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## Survey Results from Participants of a Short Course for Dairy Herdsmen

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## Survey Results from Participants of a Short Course for Dairy Herdsmen

### Abstract

A survey was conducted by University of California Cooperative Extension of past attendees of a dairy herdsman short course. The purpose was to determine to what degree course participants were applying course material to their respective position as dairy herdsmen. Overall, 41% of the attendees indicated that they had begun to apply information from the short course on the dairy farm for which they worked. Hispanic attendees appreciated simultaneous translations of presentations. Results from this survey demonstrate the need for a dairy herdsman short course in order for dairy employees to improve their practical skills in dairy herd management.

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## Introduction

In the past 20 years, average herd size on California dairy farms has grown from approximately 350 cows to nearly 800 cows per dairy (California Cost of Production, 2003). As herd size expands, employees are added, facilities are expanded, and perhaps most important, the scope and expectations for the dairy herdsman are markedly changed. At smaller herd sizes, the herdsman often spends time with individual cows, directly handling breeding, health issues, and nutrition. With larger herd sizes, the herdsman becomes more involved in delegating tasks and managing the labor force as well as performing some of the daily tasks (Hadley, Harsh, & Wolf, 2002). It is not uncommon for large dairies to have in excess of 25 employees working in the different areas of the dairy.

A large part of the dairy herdsman function is to train other dairy employees in the proper care of dairy animals. This is especially applicable for large herds where a more effective style of management (team training) is needed because more responsibility must be delegated (Reed, 1994). Along with knowledge of the basic husbandry and management skills to operate an efficient and profitable dairy, the dairy manager must also be made aware of and apply emerging dairy technologies.

Educational programs that address new technology are often conducted in English, which puts many dairy managers and herdsman at a disadvantage if they are non-English speaking. Language barriers provide a major challenge for educating the dairy labor force due to a high percentage of workers being Hispanic, commonly employed on large dairies in the West.

California dairy owners have expressed a need for basic dairy husbandry training for their employees, namely the dairy herdsman. Responding to these needs, University of California Cooperative Extension (UCCE) dairy advisors and specialists developed a Dairy Herdsman Short course to enhance the dairy husbandry skills of employees.

## Dairy Herdsman Short Course Overview

In the formulation of the short course, UCCE personnel and California State University faculty consulted with dairy producers during planning meetings to identify training needs. After these planning sessions, a short course was developed that consisted of morning classroom instruction and afternoon laboratories over 3 consecutive days. Session topics included: Raising Replacement Heifers, Reproductive Management, Milking Management, Hoof Care, Labor Management, Dairy Facilities, Herd Health, and Computer Record Systems. Laboratories consisted of students participating in an autopsy of a calf, use of stethoscope to diagnose disease problems in cows, anatomy of the mammary gland, detection of mastitis using the California Mastitis Test (CMT), appropriate use of a colostrometer, proper hoof trimming, and anatomy of the reproductive organs of the cow.

Lectures were presented in English with simultaneous Spanish translation for those who needed such service. Translators were also available during each of the laboratory sessions. Attendance was limited to 40 participants in order to provide individualized training. Each student received a notebook containing copies of each lecture and the slide presentations. Additional supplementary materials were also included in the notebook. Each student also received a CMT kit, which is used on-farm at cow-side to detect mastitis. Students also receive a stethoscope that can be used to assess the respiratory, digestive and cardiovascular health of a dairy cow. Each dairy represented was also provided a colostrometer, which measures the antibodies in colostrum that is given to newborn calves.

Comprehension by the students was assessed using a test that was given to participants at the beginning and conclusion of the short course. Test questions were multiple choice and identical for both tests. At the conclusion of each short course, participants were invited to fill out an evaluation form. Participants were asked to rate each session from excellent to poor. They were also asked what additional topics would be worthwhile.

## Survey of Herdsman Short Course Attendees

Information was lacking as to the impact of the herdsman short courses once attendees returned to their dairy operation. For this purpose, a survey was developed to evaluate to what degree participants were applying new ideas or strategies presented at the short course. This information would be used to ascertain whether current course content is providing the necessary tools for participants to apply on dairy farms.

## Methods

A direct mail survey in English and Spanish contained 22 questions and was mailed to 95 potential participants who attended one of the first three herdsman short courses and who were thought to be employed on a dairy farm. After approximately 2 - 3 weeks, a follow-up mailing was conducted.

The survey questions were divided into three basic groups. The first three questions asked for an overall evaluation of the course, the second group asked about individual lectures, and the third asked about individual laboratories. The impact of native language (Spanish or English) and the length of time in the herdsman profession on the overall rating of the course were studied using 2-way ANOVA models of SAS (SAS, 1996).

Examination of the data determined that if a respondent was in the herdsman profession for 12 years or more they would be considered as having a long involvement in the dairy industry. Survey responses were analyzed individually for the effects of language and/or experience using repeated measures ANOVA models, in which lecture or laboratories was a within-subject factor. Multiple comparisons among the lectures or laboratories were performed using least squares means.

