

Management of High Milk Production Kentucky Dairy Herds

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One of the best ways to learn is to examine the practices of other successful people. We interviewed managers of the top Kentucky milk production herds to characterize management practices employed by these farmers. Twenty-four dairy producers with a minimum rolling herd average milk production of 22,000 pounds were selected for this project. These farms represented the top DHI milk production herds in Kentucky at the time of the survey. Herd size ranged from 25 to 1590 lactating cows with an average of 191 cows, demonstrating that high milk production can be achieved in both small and large Kentucky herds.

Producers were asked questions to characterize their operation (Table 1). Nine producers (39%) conducted a monthly veterinary check. Nineteen producers (83%) conducted forage tests on every new forage and all surveyed producers analyzed forages at some point. Forage analyses allow dairy producers to maximize use of homegrown forages and maintain a balanced ration as forage nutrient content changes. Seventeen producers (74%) used a freestall barn as their primary housing for the lactating herd. Fifteen producers (35%) used a partial confinement production system as opposed to total-confinement or pasture grazing system. Fourteen producers (61%) milked their cows in a herringbone parlor. Twenty producers (86%) trim hooves at least annually and three (14%) never trim hooves.

Management practices employed by the surveyed producers are reported in Table 2. They are categorized by milking practices, management practices and tools, and feed additives. The top milking practices were drying teats before attaching milker, dry treating all quarters of all cows, pre-dipping, and post-dipping. All producers in the survey dried teats before attaching milking units and dry treated all quarters of all cows. Twenty-two (95.7%) of the producers in the survey used pre-dip and post-dip. Twenty producers (87%) used individual towels to dry the teats.

The top management practices were regular forage testing, use of fans, heat detection aids, and use of artificial insemination on heifers. All producers used regular forage testing. Twenty-one producers in the survey indicated that they have fans or sprinklers in place for cow cooling. Twenty-one (91%) producers also use heat detection aids. Among feed additives, twenty-one (91%) producers used rumen buffers, nineteen (83%) used yeast cultures, fifteen (65%) used organic or chelated minerals, and fifteen (65%) producers used mycotoxin binders. Thirteen (56%) producers in the survey indicated that they use a computer program for record keeping. During each survey, producers were asked to identify the one management practice that contributed the most to their milk production level (Table 3). The most frequently cited reasons were (1) attention to detail, (2) nutrition, (3) cow comfort, and (4) quality forages. The response of "attention to detail" demonstrates the importance of management ability in attaining high milk production. Obviously, this trait is difficult to quantify but demonstrates that an attitude of excellence contributes to high milk yield.

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Table 1. Management characteristics for high milk production herds.

Production system			Milking frequency		
System	n	Percent	Times per day	n	Percent
Pasture-grazing	0	0%	2X	17	74%
Partial confinement	15	65%	3X	6	26%
Total confinement	8	35%	4X or 6X fresh cows	1	4%
Housing system			Parlor setup		
System	n	Percent	Parlor	n	Percent
New (<10 years) or modern free stall barn(s)	17	74%	Herringbone	14	61%
Compost bedded pack (sawdust) housing	4	17%	Parallel	4	17%
Tie stall or stanchion barn	3	14%	Stanchion	3	14%
Bedded pack (straw) housing	1	4%	Side-opening	1	4%
			Parabone	1	4%
Veterinary check			Forage testing		
System	n	Percent	System	n	Percent
Monthly	9	39%	With new forages	19	83%
< Monthly	7	31%	Harvest	4	17%
> Monthly	6	26%	Monthly	2	9%
Blood test	1	4%	Seldom	2	7%
Hoof trimming			Heifer raising		
System	n	Percent	System	n	Percent
Trim hooves at least annually	20	86%	Heifers raised on farm	20	86%
Never trim hooves	3	14%	Heifers raised off farm	3	14%

Table 2. Management practices employed by high milk production herds

Milking practices	Number of herds	Percent
Dry teats before attaching milker	23	100%
Dry treat all quarters of all cows	23	100%
Pre-dip	22	96%
Post –dip	22	96%
Individual paper or cloth towels	20	87%
Gloves worn by employees	19	83%
Automatic take-offs	19	83%
Analyze milking system at least annually	19	83%
Submit milk samples for bacteriological culturing	13	57%
Written milking routine posted	4	17%
Management practices and tools	Number of herds	Percent
Regular forage testing	23	100%
Use of fans	21	91%
Heat detection aids	21	91%
Use of artificial insemination on heifers	20	87%
Rations balanced at least yearly	20	87%
Sexed semen	17	74%
Separate groups for far off and close up cows	16	70%
Kernel processor	16	70%
Computerized dairy management software program	13	57%
Push up feed regularly	12	52%
Financial benchmarking program	12	52%
Feed Additives	Number of herds	Percent
Rumen buffers	21	91%
Yeast cultures	18	78%
Organic/chelated minerals	15	65%
Mycotoxin binders	15	65%
Bypass fats	13	57%
Ionophores	13	57%
Direct fed microbials	10	43%
Anionic salts	8	35%

Table 3. “What one management practice has contributed most to your current level of production?”

Practice	Number of herds	Practice	Number of herds
Attention to detail	8	Good employees	1
Nutrition	5	Modernization	1
Cow comfort	4	Keeping SCC low	1
Quality forages	4	Sand	1
Record keeping	3	Soakers	1
Genetics	3	Total mixed ration	1
Consistency	2	Nutritionist	1