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MINNESOTA FARM MANAGEMENT SERVICE NOTES

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Prepared by the Farm Management Group at University Farm, St. Paul, Minn.
 Andrew Boss, G.A. Pond, L.B. Bassett, W.L. Cavert,
 L.F. Garey, A.T. Hoverstad

Some Side Lights on the Dairy Business

Of the milk produced in America 23.6 per cent is made into creamery butter, 12.8 per cent into farm butter, 3.7 per cent into cheese, 3.5 per cent into condensed and evaporated milk, 3.5 per cent into ice cream and about .2 per cent into other forms of manufactured products. Of the total milk produced 47.3 per cent is used for manufacture, 45.5 per cent is used for household purposes, 4.2 per cent is fed to calves and 3 per cent is waste or loss.

The Ratio of Cows to People in the United States and Per Capita Consumption of Dairy Products

Year	Number of Dairy Cows		Milk gals.	Per Capita Consumption			
	United States Total on farms	Minnesota No. per 1000 people		Minnesota Total on farms	Butter lbs.	Cheese lbs.	Con- densed milk lbs.
1915	21,262,000	214	1,186,000	-	-	-	-
1916	22,108,000	220	1,240,000	-	-	-	-
1917	22,894,000	225	1,302,000	42.4	-	-	-
1918	23,310,000	226	1,328,000	43.0	14.6	3.0	-
1919	23,475,000	224	1,368,000	43.0	14.8	3.5	-
1920	23,722,000	223	1,395,000	43.0	14.7	3.51	6.0
1921	23,504,000	220	1,532,000	49.0	16.1	3.5	11.4
1922	24,082,000	222	1,578,000	50.0	16.5	3.7	12.69
1923	24,429,000	222	1,641,000	-	-	-	-
1924	24,675,000	221	1,674,000	-	-	-	-

The above figures show no significant change in the ratio of cows to people. There has been a constant increase in the use of dairy products since 1917. Large use is likely to continue so long as wages and incomes of city consumers remain high. The increase in consumption has been met by a probable increase in production per cow and by a larger excess of imports over exports of dairy products.

According to the Agricultural Outlook, published by the United States Department of Agriculture, there was a net import balance equivalent to 477,000,000 pounds of whole milk in 1923. There is a possibility of an increase in imports in 1924. Surplus stocks of condensed milk and of cheese equivalent to 603,000,000 pounds of whole milk also were accumulated in excess of stocks on hand at the beginning of the year.

The dangers to the dairy business are (1) that depression may hit the industries and reduce the buying power of consumers, (2) that the relatively high price of dairy products over the last three or four years has stimulated the production of new cows. It is probable that a larger number of heifers have been raised than usual and that more new cows may come into production within the next year or two. (3) A further invasion of the domestic markets by dairy products from foreign countries. (4) A moist, cool season may so stimulate production per cow as to give a larger surplus and at the same time decrease consumption of product.

It is a time to exercise caution in the dairy business. Farmers in favorable localities who are already equipped should probably continue in dairy production. Others whose location and resources naturally favor the dairy business may well proceed to grow into it. It looks like a poor time, however, to buy into the business or to attempt to develop dairying in locations not naturally favorable to the industry.

A. B.

Figures used are extracts from United States Department of Agriculture records.

Costs and Returns in Butterfat Production

In the following table is presented the average cost of producing butterfat on a group of twenty-one farms in Steele County, Minnesota in 1923. 370 cows are included in the study. These cows are all grade or purebred cows of dairy breeding. The quantities of the grains and hays fed and the prices at which they are charged is as follows: 277 lbs. corn at 60 cents per bushel, 1278 lbs. small grain at \$1.10 per 100 lbs., 79 lbs. mill feeds at \$29 per ton, 19 lbs. oilmeal at \$52 per ton, 530 lbs. alfalfa at \$18 per ton, 1393 lbs. timothy and clover at \$13 per ton and 324 lbs. wild hay and corn fodder at \$10 per ton. Silage is charged at \$4.50 per ton. Calves are credited at birth at \$5.00 each for grades and \$10 for purebreds. 338 living calves were born during the year.

