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VETERINARY CONTINUING EDUCATION



ST. PAUL, MINNESOTA
UNITED STATES OF MINNESOTA

Survey: Dairy Herd Management Characteristics as Related to Large Herds Housed in Free Stall Curtain Barns in Michigan and Wisconsin

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A survey was developed to study areas of large dairy herd (over 200 cows) management in Michigan and Wisconsin. Areas surveyed were: general farm characteristics, housing facility design, sidewall curtain characteristics, free stall design and management, grouping strategies, animal waste management, hired farm labor and farm financial status.

The survey included 22 dairy farms in Michigan and 7 in Wisconsin. Another 12 farms were visited in Michigan but not included in the survey as they did not fit guidelines of the survey. Surveys were completed on each farm with the herd owner. The cooperation and support of visiting the farm and completing the survey was greatly appreciated by the author.

Data was summarized and written up for publication in six Dairy Updates (Issues 118 A through 118 F) dated April, 1994.

Issue 118 A, Survey: Herd Management Characteristics as Related to Large Dairy Herds Housed in Free Stall Curtain Barns in Michigan and Wisconsin, summarizes characteristics of the farm as related to size of farm, size of herd, ownership, DHIA information, and somatic cell data. It also pinpoints dairy barn characteristics, feeding site and age of facilities for all classes of livestock on the farm.

Issue 118 B, Curtain Sidewall Characteristics, addresses where free stalls are in relationship to the curtain sidewalls, width of traffic alleys, feet of roof overhang, method of opening/closing curtains, and curtain management in fall and spring. Testimonials on curtain sidewalls are listed at the end of the update (page 6).

Issue 118 C, Dairy Free Stall Design and Management, looks at length and width of the free stall along with length from brisket board to back curb of free stall for those reporting the use of brisket boards. Also, base material in the free stall was summarized in the survey. Data on sand usage in free stalls and movement to storage area along with agitation and movement to disposal site is included in this issue as is mattress usage and materials inside mattress covers.

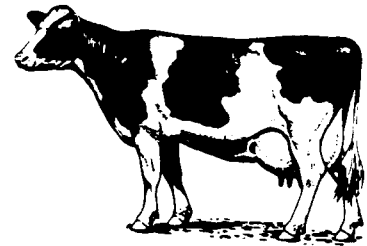
Issue 118 D, Farm Financial Credit, was the most difficult to attain complete and accurate data. Much of it is possibly related to the privacy of financial matters. However, this issue does provide credible data on sources of farm credit, use of farm financial planning assistance, financial growth over past five years and attitude on use of farm credit. Accurate interest rates were most troublesome to attain in the survey.

Issue 118 E, Hired Dairy Farm Labor, was an interesting area. Data clearly reveals large dairy farms in both Michigan and Wisconsin utilize both full time and part time hired labor. Average tenure of dairy farm employees is shown in Figure 3 while job description and job performance evaluation usage are shown in Figures 4 and 5. Also, methods to advertise for new employees and employee incentive bonuses were studied. Wages for farm labor was addressed informally but not recorded in the survey. The last paragraph (page 5) of the issue briefly addresses wages for hired labor on farms surveyed.

Issue 118 F, Dairy Animal Waste Management Systems, shows the wide variability of waste management systems (Figure 1). Manure storage systems were addressed in the survey and Figure 2 summarizes the responses. Frequency of removing animal waste and method of moving manure from storage site to field site were studied and summarized in Figures 3 and 4. The last section of this issue addresses manure testing, application rates and manure application records. The great variability of application rates as shown in Figure 5 and percentage (34.5%) of farmers reporting unknown in amounts applied would indicate this area needs lots of education to bring farmers current on manure application rates as related to soil nutrient availability and crop needs rather than just disposal.

In summary, each of the Dairy Updates provides highlights of survey findings. Keep in mind this is only survey data and no statistical analysis was completed on the data. Hopefully, the survey data can provide some background ideas on management for dairy producers moving into large scale dairy expansions.

