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Dairy Lines

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KANSAS DAIRY EXTENSION NEWS

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Upcoming Events

Area DHIA Meetings
Jan. 29–Feb 7, 1997
See inside for dates & locations

Western Dairy Management Conference
March 13–15, 1997

The Nutrition Program

Planning the Feeding Program

J. R. Dunham

Now is a good time to plan and set goals for 1997. The feeding program should receive special attention because it impacts productivity and profitability more than any other program.

The nutrition program should be built around quality forages, especially for early lactation cows. Therefore, make a goal to produce or procure high quality forages and allocate them to the high producing cows. If less than optimum alfalfa is available, find storage where it can be fed to late lactation cows and replacement heifers.

The next goal is to test the forages and balance the rations from the test results. Many dollars in protein and mineral supplement costs can be saved by balancing the grain mix according to the forage analysis.

Dry cow feeding and management should receive special attention. The next lactation will be affected by the body condition score, mastitis control and dry cow transition rations—don't overlook the dry cows. A comparison of the 1st and 2nd lactation Summit Milk Yield can tell a lot about the success of the dry cow program.

Another goal is to feed balanced rations for high production. Income over feed cost is higher in high producing herds even with high priced feeds.

Don't forget to feed the replacement heifers for adequate size and development to freshen at about 24 months of age. Heifers should gain about 1.75 pounds per day for large breeds, and 1.4 to 1.5 pounds per day for the smaller breeds. Don't guess about the heifers' rations, balance according to the forage program.

Another goal should be to shop around when selecting ration ingredients. Feed costs can be reduced without affecting the nutrition program by selecting some ingredients that have a price advantage.

The most important goal for 1997 is to feed and manage the herd for high milk production because there is greater opportunity for profit.

The nutrition program has more impact on the success of a dairy than any other component. Now is a good time to plan and set goals for the nutrition program for 1997.

Heart of America Dairy Herd Improvement Summary (December)

	Quartiles				Your Herd
	1	2	3	4	
Brown Swiss					
Rolling Herd Average	19,504	15,932	14,393	12,235	
Summit Milk Yield 1st	60.7	52.1	47.7	43.4	
Summit Milk Yield 2nd	78.2	68.1	61.2	54.8	
Summit Milk Yield 3rd	82.9	74.1	67.9	59.3	
Summit Milk Yield Avg.	73.8	65.4	60.1	54.0	
Income/Feed Cost	1,583	1,329	1,304	1,023	
SCC 1st LACT	310	237	299	204	
SCC 2nd LACT	318	290	245	192	
SCC 3rd+ LACT	425	465	419	396	
SCC Average	358	362	349	306	
Days to 1st Service	89	84	88	96	
Days Open	143	129	155	155	
Projected Calving Interval	430	417	443	442	
Guernsey					
Rolling Herd Average	16,630	13,819	12,750	10,673	
Summit Milk Yield 1st	57.4	49.9	46.6	39.9	
Summit Milk Yield 2nd	69.4	60.8	56.8	46.5	
Summit Milk Yield 3rd	72.2	62.4	59.2	50.3	
Summit Milk Yield Avg.	65.3	57.4	53.2	46.6	
Income/Feed Cost	1,673	1,287	989	861	
SCC 1st LACT	170	181	251	461	
SCC 2nd LACT	215	214	303	643	
SCC 3rd+ LACT	322	254	414	715	
SCC Average	232	218	321	603	
Days to 1st Service	86	91	93	95	
Days Open	148	155	161	146	
Projected Calving Interval	434	440	447	432	
Holstein					
Rolling Herd Average	21,822	18,797	16,907	13,926	
Summit Milk Yield 1st	70.0	63.0	58.1	49.9	
Summit Milk Yield 2nd	89.6	79.3	72.4	60.5	
Summit Milk Yield 3rd	94.1	83.6	76.9	64.9	
Summit Milk Yield Avg.	83.5	74.9	69.2	59.3	
Income/Feed Cost	1,860	1,559	1,438	1,034	
SCC 1st LACT	235	254	268	319	
SCC 2nd LACT	256	281	332	410	
SCC 3rd+ LACT	394	436	499	611	
SCC Average	300	333	383	480	
Days to 1st Service	92	93	97	99	
Days Open	145	142	140	143	
Projected Calving Interval	424	422	420	423	
Jersey					
Rolling Herd Average	15,908	13,549	11,940	9,837	
Summit Milk Yield 1st	50.9	45.1	39.8	35.6	
Summit Milk Yield 2nd	61.6	55.2	49.8	42.7	
Summit Milk Yield 3rd	66.6	57.9	53.5	45.7	
Summit Milk Yield Avg.	59.9	52.9	48.9	41.9	
Income/Feed Cost	1,635	1,250	1,021	852	
SCC 1st LACT	205	232	236	333	
SCC 2nd LACT	244	249	237	409	
SCC 3rd+ LACT	428	484	475	544	
SCC Average	311	351	355	455	
Days to 1st Service	81	88	89	89	
Days Open	118	124	123	123	
Projected Calving Interval	397	403	402	402	

