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DAIRYING IN STANISLAUS COUNTY

A Brief Summary of the 1948
Dairy Management Study
by
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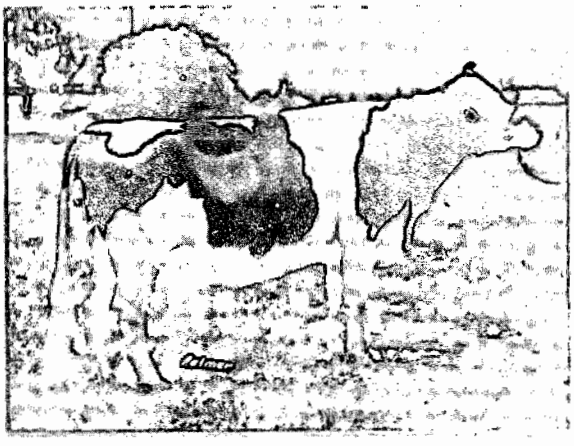

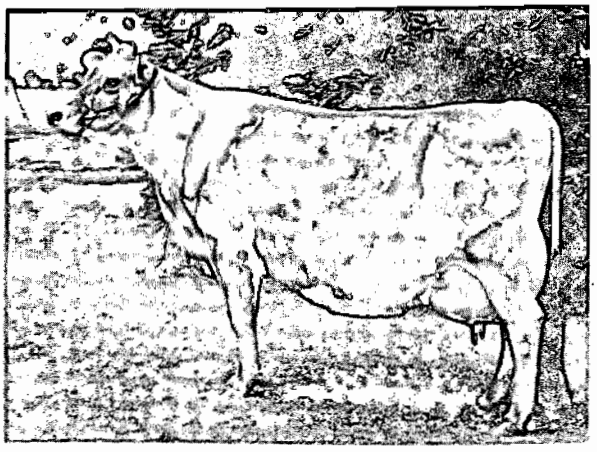

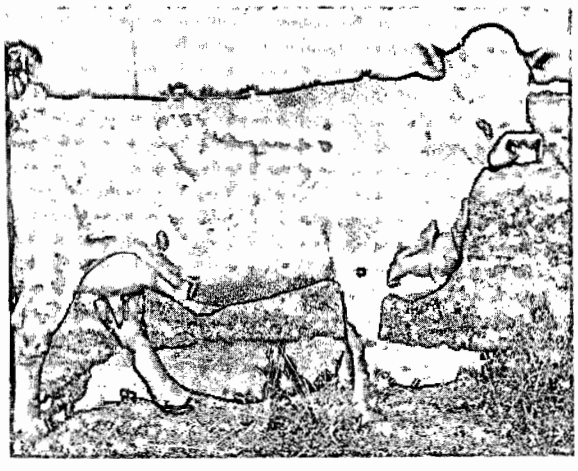

Adequate irrigation water at low cost with an abundance of alfalfa and irrigated pastures makes Stanislaus County well suited to the production of Grade "A" and manufacturing milk and dairy cattle.

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United States Department of Agriculture
County of Stanislaus, Cooperating
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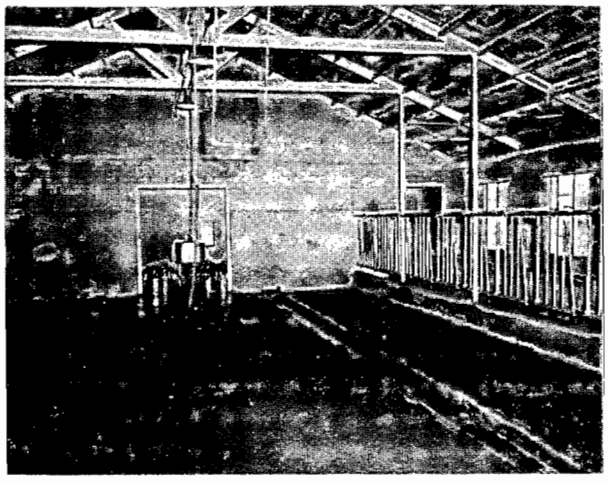
DAIRYING IN STANISLAUS COUNTY

Dairying is an important type of farming in Stanislaus County. In 1948 milk and dairy stock sales were estimated at 27 million dollars. It is the most important single enterprise in the county amounting to one-fourth of the total value of agricultural production.



