

INTRODUCTION

The U.S. dairy industry as a whole has endured economic hardships since 2015. Proximity to major metropolitan areas and the Chesapeake Bay creates significant challenges for Maryland dairy producers, such as high land prices, urban development, and strict environmental regulations. Despite these challenges, Maryland's dairy industry still consists of approximately 330 farms and 42,000 cows, and dairy sales comprise 7% of all agricultural income for the state.

A needs assessment is a tool frequently utilized by Extension to collect information that is useful for program development and resource allocation. The most recent needs assessment of Maryland's dairy producers was conducted in 2006 when there were over 600 dairies in the state. Therefore, the objective of this project was to collect updated information to formally document the educational preferences and major challenges for Maryland's dairy producers to help Extension develop more effective extension programming.

METHODS

The needs assessment was conducted between November and December, 2019.

- All licensed dairy producers in Maryland ($n = 337$) were mailed a pre-notification letter to inform them of the survey on November 1st
- Paper surveys were mailed to producers on November 15th
- An additional letter was mailed on December 6th to remind producers to complete the survey
- The survey period closed on December 23rd

The survey consisted of 41 questions to capture information regarding:

- Preferences for accessing information
- Topics of interest
- Current farm management practices
- Future farming goals
- Demographics

Survey respondents were given the option to submit responses anonymously via mail or online.

As an incentive to complete the survey, respondents were given the opportunity to enter a random drawing to win one of three \$75 Amazon gift cards.

RESULTS

A total of 89 responses were received (26% response rate)

- 97% of responses were received via mail
- 79% of respondents were male, 17% were female, and 6% did not disclose their gender
- 35% of respondents had some formal education beyond the high school level

Figure 1. Age distribution of respondents (left) and number of years in the dairy business (right).

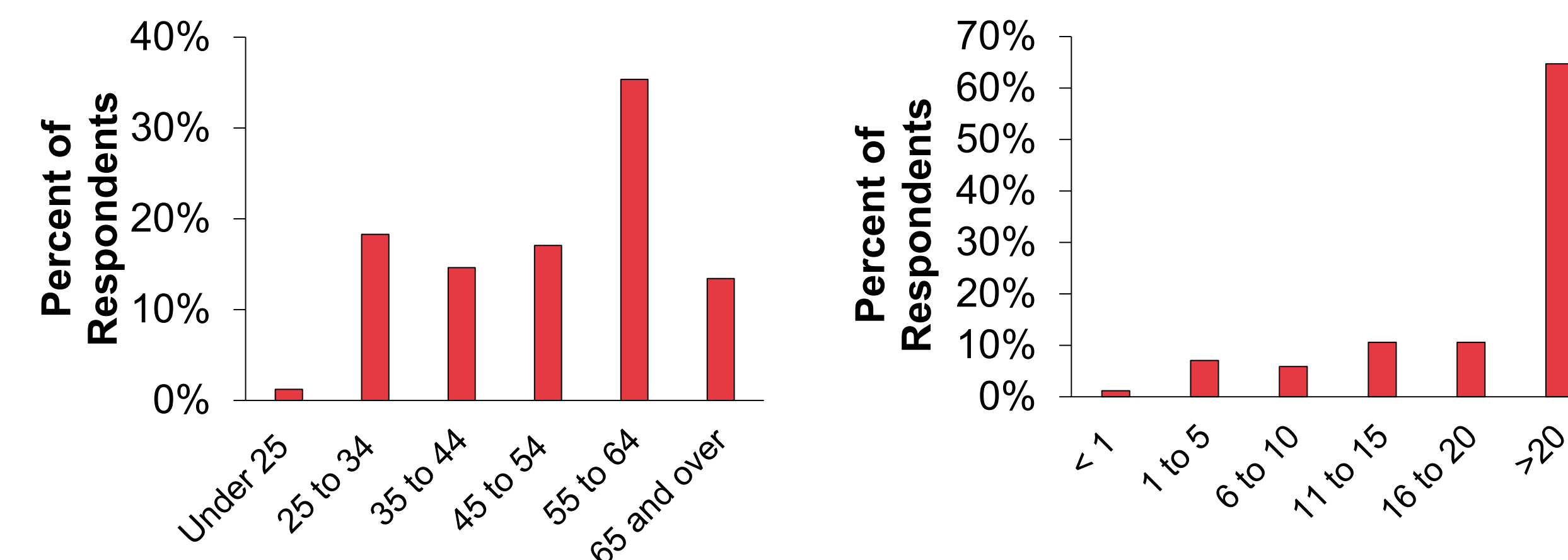


Figure 2. Number of lactating cows (left) and percentage of purchased forages (right) reported by respondents.

