

GROUP FEEDING DAIRY COWS FOR ECONOMIC PRODUCTION

The trend toward the concentration of more dairy cattle on fewer and more specialized dairy farms has been quite pronounced in Florida in recent years. At the present time, Florida has approximately 500 dairies with an average of about 350 cows per dairy. Production in 1967 increased in 20 states, Florida was up 7 percent, the largest percentage gain, followed by Texas with a 5 percent gain. Florida dairy cows led all southern states in 1967 with an average of 8,660 lbs. of milk, an increase of 460 lbs. of milk per cow, as compared with 1966 production.

Today's dairyman must not let himself become complacent in a fast changing world. He must continue to read, study, and evaluate new ideas and practices that may be incorporated into his dairy operation to help reduce overall production cost. Long range plans must be developed that are flexible enough to include the adoption of new approaches in solving current and future problems.

The movement toward larger herds and different milking systems has had a significant influence on feeding programs. One new approach that is presently receiving some study and attention is "Group Feeding". Although group feeding is not new to many dairymen, its application where cows are placed in three or more groups according to level of production is a relatively recent innovation. Group feeding is not being advocated in herds where individual feeding is practiced. However, few dairymen with large or small herds now practice individual feeding and many have adopted the practice of giving all cows an equal chance at the feed bunk. This scheme results in underfeeding the high producers and over-feeding the low producers. Dairymen shifting from this scheme to group feeding have been able to reduce their over all feed cost and increase the level of production.

Auburn researchers have recently reported the results of a trial comparing individual and group feeding. The cows were paired according to level of production and randomly assigned to concentrate feeding groups. Results of the trial are given in Table I.

Table I. Performance of Cows Fed Concentrates
Individually and in Groups

Performance Criteria	Method of Feeding	- Individually	Group
FCM/cow/day, lb.		32.0	31.0
Milk Fat, %		4.7	4.9
Gain in body weight/28 days, lb.		48.0	13.0

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In recent Illinois studies, a group feeding trial was conducted over a period of 18-weeks comparing free choice feeding of corn silage mixed with 1) 100%, 2) 50%, and 3) 0% of the concentrate mixture. The remaining portion of the concentrate mixture for groups 2 and 3 was fed individually in the parlor. The results of this experiment are summarized in Table II.

Table II A Group Feeding System Comparing A Complete Feed Mixture of Corn Silage and Concentrates for 18-weeks.

	Treatments		
	1. Outside	2. Outside & Parlor	3. Parlor
FCM/cow/day, lbs.	34.0	39.0	39.0
Milk Fat test, %	3.9	3.9	4.1
Silage TDN consumption, lbs.	16.5	16.3	16.7
Grain TDN consumption, lbs	9.5	11.2	8.4
Body weight gain, lbs.	167.2	154.0	127.6

The researchers concluded that lactating dairy cows can utilize a group-fed complete ration mixture of corn silage and concentrates as efficiently as an individually fed ration. Feeding concentrates in the milking parlor did not apparently stimulate greater milk production. All cows averaged 11 minutes per cow in the Herring-bone parlor with a consumption of 0.66 lbs. of concentrate per minute.

Recently Georgia researchers reported results comparing various group feeding schemes. The cows were assigned to four treatment groups as follows:

- (A) ad lib. corn silage, ad lib. concentrate.
- (B) ad lib. complete feed (60% concentrate, 40% cottonseed hulls and Coastal Bermudagrass pellets).
- (C) ad lib. complete feed (70% concentrate, 30% cottonseed hulls and Coastal Bermudagrass pellets).
- (D) ad lib. corn silage and 25 lbs. of concentrate.

The results are summarized in Table III.

Table III Ad Libitum and Controlled Group Feeding Of Lactating Dairy Cows for 150 Days.

	T R E A T M E N T S			
	A	B	C	D
Milk/Day, lbs.	49.0	48.0	48.0	48.0
Milk-Fat test, %	3.4	3.5	3.6	3.5
Silage consumption, lbs/day	20.0	----	----	60.0
Grain consumption, lbs/day	41.0	56.0	56.0	24.0
Total TDN consumption, lbs/day	34.0	34.8	37.1	32.0

Corn silage = 38% DM; 24% TDN
 Concentrate = 70% TDN
 Complete feed = 62% TDN

Under pasture conditions, it is usually not practical to separate the cows into more than three production groups because of the amount of labor involved in moving the cows to and from the pasture. Generally, an effective job of group feeding according to level of production can be done when the cows are separated into three groups. Many dairymen prefer to use group feeding under dry lot

dairying rather than pasture separation. Drylot dairying offers the advantage of having as many lots and production groups as needed and a better chance to eliminate the problem of wet, muddy lots, pastures and lanes.

There are several methods that might be adopted in the feeding of cows according to production groups. Fence line or outside feeding appears to be more popular in new dairies with parlor operations. In some cases, the grain is mixed with the silage and/or green chop or other roughage prior to feeding. A few dairymen are using the mixer wagon (with scales) for distributing the feed and in other cases the self-unloading wagon is used. For group feeding to be effective the feed should be evenly distributed in the bunks so that all cows in each production group will have ample space and the same length of time to eat. In some cases, individual stanchions may be desired in order to fasten timid cows in the production group.

Another method of group feeding is the use of the stanchion barn. In some cases the cows are fed by hand whereas in other cases the barns are equipped with automated feeding systems. Mechanized feeding equipment can be used in group feeding providing it will deliver measured amounts of feed to the production groups.

Group feeding appears to be the best solution to many of the problems associated with trying to adequately and economically feed large numbers of dairy animals found on many of our Florida farms. One method employed for grouping cows according to production and for feeding animals within each group is shown in Table IV.

Table IV

Groups	A Group Feeding System		
	I	II	III
Level of Production (lbs)	15-30	31-45	46 plus
Fed for (lbs. milk)	25	40	60
Feed required (lbs) Av. 1400 lb. cows)			
Pasture (fair) (lbs)	25	25	25
Hay, pangola (lbs)	6	6	6
Concentrate mix (10.5% D.P.) (lbs)	20	28	40

As more pasture becomes available the grain feeding can be reduced accordingly. Generally, good producing cows can consume from 60 to 80 lbs. of good pasture per day. About 7 or 8 lbs of pasture is equivalent to 1 lb. of grain.

Following a 2-3 week period of challenge feeding, fresh cows are usually placed in one of the high production groups. Most cows will remain in this group for a period of at least 2 or 3 months. Then, production records must be checked at monthly intervals to determine which animals should be shifted to lower production groups. Some cows will remain in the high group during the greater part of their lactation while others will need 2 or 3 changes during the course of the lactation. Dairymen have not reported any real problems due to "boss cows" or adjustments needed by cows coming into a new group. Most cows will require 1 or 2 days to establish her place in the new group.

In order to remain competitive, today's dairymen are rapidly being forced to become larger and more automated. Increasing the size of the dairy as well as increased automation requires some changes in the existing practices. Two noticeable changes have been a trend toward parlor milking and group feeding. Parlors allow less time for eating than stanchion barns. Also, individual feeding of dairy cattle in large operations becomes burdensome to many dairymen and alternative methods of feeding cattle are sought. Therefore, at the present time, it appears that the adoption of a group feeding program offers the best approach to feeding large numbers of cows according to production.

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