The Dairy Enterprise

The dairy enterprise as discussed here covers only the dairy herds and the production of milk and dairy stock, including purebred breeding stock. Farm produced feed is charged to the dairy enterprise at local farm values along with purchased feeds. Labor and other costs shown in the following tables apply only to the dairy enterprise and not the entire farm. Earnings are shown as management income per cow and as net farm income. The net farm income is the dairyman's earnings from his dairy enterprise for his management, labor and invested capital.

Dairy Enterprise Earnings - Prewar and 1948

	1938-1941		1948	
	Mkt. Milk	Mfg. Milk	Mkt. Milk	Mfg. Milk
Pounds of milk fat sold per cow	320	323	367	340
Average price per pound milk fat	$0.52	$0.41	$1.26	$1.06
Net stock income per cow	21.90	36.16	45.42	59.78
Miscellaneous income	3.36	5.33	4.04	6.03
Income from milk	165.59	133.37	462.00	358.50
Total income per cow	190.85	174.86	511.46	424.31
Total expense per cow	175.22	137.47	451.02	390.95
Management income per cow	15.63	37.39	60.44	33.36
Net farm income per cow	41.12	59.78	106.67	137.20

Outlook

Dairying is a rather stable business of moderate earnings without the high profit in some years and losses in others. Continued good demand and increasing populations in California should result in continued fair prices and earnings from dairying. Some decline from recent high milk prices is underway, but the good efficient producer should make a fair profit over the years.

Effect of Pasture on Costs and Income

Stanislaus County Dairy Study Records for 1948

	Market Milk		Manufacturing Milk	
	High Pasture	Low Pasture	High Pasture	Low Pasture
Av. pounds of milk fat sold per cow	372	363	357	334
Pounds of hay fed per cow	7634	9594	6884	10103
Pounds of concentrates fed per cow	2389	2221	1987	1910
Pounds of silage and green feed per cow	431	8434	0	6518
Animal unit months of pasture per cow	11.2	6.7	10.8	4.9
Total feed cost per cow, as reported	$260.52	$309.35	$241.62	$246.67
Estimated pounds of TDN per cow	10141	10155	9252	9225
Cost per 100 pounds of TDN, as reported	2.56	3.04	2.60	2.67
Management Income per cow	$101.96	$ 24.12	$ 83.41	$ 18.28

The above table shows those using a high quantity of pasture had lower feed costs and higher management incomes than those using low quantities of pasture.

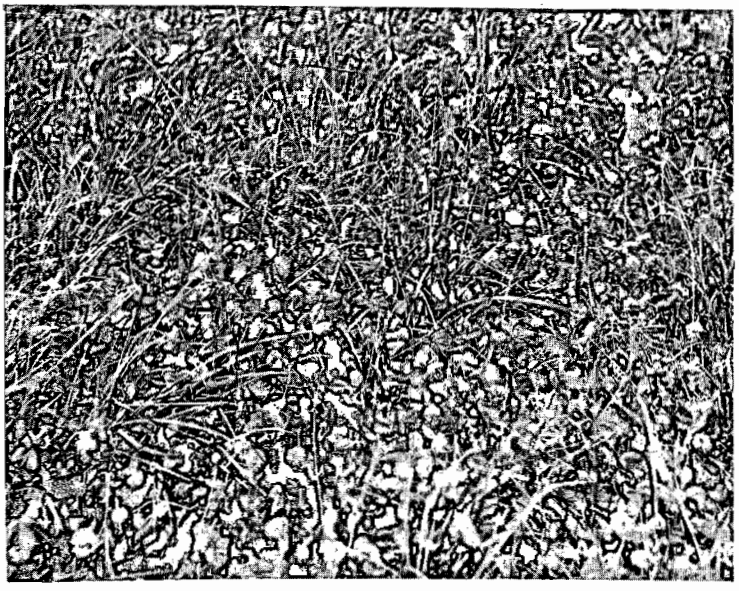
Pasture is the cheapest feed.

