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Milking management clinics

Abstract

Thirty Milking Management Clinics have been conducted at various on-farm locations. The clinics have demonstrated that good milking techniques can result in an additional 1891 lb milk yield/cow in a 10-mo lactation and an increased milk flow rate of 0.9 lb/min. Additional demonstrations include: 1) teat dipping techniques, 2) proper sanitation programs, 3) antibiotic sensitivity culturing, 4) residue avoidance programs, 5) dry cow treatment techniques, and 6) milking equipment evaluation.; Dairy Day, 1988, Kansas State University, Manhattan, KS, 1988;

Keywords

Kansas Agricultural Experiment Station contribution; no. 89-107-S; Dairy; Milking management; Milk secretion; Milk let-down

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MILKING MANAGEMENT CLINICS

J. R. Dunham and E. P. Call

Summary

Thirty Milking Management Clinics have been conducted at various on-farm locations. The clinics have demonstrated that good milking techniques can result in an additional 1891 lb milk yield/cow in a 10-mo lactation and an increased milk flow rate of 0.9 lb/min. Additional demonstrations include: 1) teat dipping techniques, 2) proper sanitation programs, 3) antibiotic sensitivity culturing, 4) residue avoidance programs, 5) dry cow treatment techniques, and 6) milking equipment evaluation.

Introduction

Modern milking management often overlooks the physiology of the dairy cow. Although cows milked per hr is a measure of milking efficiency, many producers fail to take advantage of the milk let-down hormone--oxytocin. Thus, milk harvest is incomplete or milk flow per min is reduced because of improper stimulation for milk let-down or waiting too long before machine attachment to achieve the maximal benefits from oxytocin.

Other practices that need to be improved in many dairy operations include: 1) sanitation, 2) antibiotic sensitivity culturing for treatment programs, and 3) milking machine maintenance and evaluation.

Procedures

County Extension Agricultural Agents are encouraged to host a milking management clinic. The on-farm demonstration requires a cooperator to provide four to six mid-lactation cows that can be milked in a parlor that will accommodate 20 to 30 dairy producers.

After a discussion of milk secretion, milk let-down, and preparation procedures, the demonstration is conducted. Two or three cows are prepared for milking, and the milking machine is attached one min after initial preparation commences. Two or three other cows are prepped in the same manner and allowed to stand 5 min before the milking unit is attached. Both groups are milked, and the milk produced is measured. This is noted as initial milk. Then the cows are injected with 2 ml oxytocin (20 u/ml). The cows are milked again after 2 min to measure the amount of milk not harvested (residual milk).

Following the milking demonstration, good sanitation procedures are demonstrated in which bacterial culture plates are used to illustrate the amount of bacterial growth on teat ends with various sanitation programs. In addition, a discussion of programs for mastitis treatment is held, and an evaluation of the milking system is demonstrated.

Results and Discussions

Results of the milking demonstration are shown in Table 1. These demonstrations have shown that milk production can be increased 3 lb per milking by using good cow preparation techniques (normal prep) compared to advanced prep cows. This is equivalent to 1891 lb milk

in 305 days. Milk production is improved because cows are milked out more completely when the full benefit of oxytocin is utilized with proper timing in cow preparation. In addition milking time can be reduced by improved milk flow rate (0.9 lb/min) with normal cow preparation. Dairy producers have tended to prep too many cows before attaching the milking unit and, therefore, the effect of oxytocin on milk let-down is reduced. Furthermore, many producers do not spend at least 30 sec in cow preparation for maximal stimulation for milk let-down.

Although reports from producers after attending a clinic are only testimonials, several have reported improved milk production and(or) shorter milking time after improving their cow preparation techniques. Other comments include lower somatic cell counts after improving sanitation practices, such as drying udders and using pre- and post-milking teat dips. Using lactating and dry cow mastitis treatments, which are based on antibiotic sensitivity, seems to be a more common practice.

Table 1. Summary of 30 Milking Management Clinics

Item	No. cows	Milk (lb)			Milk harvested (%)	Milk flow (lb/min)
		Initial	Residual	Total		
Normal prep	61	32.0	1.5	33.5	95.5	4.9
Advanced prep	61	29.0	4.6	33.6	86.3	4.0
Difference		+3.0	-3.1	-0.1	+9.2	+0.9