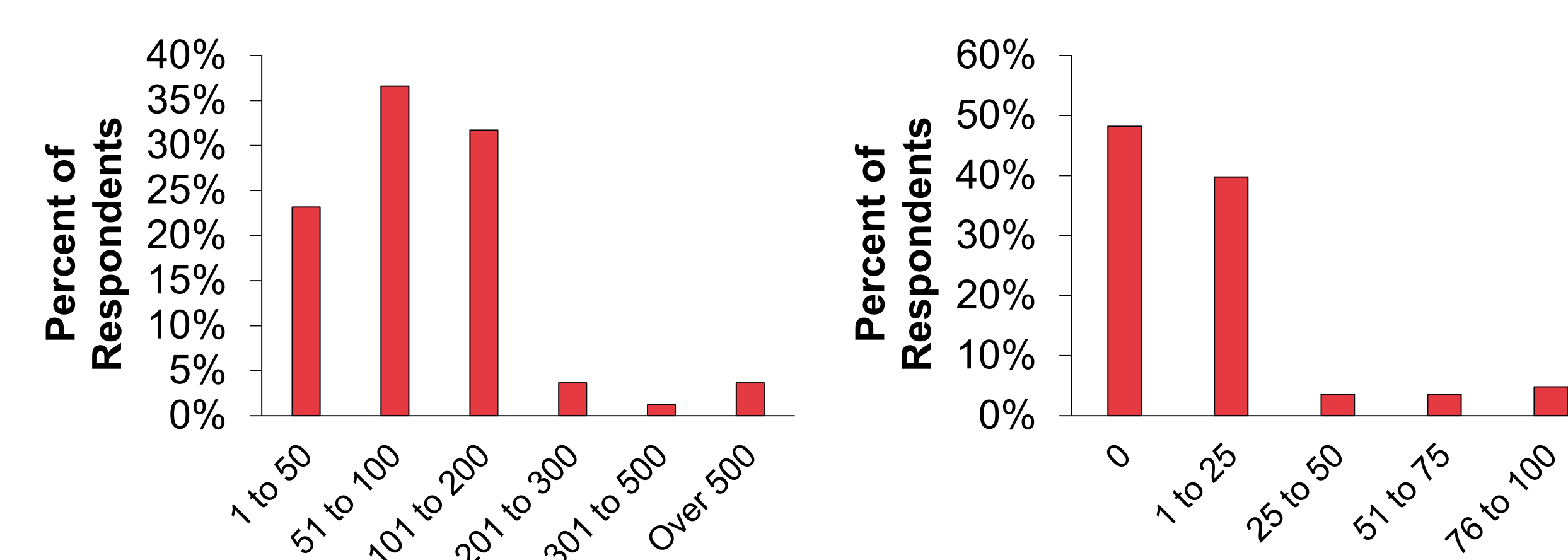


Figure 3. Limitations preventing respondents from growing their businesses. Limitations were assigned a score of 1 (not limiting) to 4 (very limiting) to indicate which factors are major challenges.