Grouping Strategies Affect Time Spent in Parlor

by Lawrence R. Jones and John F. Smith

Throughputs of milking parlors usually are compared on a steady-state basis. For example, a double-10 parallel might be rated at 100 cows per hour. This figure is the parlor throughput under optimal labor, cow and equipment conditions.

However, most farms cannot achieve the rated throughput for a variety of reasons. Commonly, a poor work routine by the milker is the culprit. Another, often overlooked, reason is poor cow grouping.

Cows are put into groups for many reasons: specific rations, days in milk, body condition, number of stalls, and so forth. An often neglected factor when grouping is parlor size.

Avoid empty stalls

Poor grouping will result in empty stalls and a greater number of milking cycles or parlor "turns." (A cycle is one side of the parlor, a turn is one complete change of both sides of the parlor.) The result is significantly slower milking parlor throughput and more time and money spent milking.

Whenever possible, group size should be an even multiple of the parlor. The ideal group size will include the number of cows that can be milked in one hour to keep them from standing in the holding pen away from feed and water too long.

A good rule-of-thumb for group size in herringbones and parallels is four times the parlor size. For example, groups for a double-10 parlor should be 80 cows or less.

When groups are not matched to the parlor size, the parlor generally will be under utilized, and parlor performance will suffer. Let's look at what happens to parlor performance under different situations using a well-maintained, double-8 herringbone as an example.

We will assume 400 cows are being milked 3× and averaging 60 pounds each per day. The milker is well trained and has an "essential" work routine of 38.5 seconds and an acceptable idle time of 6.5 seconds per cow. See Table 1.

Grouping Strategies, continued from page 2

A first observation is that the parlor is too small for the labor available. If milkers spend 45 seconds per cow, then they can milk about 80 cows an hour (3,600 seconds per hour divided by 45 seconds per cow).

But it usually takes 15 minutes to move a side of cows through the parlor, so this double-8 parlor will have a maximum throughput of about 64 cows an hour. The operator will be idle about 20 percent of the time.

Let's now look at three other situations as shown in Table 2. In the optimal situation (A) as described above, the cows are grouped in five groups of 80 cows each. Also, the milker does not have to wait for the next group of cows. There always are cows in the holding pen. In this situation, milking time is about 6 hours and 22 minutes for one person. The throughput is near the 64-cows-per-hour parlor capacity.

In this next situation (B), the milker still is working with the same routine, but the cows are housed without regard to parlor size in the following five group sizes: 78, 82, 65, 83, 92. As a result, there are five cycles that are not filled. Now the milking time goes up by 20 minutes, and throughput drops to less than 60 cows per hour.

In Situations C and D, the parlor is idle after each group. This usually happens when the milker gets his or her own cows or when the milker needs to wait for the next group to be brought to the parlor. For this situation, we will count only the time that cows are in the parlor.

Parlor shuts down

Let's assume shutting the parlor down between groups adds an additional 8 minutes to the milking time for each group. For our example double-8 herringbone, milking time (that is, time in the pit) went up to 7 hours and 10 minutes, and throughput dropped to 56 cows per hour.

If the milker also spends 10 minutes in herding the next group of cows into the holding pen (Situation D), the total milking time goes up to almost 8 hours. It is no longer possible to complete three milkings in a 24-hour period. In addition to scheduling problems, uneven and consistently changing milking schedules will hurt milk production. From the optimal scenario to the worst scenario, the parlor throughput dropped by 15 percent, even though the same parlor and the same work routine were being used.