My presentation will be the use of slides discussing some of the key management findings addressed in the survey and findings reported in Dairy Updates.



Dairy Update

**Survey: Herd Management Characteristics as Related
to Large Dairy Herds Housed in Free Stall Curtain
Barns in Michigan and Wisconsin**

**Issue 118A
April 1994**

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Introduction

A survey was developed utilizing nine different sections: namely, general farm characteristics, housing facilities, sidewall curtain characteristics, fly control, free stall design and management, grouping strategies, waste management, hired farm labor, and farm financial status. A total of 29 large dairy farms were included in the survey with 22 studied in Michigan and seven in Wisconsin in the fall of 1993.

The purpose of the survey was to study management in large dairy herds (over 200 cows) in the Upper Midwest-Great Lakes area.

General Farm Characteristics of Farms Surveyed

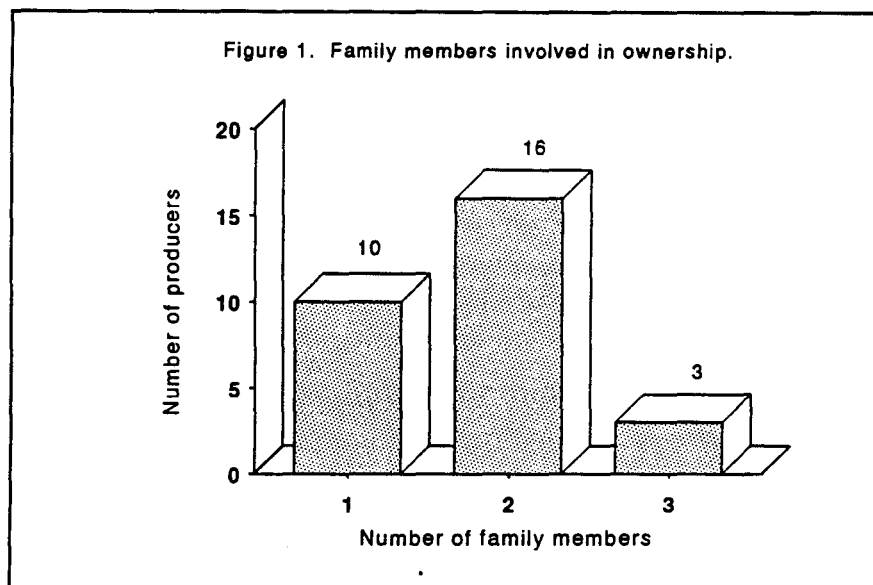
Crop acres owned on farms surveyed had a range of 150 acres to a high of 2,350 acres for an average of 642 crop acres owned per farm. In contrast, acres rented averaged 361 acres with a range of zero to 1,180 acres rented. Farms reporting high crop acres rented often grew cash crops as a part of the total farming enterprise. This was most prevalent in the Thumb Area of Michigan with sugar beets, pinto beans, navy beans, and soybeans often grown as cash crops.

Dairy cows on 29 farms surveyed averaged 339 cows per farm with a range of 130 to 1,010 cows. Guidelines for the survey were originally set at 200 or more cows; however, a few farms fit all other criteria except minimum number of cows and were included in the survey.

Youngstock (unfreshened) dairy animals ranged from 150 to 800 for an average of 296 dairy replacements per farm surveyed.

Ownership

One might hypothesize that large scale dairy farms would be under the ownership of off farm investors. Quite the contrary, dairy farms surveyed ranged from one to three family members involved in farm ownership with an average of 1.69 families per farm managing and controlling assets. Figure 1 shows distribution of ownership on dairy farms studied in the survey.



In the survey, generations of families involved in ownership were not included. In discussions with family members, it was apparent that many of the farms were third, fourth, or fifth family generation farms.