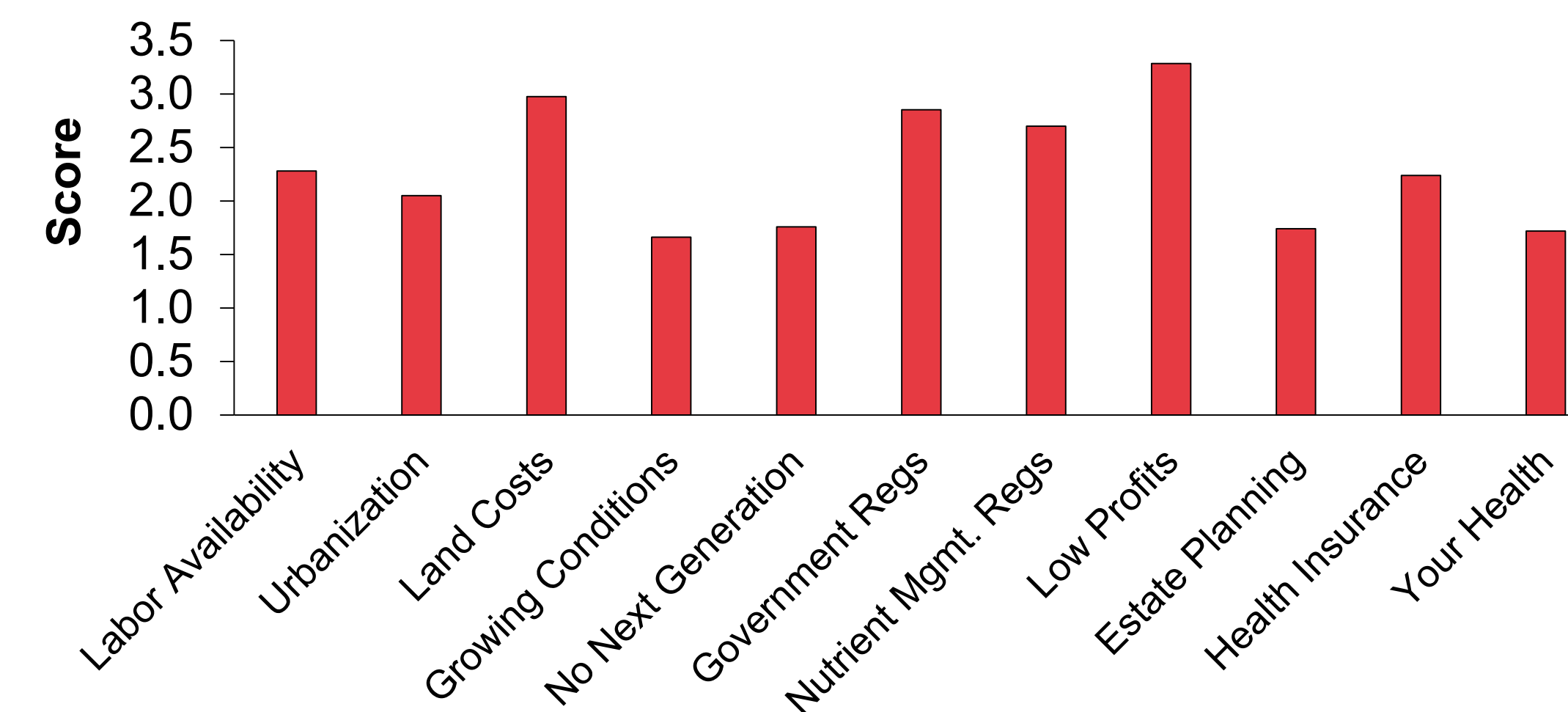


Table 1. Helpfulness of various sources of dairy-related information. Each source was assigned a score between 1 (not helpful or not routinely utilized) and 4 (very helpful) to indicate how helpful each source is.

Source	Score	Standard Deviation
Extension Agents/Events	2.06	1.14
Extension Newsletters	2.40	1.11
Industry Events	2.06	1.04
Internet Websites	2.15	1.21
Local Farm Suppliers/Dealers	2.96	0.90
Magazines	3.05	0.86
Newspapers	2.52	0.98
Nutritionist	3.08	1.10
Other Dairy Producers	3.02	0.92
Private Consultants	1.94	1.18
Regional Sales Representatives	2.07	0.95
Relatives Involved in the Dairy Industry	2.60	1.16
Social Media	1.71	0.94
Veterinarian	3.18	1.00

Table 2. Format preferences for obtaining dairy-related information. Each format was assigned a score between 1 (not likely) and 4 (very likely) to indicate how likely respondents would utilize information in that format.

Source	Score	Standard Deviation
All-day sessions	1.69	0.78
Evening Sessions	1.86	0.90
Farm Tours	2.07	0.87
Field Days/Demonstrations	2.32	0.89
Half-day Sessions	2.36	1.02
Internet Webpages	2.00	1.09
Multiple Day Sessions	1.19	0.42
Newsletters	2.90	0.93
Online Courses	1.48	0.75
Online Videos	1.85	0.92
Social Media	1.55	0.87
Webinars	1.55	0.77

Table 3. Topics of interest for further learning. Each topic was assigned a score between 1 (not interested) and 4 (very interested) to indicate respondent interest in the topic. The two highest ranked sub-topics from each major category are presented.

Topic	Score	Standard Deviation
Animal Health and Welfare ¹	2.40	
Mastitis	2.95	0.80
Calf Housing	2.74	0.99
Reproduction & Breeding ¹	2.10	
Problem Breeders/Infertility	2.64	1.01
Activity Monitor Applications	2.22	1.12
Nutrition & Feeding ¹	2.53	
Heifer Nutrition	2.78	0.92
Dry Cow Nutrition	2.76	0.90
Forage & Hay Production ¹	2.60	
Silage Quality	2.90	1.00
Variety Selection	2.79	0.90
Grazing & Pasture Management ¹	2.22	
Weed Control	2.54	1.06
Managing the Summer Slump	2.38	1.14
Soil Health & Fertility ¹	2.85	
Improving Organic Matter	3.05	0.84
Mitigating Compaction	2.93	0.91
Farm Management & Finances ¹	2.19	
Analysis of Financial Records	2.71	0.96
Utilization of Production Records	2.61	0.92

¹Score presented for each major topic area reflects the mean score for all related sub-topics.

SUMMARY

Our results indicate that dairy producers in Maryland are most receptive to receiving informative materials via newsletters, webpages, and field days. Maryland's dairy producers seem to be most interested in learning about topics related to improving soil organic matter and mitigating compaction, silage quality, and mastitis. Results from this survey will help direct future Extension programming to better serve Maryland's dairy producers.