Table 1. Typical work routine for a herringbone parlor

Event	Seconds per cow
Entry	5
Udder preparation	10.5
Attach	12.5
Reattach	1.5
Postdip	4
Exit	5
Idle	6.5
Total	45 seconds

Table 2. Compare four milking parlor strategies

Situation	Turns of parlor per milking*	Milking time (hours:min)	Throughput (cows/hour)	Labor costs ($/cwt./day)**
A. Optimal	25	6 h 22 min	63	0.80
B. Uneven groups	26-1/2	6 h 45 min	59	0.84
C. "plus parlor shutdown	26-1/2	7 h 10 min	56	0.90
D. " 10 min for group change	26-1/2	7 h 50 min	51	0.90***

* A turn is one complete change of both sides of the milking prlor.
** Assumes 60 pounds of milk per cow per day and labor at $10 per hour including benefits.
*** Incluestime in parlor only.

Hay Prices*

	Location	Quality	Price ($/ton)
Alfalfa	Southwestern Kansas	Premium	120–130
Alfalfa	Southwestern Kansas	Good	115–120
Alfalfa	South Central Kansas	Premium	110–120
Alfalfa	South Central Kansas	Good	90–100
Alfalfa	Southeastern Kansas	Premium	110–120
Alfalfa	Southeastern Kansas	Good	95–120
Alfalfa	Northwestern Kansas	Premium	110–120
Alfalfa	Northwestern Kansas	Good	80–90
Alfalfa	North Central Kansas	Premium	110–120
Alfalfa	North Central Kansas	Good	100–110

Source: USDA Weekly Hay Report, *Week ending January 10, 1997*

*Premium Hay RFV = 170–200
Good Hay RFV = 150–170

Feed Stuffs Prices

	Location	Price ($/ton)
SBM 48%	Kansas City	239–243
Cotton Seed Meal	Kansas City	229–235
Whole Cottonseed	Memphis	145
Meat and Bone Meal	Central United States	264–267.50
Blood Meal	Central United States	585–595
Corn Hominy	Kansas City	95–101
Corn Gluten Feed	Kansas City	110–112
Corn Gluten Meal 60%	Kansas City	335–345
Distillers Dried Grain	Central Illinois	145–147
Brewers Dried Grain	St. Louis	134
Wheat Middlings	Kansas City	95–100

Source: USDA Weekly Feed Stuffs Report, *Week ending January 8, 1997*

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KANSAS DAIRY EXTENSION NEWS

You are encouraged to attend one of the Area DHIA Meetings at one of the locations listed.

January 29 Valentino's SENECA	***January 30*** Extension Office OTTAWA	***February 4*** Amish Community Building WHITESIDE
February 5 Methodist Church HILLSBORO	***February 6*** Extension Office WICHITA	***February 7*** Holidome HAYS

At these meetings, time will be allowed for your association to conduct its annual business. Heart of America DHIA is sponsoring the meeting and noon meal.

A G E N D A

10:30 a.m.	Refreshments
11:00 a.m.	Local Association Business Meetings
Noon	Lunch sponsored by Heart of America DHIA
1:00 p.m.	DHIA and Dairy update
	Report from Heart of America DHIA
	Nomination for Board of Directors— HOA DHIA—Phillips position
	Report from Kansas Dairy Association (KDA)
2:30 p.m.	Adjourn

In order to plan for food, we need your reservation by January 26. Please clip and return the reservation slip or call one of the following County Extension Offices:

Joe Wary
Ellis County Agent
601 Main, Suite A
Hays, KS 67601
913-628-9430

David Key
Nemaha County Agent
604 Nemaha, Ste. 201
Seneca, KS 66538
913-336-2184

Duane Liddeke
Reno County Agent
2 W. 10th
South Hutchinson, KS 67505
316-662-2371

Steve Tonn
Marion County Agent
Box 178
Marion, KS 66861
913-382-2325

Steve Westfahl
Sedgwick County Agent
7001 W. 21st St. N.
Wichita, KS 67205
316-722-7721

Darren Hibdon
Franklin County Agent
1418 S. Main, Suite 2
Ottawa, KS 66067
913-229-3520

Clip and send to one of the addresses to the left.

Please reserve (No.) ____ meals for the Area DHIA Meeting.

Name: _____

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