely on guidance from specialists such as agronomists, animal scientists and veterinarians, to name a few, each contributing specific bits of information. The producer then weighs the various opinions, often contradictory, to determine what course of action to take. For instance, land-grant universities and the National Academy of Science constantly evaluate and periodically publish updated recommendations in nutrient requirements of dairy cattle and fertilizer recommended rates for common crops and soil types across the US. In the past, however, cheap feeds and fertilizers relative to milk prices led to relaxed attitudes toward feed allowances (quantity and quality) to cows and in fertilizer applications to crops. If feasible, consultants recommended and producers followed up by allowing a wide safety margin to ensure that yields would not be limited, often ignoring nutrient recycling with the farm. Disconnection between fertilizer and nutritional recommendations further exacerbate nutrient imbalances, resulting in farming systems increasingly dependent on costly nutrient imports to the farm and potentially contribute to excess nutrient losses to the environment. Since then, feed costs soared and milk prices have become more volatile, making it ever more important to plan carefully and keep expenses and excesses very close to the minimum necessary. Society now demands that animal welfare and environmental sustainability also be added to that list of dairy farming responsibilities. Sustainability is a continuously evolving concept inextricably associated with social, economic and environmental aspects, the interactions of which have challenged scientists, producers and society. In this presentation we will review the scientific literature on recommended practices for the sustainability of dairy production systems in the US. I will incorporate results of our research on dairy nutrition and waste management in Louisiana small grazing dairies. We will discuss potential limitations of those practices and suggest future research to address gaps in knowledge.

Key Words: dairy, sustainability, environment


Driver and barriers to farmer adoption of sustainable practices. M. Niles*, University of Vermont, Burlington, VT.

Antibiotic residues and resistance in sustainable dairy farming. G. Habing*, Department of Veterinary Preventive Medicine, The Ohio State University, Columbus, OH.

Antibiotic resistance is a critical issue in public health. Reducing the volume of antibiotics used in animal agriculture has long been advocated to limit the spread of antibiotic resistant pathogens, or the dissemination of horizontally transferable genetic determinants of resistance.
Yet, antibiotics are necessary to treat and prevent bacterial infections in livestock. On dairy farms, producers make most routine decisions on when to initiate antibiotic therapy; therefore, the advocated reductions in antibiotic use from current levels will require changes in producer treatment behaviors. Many surveys of livestock producers, however, show a consistent doubt about public health impact of antibiotic use in agriculture. For instance, the majority (58%) of conventional dairy producers disagreed that antibiotic use in agriculture led to resistant bacterial infections in people. Likewise, 88% of beef producers believed that antibiotic use in the beef industry contributes little or nothing to antibiotic resistance in general. Undeniably, the relative contribution of veterinary antibiotic use to the incidence of resistant infections in people is unknown, though not zero. By contrast, consumer surveys and purchasing behaviors indicate substantial concern about the use of antibiotics in livestock. For instance, a survey of the general public showed that most (60%) of people agreed with the statement that “The use of antibiotics for livestock leads to resistant bacteria in meat that can make people sick.” Other literature showed that consumers support the idea of antibiotics for the treatment of disease, but are unsupportive application of antibiotics to healthy animals. Clearly, consumers are not likely to be well-informed on the complexity of antibiotic resistance, and may not distinguish the overlapping but distinct issues of antibiotic residues and of antibiotic resistance. Nonetheless, the evolving consumer attitudes and changing purchasing behaviors are likely to continue to influence antibiotic treatment practices. Sustainable dairy production will require a proactive and holistic approach toward antibiotic stewardship to meet consumer expectations.

**Key Words:** antibiotic residue, sustainability