Pasture is good nutritionally. It contains adequate protein, vitamins, and minerals and insures against feed deficiencies.

HOW MUCH PASTURE? High producing cows need some dry hay and concentrates even when maximum pasture is available. Pasture yields vary from ranch to ranch, but the records indicate that about 1 acre of good pasture per cow is about right.

Sources of Nutrients Compared

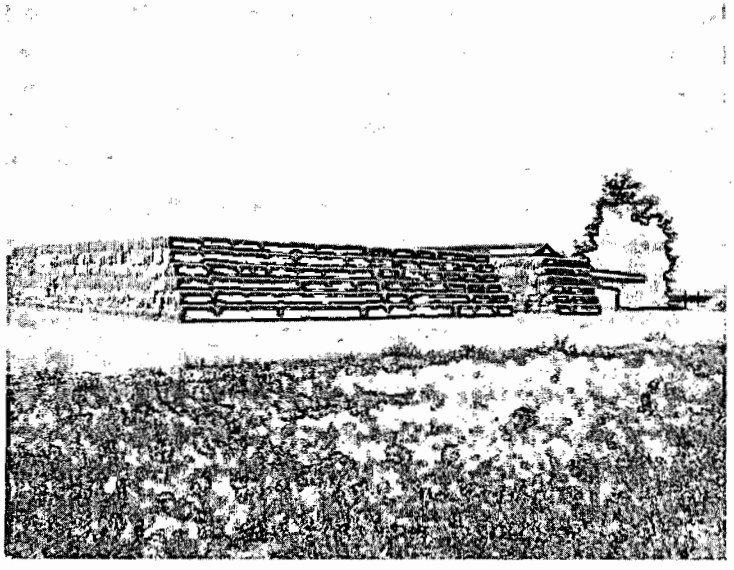
It should be of interest to note the difference in cost of 100 pounds of total digestible nutrients in various types of feed. The term "Total Digestible Nutrients" (TDN) refers to that part of any feed which the animal can digest and use. Dairymen have a choice as to the type of feed to use and the cost of TDN in the ration as shown below.



