

MARIN COUNTY DAIRY MANAGEMENT STUDY FOR 1954

Study Conducted by
THE AGRICULTURAL EXTENSION SERVICE
University of California and Marin County

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INTRODUCTION

This study was conducted by the Agricultural Extension Service in cooperation with a small group of progressive local dairymen for the purpose of providing information to help improve efficiency and profit in milk production under Marin County conditions. Detailed records were kept and furnished for analysis by five dairymen who are certainly above average in efficiency of production. Hence, the average figures shown herein are not to be considered as average for the county, but apply only to these 5 dairies and for the year 1954.

The costs and income shown apply only to the dairy enterprise as a separate, but main part of the dairy farm. The raising of replacements is included, but the raising of feed or other crops is not. Hence, the labor shown is only for the milking of the cows and the feeding and care of all the stock in the dairy herd. Pasture, which was the only feed produced on these 5 dairies, was charged to the dairy herd at the estimated farm value of \$4 per animal unit month. An animal unit month is the feed required by one mature head of cattle for one month.

Milk is the main product, but some stock is raised and sold in connection with maintaining a herd of good cows. "Net Stock Income" shown in Table I, reflects the value of the net production of dairy stock. At an average of 24.75 per cow, it was only about 5% of the total income.

For purposes of uniformity and comparison, profit in this study is figured two ways as follows:

Management income is total income less total expense. Total expense includes in addition to cash costs and depreciation, the value of home grown feed, the value of the operator's labor and interest at 5% on the average investment in the dairy enterprise.

Farm income is profit figured without including the dairymans own labor or interest on investment as part of his costs. It is his full income from his dairy enterprise.

Report issued at
Farm Advisor's Office
Post Office Building, San Rafael
March, 1955

Table I - DAIRY ENTERPRISE PROFIT FACTORS, 1954

	Range		Average 5 Dairies	Your Herd
	Lowest	Highest		
Pounds of butterfat per cow, D.H.I.A.	357	488	429	
Pounds of butterfat sold per cow	344	454	402	
Per cent sold of D.H.I.A. record	92	96	94	
Pounds of milk sold per cow	8100	11600	9900	
Average butterfat test of milk sold	3.6	5.0	4.1	
Average price per cwt, all milk sold	\$4.15	\$5.57	\$4.62	
Net cost per cwt, sold	3.62	4.59	<u>4.02</u>	
Management income per cwt.	.15	1.31	<u>.60</u>	
<u>Income per cow</u>				
From sale of cull cows	\$20.43	44.12	30.85	
Other stock sales	3.51	27.89	8.91	
Increase stock inventory - decreased (-)	-18.86	50.12	2.28	
Less stock bought	1.24	110.97	<u>17.29</u>	
Net stock income (cost -)	-17.28	48.59	<u>24.75</u>	
Miscellaneous income, manure, etc.	.00	3.74	2.44	
INCOME FROM MILK SALES	\$395.70	500.04	<u>456.44</u>	
Total income per cow	\$433.04	500.04	<u>483.63</u>	
Total expense per cow	\$367.96	466.56	<u>424.17</u>	
Management income per cow	15.07	110.00	<u>59.46</u>	
Farm income per cow	76.28	156.22	115.02	

The above table shows certain figures from 5 dairy enterprise records. The range shows the highest and lowest for each figure among these 5 dairies. The figures in the high column or the low column are unrelated since they usually apply to different enterprises. The average in the third column is the weighted average for all 5 dairies. This means every item was added for all five dairies and the figures shown are the averages for this large group of 902 cows.

Profit in the dairy enterprise is total income less total costs. Total income is made up of sales of milk, dairy stock and manure. Above we show the net stock income by deducting the cost of stock bought and adjustment for change in the stock inventory. Generally, the higher the net stock income, the better the profit. One of these dairies had a net stock cost instead of a net stock income through selling and buying a large number of cows.

The total expense is equal to income in importance in determining profit. Expenses are shown in detail in the next table. They include the cost of feed purchased and the farm value of farm grown pasture.

Two profit figures are shown above--the management income which is the amount remaining to reward the operator for his good management after he has already been paid wages for his labor and 5% interest on his invested capital. These 5 dairymen are all considered exceptionally good managers and all made a management income shown above to vary from a low of \$15 a cow to a high of \$110 and to have averaged \$59 for each of the 902 cows. Farm income is the total earnings from his business from labor, invested capital and management.

Table II - INPUTS AND COSTS PER COW

	Range		Average 5 Dairies	Your Herd
	Lowest	Highest		
Pounds of butterfat sold per cow	344	454	402	
Total animal units of stock per average cow (heifers, etc.)	1.29	1.64	1.43	
Total hours of labor per cow	61	98	86	
Average price per hour of labor	.96	1.36	1.18	
Feed quantities used per cow				
Tons of hay	2.72	7.86	4.34	
Tons of concentrates	1.08	1.77	1.53	
Tons of molasses	---	.93	.23	
Tons of green feed	---	5.80	.94	
Animal unit months of pasture	3.40	9.13	7.00	
Feed Prices				
Hay cost per ton	\$21.54	\$26.00	\$24.73	
Concentrate cost per ton	66.79	72.08	69.20	
Molasses cost per ton	21.16	21.16	21.16	
Green feed cost per ton	8.00	8.00	8.00	
Pasture cost per animal unit month	4.00	4.00	4.00	
Costs per average cow for the year				
Hay	\$67.80	169.35	107.23	
Concentrates	76.63	118.41	106.07	
Molasses	---	20.12	5.08	
Green feed	---	46.41	7.95	
Pasture	13.60	36.50	27.98	
Total feed cost	\$215.85	290.24	254.31	
Hired labor	32.63	85.59	67.89	
Operator's labor	14.22	49.18	33.60	
Miscellaneous	30.55	44.15	39.66	
Depreciation	5.53	9.51	6.75	
Interest on investment	20.22	24.97	21.96	
Total expense per cow	\$367.96	466.56	424.17	

The average animal units per cow varies in different herds with different proportions of young stock in the herd. The average above was 1.43 with the "1" being the cow and the .43 being bulls and other stock. The higher this figure, the more feed required per cow and the higher the feed cost.

Feed costs are 60% of the total cost and so offers the greatest opportunity for extravagance or economy. Concentrate feeding conservatively according to the production of each individual cow offers considerable opportunity for cost reduction. A high proportion of pasture estimated in this study at a cost or value of \$4 per animal unit month also reduces feed cost and improves profit. Note that the above use varied from a low of 3.40 AUM (animal unit months) per cow to a high of 9.13 which includes the young stock.

Labor is next as a cost item at 24% of the total cost with an average of 86 hours per cow per year.