## Results

Of the 95 surveys mailed, 32 were returned for a response rate of 33.7%. Of those responding, English was the first language for 63%. Time since course participants attended a short course ranged from 8 - 24 months. Average years of employment of survey participants on their current dairy for non-Hispanic and Hispanic dairy herdsman averaged 10.6 and 8.3 years, respectively. When asked if the dairy herdsman short course met their expectations for the course, all of the respondents indicated that the course met their goals of attaining more knowledge in dairy herd management (Table 1). When the response to this question was analyzed alone for Spanish speaking participants, no differences were shown based on their degree of goal expectations for the course. Length of time being a herdsman was not a significant factor with regards to the course meeting their goals.

**Table 1.**  
Overall Response to Herdsman Short Course

Question	Responses

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
	-----%-----			
Short course met your expectations	31.3	68.7	0	0
Would recommend to other herdsman	39.4	57.6	0	3.0
Spanish translation aided understanding	29.2	54.2	16.6	0

Respondents also indicated a strong inclination to recommend the short course to other dairy herdsman, but individuals speaking Spanish was not a factor in this recommendation. Length of time being employed as a herdsman was not a factor in recommending the course to other herdsman. As expected, respondents were favorable on having presentations translated into Spanish. This was most noted for Spanish-speaking participants, who tended to be more favorable than English speaking participants ( $P=0.09$ ).

Survey participants were questioned as to application of strategies presented at the herdsman short course to their current position as a dairy herdsman (Table 2). Of the topics presented at the herdsman short course, herd health, heifer replacement raising, and milking management were already being applied for more than 70% of the respondents. Information in the area of labor management was the topic already being applied the least on the dairy.

**Table 2.**  
Application of Strategies Presented in the Herdsman Short Course

<b>Item</b>	<b>Responses</b>			
	<b>Already Applying</b>	<b>Now Applying</b>	<b>Soon to Start Applying</b>	<b>Do Not Intend to Apply</b>
	-----%-----			
Foot care	53.3	26.7	20.0	-
Nutrition	56.7	30.0	13.3	-
Dairy food safety	60.0	16.7	23.3	-
Fresh cow management	60	23.3	16.7	-
Reproductive management	50.0	28.6	21.4	-
Milking management	70.0	23.3	6.7	-
Mastitis prevention	59.4	31.3	9.3	-

and control				
Labor management	41.4	34.5	20.7	3.4
Dairy herd software	53.6	10.7	28.6	.71
Herd health	73.3	20	3.3	-
Heifer replacement raising	70	20	10	-
Dairy facilities	53.3	16.7	26.7	3.3

Topics dealing with labor management, mastitis prevention and control, and nutrition received the highest percentages of respondents' replies as subjects being applied on the dairy based on attendance at the short course. Areas of food safety and dairy herd software were among the lowest responses. Conversely, food safety, dairy herd software, and dairy facilities were indicated by survey respondents as topic areas that they would soon start to apply. When evaluated separately, Spanish speaking attendees were more likely ( $P=0.04$ ) to use the information presented in the lectures than English speaking attendees. Length of time employed as a herdsman did not affect results.

Use of the laboratory exercises was found to be highly helpful to a high percentage of short course attendees (Table 3). Cow health exams and foot trimming demonstrations were two of the most useful laboratories. Whether an individual spoke Spanish or was employed more than 12 years as a herdsman did not affect their perceived usefulness of the laboratories.

**Table 3.**  
Usefulness of Laboratory Exercises

Lab	Responses			
	Very Useful	Useful	Somewhat Useful	Not Useful
	-----%-----			
Calf autopsy	28.1	65.6	6.3	-
Reproductive tracts	53.1	37.5	9.4	-
CMT/colostrometer	38.7	48.4	12.9	-
Cow health examination	65.6	31.3	3.1	-
Foot trimming	59.4	28.1	9.4	3.1

## Conclusions and Implications

The demand for well-trained dairy herd employees is growing for dairy herd owners because herd sizes are expanding at a rapid pace. This need has necessitated dairy Extension programming in California to focus on training for dairy herdsman who are in need of increased dairy husbandry or personnel management skills. Results from the survey reported here demonstrated the need for a dairy herdsman short course in order for dairy employees to improve their practical skills in dairy herd management. Based on attendance, dairy farmers are willing to send their employees to receive additional training in dairy husbandry practices.

Those who attended the short courses overwhelmingly felt that they received information that they could take back to their individual dairy farm. Labor management, mastitis prevention and control, and nutrition were topics that were adopted and used on the dairy by those who attended the short course. Short courses such as ours will need to provide simultaneous translation of presentations for non-English speaking attendees to ensure the understanding of materials. In addition, laboratory exercises that provide students the ability to have hands-on learning can be a valuable asset to a training program in dairy husbandry skills.

Dairy employees who wish to improve their skills in dairy husbandry practices may find it advantageous to attend training courses similar to the ones provided by University of California Cooperative Extension. Our results demonstrate what impact dairy extension programming can have in California when the needs of clientele are addressed.

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