With 53 cents per pound for butterfat in 1923 these farmers received an average wage of 37 cents per hour for labor on cows. One farmer received as high as 68 cents per hour and another as low as 8 cents. Should the price of butterfat drop to 45 cents and feed and labor prices remain the same the average return per hour for labor expended on cows would drop 25½ cents. With butterfat at 40 cents it would drop to 18 cents and with a price of 35 cents to 11 cents. On the other hand the farmer who in 1923 received 68 cents per hour for the labor spent on cows would receive but 42 cents with 40 cent butterfat and 32 cents with fat at 35 cents. In other words the farmer whose costs are at or above the average shown here must adopt methods for lowering his costs or a lower price level for butterfat, such as many people think is indicated by the recent abnormally rapid seasonal decline, will reduce his returns to a point where he not only can not afford to hire labor to milk cows but must accept a low return for his own time so spent.

Cost of Dairy Production per Cow in Steele County in 1923

	Average amount	Range	Average cost	
Feed - kind				
Crain	1653 lbs.	247 - 3330	13.67	
Hay	2247 "	1426 - 4603	15.44	
Silage	7090 "	3972 - 10300	15.95	
Pasture	196 days	141 - 232	<u>7.84</u>	
Total feed cost				57.90
Labor -				
Man labor	149 hrs.	84 - 272	31.29	
Horse work	4½ "	0 - 17	<u>5.50</u>	
Total labor cost				31.79
Other costs -				
Interest @ 6%			6.49	
Depreciation			7.09	
Equipment charge (separator, dairy utensils, etc.)			4.50	
Barn charge			9.10	
Misc. cash costs (veterinary services, medicine, etc.)			1.09	
Overhead			<u>5.25</u>	
Total other costs				33.52
Total expenses				<u>123.21</u>
Credits:				
Calf			6.28	
Manure, 10 loads @ \$1.00			10.00	
Skim milk, 6000 lbs. @ 31¢ per 100 lbs.			<u>18.60</u>	
Net cost of butterfat production				<u>34.88</u>
Average butterfat production - 211 (range 154-297)				
Average cost per lb. of butterfat - 42¢				
Average cost per 100 lbs. 3.5 per cent milk - \$1.77				

In interpreting these figures it should be noted that these herds produce at least 40 per cent more butterfat per cow than the average cow in the state. They are fairly well bred dairy cows handled by dairymen of much more than average experience and ability. Most of these farmers have been keeping complete farm accounts for several years. With these records as a guide they have weeded out their low producers. They have increased their production by breeding and selection and by better feeding including the use of more alfalfa and clover in the place of wild hay and corn stover. They have lowered their feed bill by substituting cheap home grown feeds for high priced commercial feeds. The average production of these herds has increased 44 pounds of B.F. per cow in three years with an increase of less than \$5.00 in the feed cost per cow and an actual decrease of 22 hours of man labor per cow. These costs, therefore, represent a fairly efficient standard of production that may be used as a guide by other dairymen.

Butter Prices Compared to Livestock Prices

Over a period of years the following have been the average long time prices of several different kinds of livestock and of butter.

Hogs (average of all grades)	Chicago markets	1903-1923	cwt.	\$9.00
Corn fed steers (1200-1500 lbs)	" "	" "	" "	8.80
Native lambs	" "	" "	" "	9.42
Butter (Extras)	New York	" "	lb.	.35

Livestock prices are from year books of Chicago Drovers Journal; butterfat prices from U.S. Dept. of Agriculture year books.

Farmers in southern Minnesota who ship livestock in car lots or who patronize shipping associations usually net at their home station about \$1.00 per cwt. less than Chicago quotations, while for butterfat in sweet cream sections they receive two to five cents above the New York quotation for 92 score butter (creamery extras). This would indicate that on a farm price basis over a period of years the Minnesota farmer is as likely to average \$8.00 for hogs or \$7.80 for corn fed steers or \$8.40 for lambs as to receive 36 cents to 40 cents for butterfat (sweet cream basis). The average price paid in sections handling sour cream and not having a sufficiently large volume of business is usually two to five cents under New York extras.

At the present time, assuming hogs to be worth \$6.40 at country points and butterfat to be worth 40 cents, hogs are selling at about 80 per cent of their average value for 1903-1923 inclusive while butterfat is still seven per cent above the average for the same period of years. A consideration of the figures inevitably leads one to the conclusion that producers of butterfat during 1923 and early 1924 enjoyed prices that were altogether out of proportion to the price for hogs and the ordinary grades of cattle and that the price of butterfat is still favorable compared to that of hogs and common cattle. It is well to keep in mind in planning future production that what is relatively cheap is usually likely to rise in price while the production of those things that are high in price is likely to be increased so that lower prices will result when the increased quantity of products reaches the market.

W.L.C.