FIRST

100 pounds of TDN from pasture cost

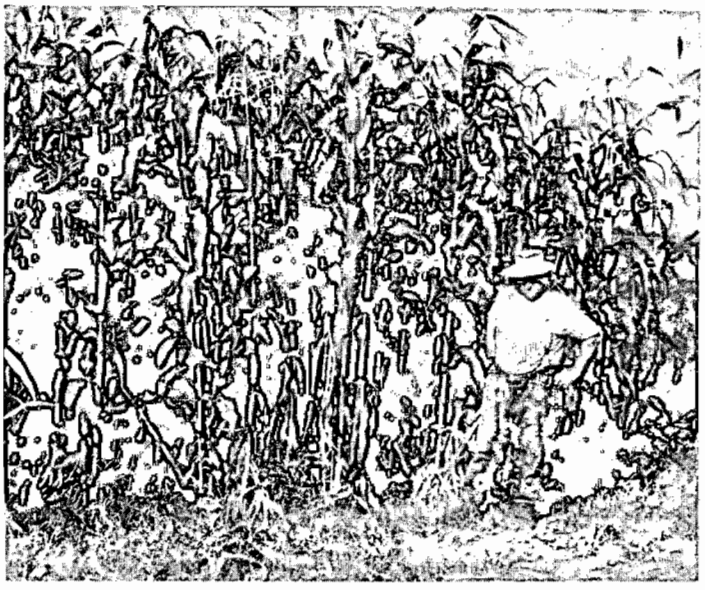
$1.61



SECOND

100 pounds of TDN from alfalfa hay cost

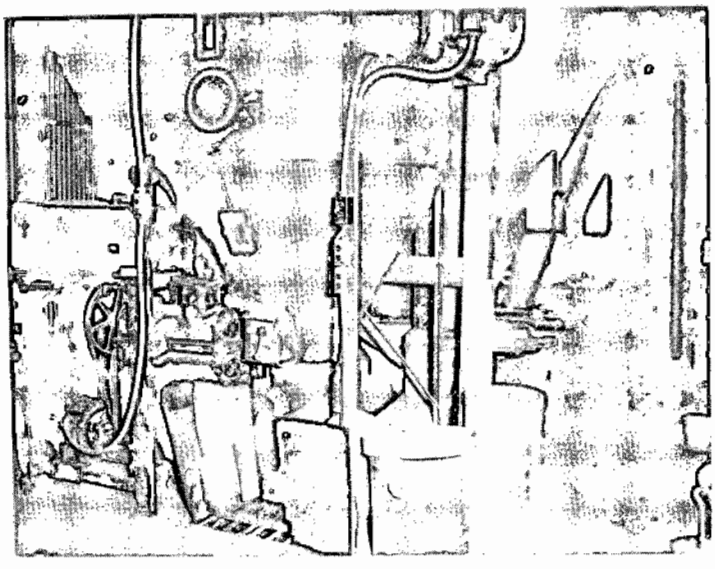
$2.63



THIRD

100 pounds of TDN from silage cost

$3.06



FOURTH

100 pounds of TDN from concentrates cost

$5.49

Our 1948 records indicate that a dairyman should use, (1) a maximum of pasture; (2) alfalfa hay; (3) silage; (4) as much concentrates as the better cows can use economically. Always feed cows according to production.

Grade A Dairying

The production of Grade "A" or market milk requires more expensive facilities for the production to meet the high sanitary and quality standards for the product. Milking barns, milkhouse and refrigeration for cooling result in a higher investment. The demand for such milk being rather even throughout the year also requires more expensive feeding and care to maintain stable production at all times.

The following table shows the average inputs and costs on 13 Stanislaus County Grade "A" dairies for 1948 as obtained by supervised records in our dairy enterprise management study. These figures apply only to 1948 and the dairies covered and are not county averages.

Market Milk Dairy Records for 1948

	Quantity per cow	Unit price	Cost or value per cow	per lb. B. F.	Per cwt. milk	% of total cost
Hay	4.3 T.	$26.82	$116.41	31.7¢	$1.36	25.8
Concentrates	1.1 T.	82.20	94.58	25.8	1.10	21.0
Silage and green feed	2.3 T.	8.02	18.41	5.0	.21	4.1
Pasture	8.8 AU Mo.	6.52	57.16	15.6	.66	12.7
Total feed cost			286.56	78.1	3.33	63.6
Hired labor	74.3	.98	72.90	19.9	.85	16.2
Operator and family labor	24.4	1.00	24.41	6.6	.28	5.4
Miscellaneous, taxes, etc.			32.66	8.9	.38	7.2
Depreciation, dairy bldg. & equipment			12.67	3.5	.15	2.8
Interest on investment @ 5%			21.82	5.9	.26	4.8
Total expense			451.02	122.9	5.25	100.0
Less income not milk			49.46	13.5	.57	
Net cost of milk			401.56	109.4	4.68	
Milk sold lb. B.F.	367.1	1.26	462.00	125.9	5.38	
Management income			60.44	16.5	.70	
Net farm income			106.67	29.1	1.24	

Manufacturing Milk Dairying in Stanislaus County

Manufacturing milk production requires less investment, labor and attention to quality factors, hence has a lower cost of production. It is not so important to maintain even production through the year. It is possible and profitable, however, in this county to freshen a considerable portion of the cows in the fall in order to obtain more of the year's production in those months when manufacturing milk prices are higher.

