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Assessing the research and education needs of the organic dairy industry in the northeastern United States

A. B. D. Pereira,* A. F. Brito,* L. L. Townson,† and D. H. Townson‡[1]
*Department of Biological Sciences,
†Cooperative Extension, and
‡Department of Molecular, Cellular and Biomedical Sciences, University of New Hampshire, Durham 03824

ABSTRACT

Demographic and management data about organic dairies have been reported previously, but the current study is the first needs assessment of research and educational priorities of organic dairy farmers in the northeastern United States based directly upon their input. Our objectives were to (1) develop an initial understanding of the emerging research and educational needs of organic dairy farmers in the northeastern United States via focus group interviews, and (2) prioritize the needs identified by the focus groups with a broader population of organic dairy farmers via survey methods. Focus group interviews determined the questions used for the survey questionnaire distributed to 1,200 members of the Northeast Organic Dairy Producers Alliance. The members were asked about demographic information, but more importantly, challenges concerning business management and marketing, organic certification, and animal nutrition, health, and reproduction. The results (183 respondents, 15% response rate) were parsed by region (New England farms compared with New York and Pennsylvania farms), herd size (i.e., 12 to 37, 38 to 59, and >60 cows), and years of organic certification (<4 yr vs. ≥4 yr); however, no differences between regions were observed for demographic data. The average farm consisted of 309 acres and 57 milking cows, on which most of the forage was homegrown but grains were purchased (73% of farms). Among the greatest challenges identified by the farmers were obtaining a steady, fair price for milk (85% respondents); determining dry matter intake for animals on pasture (76%); and controlling nuisance flies (89%). Needs for additional research included organic treatments for mastitis (92% respondents), growing forages for organic production (84%), and developing value-added products (84%). Farms with <4 yr of organic certification were concerned with level of knowledge and experience of local certifiers, whereas organic producers with ≥4 yr of organic certification were more interested in field testing of new organic products. Opportunities for educational programs included learning about direct marketing possibilities (76% respondents) and providing training to regional veterinarians interested in organic remedies (91%). In conclusion, the information obtained from the current needs assessment provides a foundation for future research proposals and educational outreach programs, germane to stakeholder needs, which could benefit the organic dairy industry within the region and beyond.

Key words: organic dairy farming, research needs, educational needs, northeastern United States

INTRODUCTION

The emergence of organic milk production during the last decade as one of the fastest growing segments of organic agriculture in the United States has created new and exciting opportunities for organic dairy farmers in the northeastern United States (hereafter, the Northeast). Demographic and management practices among organic dairy producers have been surveyed and reported (McBride and Greene, 2009; Stiglbauer et al., 2013). However, no formal needs assessment based upon direct input from organic dairy farmers, specifically within the Northeast, has been conducted previously. The majority of dairy farms in the Northeast have fewer than 100 milking cows (McBride and Greene, 2009; Winsten et al., 2010). To improve the economic viability of their operations, some farmers have shifted their conventional operations to organic milk production (Dalton et al., 2008). Between 2000 and 2008, the number of certified organic dairy cows on US farms increased from 38,000 to more than 249,000 cows, an annual average increase of 69% (USDA-ERS, 2010). Conversely, the total number of milk cows in the United States has declined from approximately 20 million cows in 1950 to fewer than 10 million cows today (USDA-NASS, 2012). The consumer market for organic milk has grown from 2% to 3% of total milk consumption between 2006 and 2008, with most of the

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[1]Corresponding author: dave.townson@unh.edu

organic milk produced being marketed as fluid milk (Miller and Blayney, 2006). In 2008, national production of organic milk reached approximately 567,000 t of milk, and the trend of growth has continued, following a pattern similar to total milk production (50 million tonnes in 1950 to more than 80 million tonnes today; USDA-NASS, 2012). Despite these encouraging trends, the total number of dairy farms in the Northeast has diminished from more than 100,000 farms in 1960 to fewer than 16,000 farms today (USDA-NASS, 2012). However, more than 80% of all US certified organic dairies are located in the Northeast and Upper Midwest (McBride and Greene, 2009). For these reasons, future research and educational outreach efforts are needed to assist Northeast organic dairy farmers in managing their operations during difficult economic times. Without question, organic dairy farming has become a viable alternative enterprise, especially for the relatively small northeastern dairy farms that cannot expand to the size necessary to compete in the conventional sector. Marketing of high quality organic milk and dairy products necessitates expanding the learning community to include other representative stakeholders (e.g., organic organizations, cooperatives, and milk processors). However, the first critical step to develop a comprehensive assessment of the research and educational needs of the organic dairy industry in the Northeast is to actively engage organic dairy farmers in these discussions.

The objectives of the current study were to (1) develop an initial understanding of the emerging research and educational needs of organic dairy farmers from the Northeast (New York, Pennsylvania, Massachusetts, New Hampshire, Vermont, and Maine), including the most effective means of communication and outreach, via focus group interviews; and (2) prioritize the research and educational needs identified in the focus groups with a broader population of organic dairy farmers via survey methods.

MATERIALS AND METHODS

The University of New Hampshire's Institutional Review Board provided review and approval for the study (IRB #4911), and a consent form, along with University of New Hampshire Human Subjects Compliance Contact information, was provided to participants of the focus groups as well as to those asked to complete surveys. Participants were asked to give consent to be included as research subjects and responses were only included from those who provided consent. All participants were provided with the mailing address, phone number, and email address of the evaluator in case questions arose about the survey or the overall research study.

Focus Group Interviews

A series of focus group interviews were conducted to obtain a broad perspective of the research needs and issues facing the organic dairy industry in the Northeast. The largest numbers of certified organic dairies in this region are located in Maine, Vermont, New York, and Pennsylvania. For this reason, extension educators and industry personnel in these states were engaged to determine the best location for hosting focus group interviews. Acknowledging that extension educators are keenly aware of the farmers in their area, we asked them to suggest people who would be likely to participate in focus group interviews and yet represent a diverse range of backgrounds (e.g., size of operation, length of time involved in organic dairy production, experience with direct marketing). Each focus group was arranged by the local extension educator, sometimes with input from Organic Valley Family of Farms (Coulee Region Organic Produce Pool Cooperative, La Farge, WI) or the Northeast Organic Dairy Producers Alliance (**NODPA**, Deerfield, MA). Invitations to participate were sent directly from the local extension educator for 3 separate focus groups in Waterville, Maine; Binghamton, New York; and Randolph, Vermont. Purposeful sampling was used because it is a common method for identifying participants for qualitative inquiry such as focus groups (Seidman, 1998). The extension educators, and Organic Valley and NODPA personnel, however, were not part of the focus group, nor were they present at the time of the focus group interviews. Any concerns about educator- or industry-bias were minimized by the fact that the focus group interviews did not pertain to current extension or dairy industry efforts.

In conducting the focus group interviews, farmers were asked by a professional facilitator to respond to pointed, open-ended questions about their greatest successes, greatest challenges, and the most critical knowledge and skills they felt were needed to be successful in their operations (see Supplemental File A; http://dx.doi.org/10.3168/jds.2013-6690). In addition, they were asked about their previous experience and future interest in any type of on-farm research. The facilitator was careful to ensure that all participants responded, drawing out shy members when necessary and politely closing off dominant participants when required (Groves et al., 2004). Responses were audio recorded (with permission of participants) to accompany written notes taken by the facilitator and 2 separate note takers. Coding of the qualitative responses was conducted by reading through the written notes taken by the facilitator and note takers as well as the transcripts taken from the audio recordings. This resulted in coding of information into themes. Briefly, the data were summa-