

SOUTHEAST QUALITY MILK INITIATIVE: IMPLEMENTING SCIENCE-BASED RECOMMENDATIONS TO CONTROL MASTITIS AND IMPROVE MILK QUALITY IN THE SOUTHEAST

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The dairy industry in southeastern United States (SE) is in serious jeopardy. A significant decline in the number of dairy farms coupled with lower milk yields per cow and production of lower quality milk poses significant problems for the vitality of SE dairies and sustainability of the SE dairy industry. From 1995 to 2010, the number of dairies in the SE has declined significantly, with a 64% reduction in licensed dairy farms (Herndon, 2011). Consequently, the SE realized a 37% decline in total milk production from 1995-2010, while the US experienced a 24% increase. In addition, milk production per cow in the SE lags behind the rest of the US by about 13%. Milk quality is consistently the poorest of all the regions of the US; the SE 2010 DHIA SCC averaged 50% higher than the national average. Furthermore, 16-yr trend data suggests the expected number of dairy farms in the SE will decline by 56.7% between 2010 and 2025 to only 2,170 operations (Herndon, 2011). If this happens, milk production is forecasted to decline by 35% in the SE between 2010 and 2025, whereas US production will increase by 23% (Herndon, 2011).

Approach

We believe that if the SE dairy industry is to survive, it is of paramount importance to develop initiatives that include outreach, education, and research to improve milk quality and milk production. Our goal is to enable dairy farmers to move profitably toward production practices compatible with the concept of a sustainable dairy industry in the SE. Therefore, our approach for improving the sustainability of the SE dairy industry is through the development of a multi-state collaborative outreach, educational, and research program. This program will be developed by milk quality professionals from six SE Land-Grant Universities and will target challenged dairy farms and use those operations producing superior quality milk as demonstration herds.

Objective 1: We will identify economic, social, and psychological factors affecting limited adoption of practices known to control mastitis, and develop strategies to counter the rationale for non-adoption. This knowledge will lead to more effective strategies to facilitate adoption of practices for enhancing milk quality.

Objective 2: We will conduct applied research and on-farm demonstrations focusing on implementation of strategies for controlling mastitis and enhancing milk quality (National

Mastitis Council, 2006) and work directly with producers to assess on-farm practices. The program's applied research-based and demonstration farm information will be packaged for educational and outreach delivery to stakeholders including producers, veterinary practitioners, university students, extension personnel, and other agri-industries serving the dairy community.

Objective 3: By using print, face-to-face, and electronic delivery tools (including DAIReXNET webinars and Spanish translations), we will train dairy producers and milkers to utilize current and newly developed tools to make on-farm decisions that improve milk quality.

Objective 4: We also plan to develop continuing education programs to create human resources needed to serve the dairy industry by targeting practicing veterinarians and personnel serving the industry for providing immediate help, and undergraduate/graduate students to provide long-term solutions. Continuing education courses taught using traditional venues and provided through DAIReXNET webinars and directed internships will provide real-world experiences on milk quality, and result in a more knowledgeable work force to promote the sustainability of the SE dairy industry.

Conclusions

Our approach for improving the sustainability of the SE dairy industry is to develop a collaborative outreach, educational, and applied research program on mastitis control assembled by milk quality professionals from six Land-Grant Universities in the SE. We envision that the impact from this study will be enormous. Potential outcomes include: 1) dairy producers in the SE with an improved understanding of the economic impact of mastitis, leading to increased motivation to change management practices and improve animal health and well-being; 2) implementation of cost effective science-based mastitis prevention and control strategies resulting in higher quality milk, increased production, and improved profitability to enhance sustainability; 3) meeting human food and fiber needs while enhancing environmental quality and the natural resource base upon which the agriculture economy depends; 4) making the most efficient use of nonrenewable and on-farm resources and integrating natural biological cycles and controls; 5) sustaining the economic viability of SE dairy farm operations; and finally, 6) enhancing the quality of life for farmers and society as a whole. Implementation of cost effective mastitis prevention and control strategies for the SE region will result in higher milk quality, increased milk production, and improved profitability, all of which will benefit dairy producers in the SE and enhance the sustainability of the dairy industry in this region.

References

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