DHIA Information

DHI herd averages were available on 21 of the 29 farms surveyed. Herds not able to provide DHI data were either not on test or figures were not available. A number of herds not providing DHI herd averages had purchased their own computer milk monitoring system and were calculating daily production weights. DHI herd averages reported averaged 23,971 lb of milk with a range of 26,985 to 14,200 (Jersey herd). Of the 29 herds surveyed, 21 were on three times per day milking.

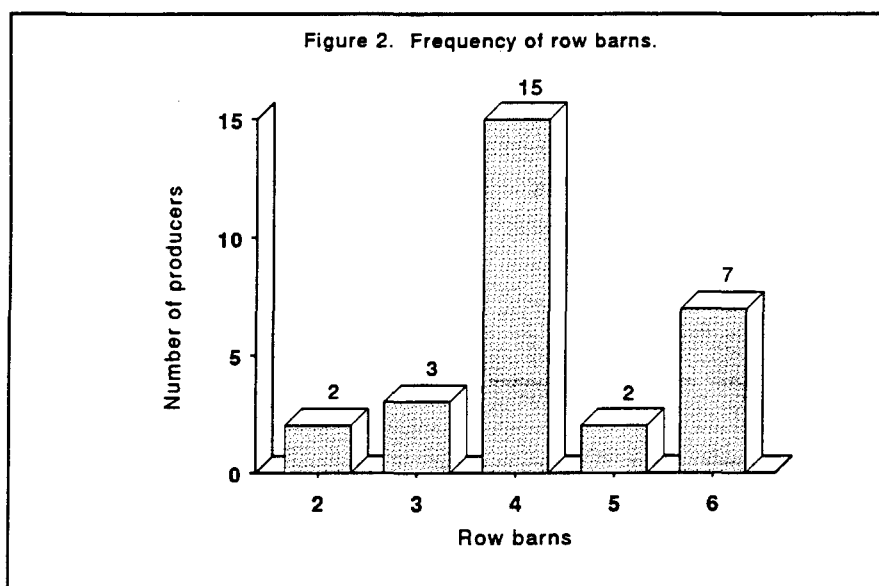
Somatic Cell Count

Somatic cell count in each of the 29 herds averaged 192,586 with a range of 110,000 to 400,000. Milk quality was a great concern to those surveyed as quality premiums were available to dairy producers on milk produced at specific somatic cell count levels.

Dairy Barn Characteristics

In the survey, the number of rows in dairy housing facilities were studied. Row barns ranged from two-row barns to six-row barns. Three farmers surveyed had a multiple number of housing rows in their barns. The six-row barns averaged 105 feet in width while four-row barns averaged 90 feet in width. Figure 2 shows that four-row barns were most popular (52%).

A number of farms surveyed with six-row barns had experienced less than desirable summer ventilation especially during periods of hot, humid weather. One respondent experienced a significant milk reduction in mid-summer 1993 and had installed mechanical fans to combat poor air movement and cow performance. Although the survey did not officially address direction of the housing facility, dairy owners appeared to favor the east-west barn feeling summer ventilation was enhanced vs north-south facing barns. This bears further study.



Feeding Site

Twenty of the 29 dairy producers surveyed reported dairy barns with drive through feed alleys. Five reported feeding cows at an outside bunk while two producers surveyed were feeding cows with automated feeding inside the housing facility. One of these two was in the process of removing the feed bunk and automated system in favor of feeding at a drive by bunk outside of the housing facility. No survey data was collected on lock-ups vs conventional feeding in drive through alley feeding; however, it appeared at about an equal split of 50-50. Dairy producers liked lock-up stalls for retaining individuals and groups of cows; however, cost was the big factor in determining whether to install or not.

Age of Dairy Housing Facility

Sixty-six percent of the 29 dairy farms surveyed had built new dairy housing facilities in recent years. Dairy housing facilities for lactating cows vs dry cows and heifer replacements had priority in the building scheme of farms surveyed. Figure 3 shows the age of dairy housing facilities of farms surveyed in Michigan and Wisconsin in the fall of 1993. At the time of the survey, a number of new dairy housing and milking facilities were seen under construction especially in Michigan.

