

An integrated extension and education program to reduce mastitis and antimicrobial use

**R.L. Schewe,¹ PhD; A. Contreras,² DVM, PhD; J. Kaytisinga,² PhD; W. Escalante,² BS;
R.O. Martinez,² PhD; E.P. Hovingh,³ DVM, PhD**

¹Mississippi State University, Mississippi State, MS 39762

²Michigan State University, East Lansing, MI 48824

³The Pennsylvania State University, University Park, PA 16802

Introduction

A critical, and often unrecognized, obstacle to implementation of mastitis control practices in many dairy herds is the behavior and attitude of farmers and employees. Additionally, increasing reliance on hired labor in the US dairy industry raises concerns with communication, training, and protocol compliance. The Quality Milk Alliance is a 5-year, USDA-NIFA funded project that seeks to reduce mastitis prevalence and antimicrobial drug use on dairy farms. This will be accomplished by the development of a team-building approach to address social and communication barriers to adoption of mastitis control practices. To that end, the first aim of the project used a combination of a mailed survey and focus group meetings to determine existing knowledge, attitudes, and beliefs about mastitis control and antimicrobial use on dairy farms, as well as potential barriers to adopting and complying with herd protocols.

Materials and Methods

The mailed survey was sent to a stratified random sample of farmers in Michigan, Pennsylvania, and Florida (320 dairy herds in Michigan, 1,250 herds in Pennsylvania, and 130 herds in Florida) in January 2013. A total response rate of 41% was attained, resulting in 625 complete surveys that represented > 5% of all Grade A-permitted herds in each state.

The survey was administered through the Wolfgang Freese Survey Research Laboratory at the Social Science Research Center (Mississippi State University),

and included questions in 6 key areas: farm characteristics, existing mastitis control and antimicrobial use practices, knowledge of mastitis options, values and beliefs concerning mastitis control and antimicrobial use, constraints and barriers to available mastitis control options, and dairy owner or manager characteristics and demographics.

The analysis of the mailed survey identified key barriers to the implementation of mastitis control practices from the perspective of the farm owners or managers. Subsequent to the surveys, we conducted focus group meetings with personnel from dairy herds in Michigan, Pennsylvania, and Florida. The focus groups provided a more in-depth understanding of the diverse barriers that limit the adoption of mastitis control practices and prudent antimicrobial use and also engaged the unique perspective of farm employees. The focus groups included owners or managers of small and medium herds, managers of large herds, English-speaking farm employees, and Spanish-speaking farm employees. The focus group interviews were conducted, transcribed, and analyzed by the Julian Samora Institute, Michigan State University.

Significance

The findings from the survey and focus groups will be incorporated into a Quality Milk Audit tool for use by herd veterinarians to help incorporate farm personnel attitudes and behaviors into herd-specific quality milk teams. A pilot study to determine the feasibility of this approach will be tested in the fall of 2013.