KANSAS FARM MANAGEMENT ASSOCIATION DAIRY COW HERD ENTERPRISE MANAGEMENT ANALYSIS

F. D. DeLano and L. N. Langemeier[1]

Summary

Actual dairy cow herd enterprise records from Kansas Farm Management Association farms over the past 4 years have shown an increase in returns over variable costs from $17,900 to $23,300 per farm for a 100-cow dairy herd in favor of herds with higher milk-producing cows. Cost per hundred weight of milk produced per cow decreased for the higher-producing herds compared with lower-producing herds, even though total cost per cow increased. In 1992, for every extra $1.00 spent on feed and other variable costs, the higher producing herds earned $1.71. This was a 71% return per dollar invested.

(Key Words: Economics, Dairy, Management.)

Introduction

Detailed dairy cow herd records from farms enrolled in the Kansas Farm Management Association program are analyzed each year using the K-MAR-105 mainframe computer as the basis for providing valuable information to each participating dairy farm. This detailed information is also useful to nonmembers for benchmark comparisons. Total dairy herd production expenses, along with production information, are made available on per hundred weight (cwt) of milk sold and per cow bases. This complete dairy herd enterprise analysis, along with DHIA records, provide the information for dairy farmers to evaluate correctly their dairy herd program.

Procedures

Dairy cow herd producers keep monthly receipt and expense records in an account book or on a computerized accounting program. Detailed crop production, feed, and inventory records are completed each year under the supervision of Extension Agricultural Economists, Farm Management Association Program.

Milk production is based totally on sales and, thus, does not include home use or milk fed to calves. The total feed expense includes all feed consumed by the dairy cow herd including pasture, value of stock fields, etc. Values are based on average farm market price for the current production year, inventory value, or actual purchase cost.

Results and Discussion

The 1992 dairy cow herd enterprise records from 108 dairy farms were analyzed by dividing the farms into herds with milk sales below and above 18,000 lb of milk per cow. High production per cow is very important to obtain acceptable returns to the operator for management, labor, and equity capital.

Table 1 compares these two milk production groups. In 1992, the higher-producing herds sold 3,757 lb more milk per

[1]Department of Agricultural Economics.

cow (over 23% greater production), which resulted in $477 additional gross income per cow. For the higher-producing herds, total feed cost per cow increased by $151 and other variable costs (direct production costs) increased by $116. These herds returned $210 more per cow above variable costs than the lower-producing herds. For a 100-cow herd, higher production provided $21,000 more income for family living, debt repayment, replacement of machinery and equipment, and other capital investments. Table 2 provides information on all dairy cow herds in the Kansas Farm Management Association program for the past 4 years. Table 3 compares the difference in milk production, gross income, variable cost, and net returns between the high- and low-producing dairy herds for the period 1989 to 1992.

Table 1. Kansas Farm Management Association Dairy Cow Enterprise Analysis, 1992

	Milk Sold per Cow			
Factor	Under 18,000 lb		18,000 lb and over	
Production Data				
No. farms	55		53	
No. cows/farm	79		94	
Milk sold/cow, lb	16,052		19,809	
	Per Cow	Per cwt Milk Sold	Per Cow	Per cwt Milk Sold
Production Returns				
Milk sold	$2,097	$13.06	$2,570	$12.97
Livestock sales and other	319	1.99	323	1.63
Gross income	$2,416	$15.05	$2,893	$14.60
Production Costs				
Feed fed	$1,281	$7.98	$1,432	$7.23
Hired labor	133	.83	168	.85
Vet, supplies, marketing	249	1.55	353	1.78
Repairs, fuel, utilities	215	1.34	198	1.00
Interest & miscellaneous	111	.69	105	.53
Total variable costs	$1,989	$12.39	$2,256	$11.39
Return over variable cost	$427	$2.66	$637	$3.21

Table 2. Kansas Farm Management Association Dairy Cow Enterprise Analysis, 1989-1992

Factor	1989	1990	1991	1992
Production Data				
No. farms	66	87	113	108
No. cows/farm	90	92	85	86
Milk sold/cow, lb	18,151	17,969	17,518	18,135
Production Returns	Per Cow			
Milk sold	$2,407	$2,471	$2,094	$2,360
Livestock and other	426	374	310	322
Gross income	$2,833	$2,845	$2,404	$2,682
Production Costs				
Feed fed	$1,431	$1,321	$1,311	$1,367
Hired labor	115	154	164	153
Vet, supplies, marketing	276	293	272	304
Repairs, fuel, utilities	181	211	209	218
Interest & miscellaneous	128	111	114	96
Total variable costs	$2,131	$2,090	$2,070	$2,138
Return over variable cost	$702	$755	$334	$544

Table 3. Impact of Differences in Milk Production on Returns from High-Producing Dairy Cows Compared to Low-Producing Dairy Cows, 1989-1992

	High Producers over Low Producers*			
Factor	1989	1990	1991	1992
	per cow			
Milk sold, lb	4,369	3,984	3,416	3,757
Gross income	$576	$628	$373	$477
Total variable cost	$343	$449	$449	$267
Returns above variable cost	$233	$179	$210	$210
Returns/100 dairy cow herd	$23,300	$17,900	$21,000	$21,000
Return/$1.00 spent	$1.68	$1.40	$1.47	$1.71

*The 1992 analysis separated herds on 18,000 lb milk produced per cow, whereas the 1989-91 analyses were separated on 17,000 lb.