The following table shows costs on 16 manufacturing milk dairies in our dairy management studies for 1948. Although these dairies were smaller and perhaps less efficient than the market milk dairies as shown by lower production and management incomes per cow, they did have higher net farm incomes because of the larger extent to which the operators worked in the enterprise. Feed costs are now below those of last year, so the good dairyman may still make fair earnings from manufacturing milk production.

Manufacturing Milk Dairy Records for 1948

	Quantity per cow	Unit price	Cost or value per cow	Per lb. B.F.	Per cwt. milk	% of Total cost
Hay	4.7 T.	$24.68	$115.49	34.0¢	$1.58	29.6
Concentrates	1.0 T.	80.80	77.87	22.9	1.07	19.9
Silage and green feed	2.4 T.	6.59	13.35	4.0	.19	3.4
Pasture	6.3 AU Mo.	6.18	38.79	11.4	.53	9.9
Total feed cost			245.50	72.3	3.37	62.8
Hired labor	10.7	1.00	10.64	3.1	.14	2.7
Operator's labor	81.2	1.00	81.20	23.9	1.11	20.8
Miscellaneous, taxes, etc.			24.01	7.1	.33	6.1
Depreciation, dairy bldg. and equipment			6.96	2.0	.10	1.8
Interest on investment at 5%			22.64	6.7	.31	5.8
Total expense			390.95	115.1	5.36	100.0
Less income not milk			65.81	19.4	.90	
Net cost of milk fat sold			325.14	95.7	4.46	
Milk sold lb. B.F.	339.7	$1.06	358.50	105.5	4.92	
Management income			33.36	9.8	.46	
Net farm income			137.20	40.4	1.88	

Currently manufacturing milk prices are considerably below market milk prices so Grade "A" milk production is more profitable. But with market milk demands already met by those in that business, there are few opportunities to shift from manufacturing milk production. Manufacturing milk production to show a profit at current low prices will have to be efficient and at low cost.

Main Profit Factors in Dairying

MANAGEMENT DOES IT. It may take a few years to build up a good herd with good production and earnings like the top half of the dairies in each group below -- but -- it CAN be done by Testing, Culling, Breeding and Feeding.

Profit in the dairy enterprise is determined as follows:
1. Pounds of milk fat sold per cow times average price per pound plus the stock and miscellaneous income equals total income per cow.
2. Total income less total costs per cow equals profit.

Hence, the main profit factors:
1. Production per cow
2. Price of milk fat (or milk)
3. Net stock income (from stock raised)
4. Total cost per cow

See below how these operated in 29 individual dairies in 1948.

Main Profit Factors in Individual Dairies in 1948

	Ser. no.	Lbs. fat sold per cow	Av. price Per lb. fat	Av. price Per cwt. milk	Milk sales	Stock & misc. income	Total income	Total expense	Management income	Net farm income
					Dollars per average cow					
	1	412	1.17	7.04	483.44	164.96	648.40	443.67	204.73	262.31
	2	413	1.15	5.61	474.37	37.20	511.57	340.55	171.02	221.61
	3	451	1.27	5.83	573.55	50.06	623.61	498.63	124.98	255.99
	4	342	1.22	5.79	418.50	35.52	454.02	337.76	116.26	216.46
Thirteen										
Grade A	5	394	1.27	5.89	501.46	23.65	525.11	410.13	114.98	225.79
or	6	389	1.26	5.52	489.58	40.56	530.14	417.28	112.86	139.40
Market	7	407	1.28	5.04	521.14	48.66	569.80	460.09	109.71	199.65
Milk	8	356	1.25	4.44	444.21	147.94	592.15	490.99	101.16	135.61
Dairies										
	9	352	1.23	5.76	432.30	63.01	495.31	435.20	60.11	181.77
	10	336	1.26	5.02	423.05	31.99	455.04	451.15	3.89	73.08
	11	352	1.24	5.71	435.50	56.61	492.11	493.82	-1.71	58.48
	12	341	1.26	5.81	430.00	10.92	440.92	445.04	-4.12	16.16
	13	340	1.30	5.12	440.76	23.09	463.85	488.13	-24.28	-3.77
	Av. A	367	1.26	5.38	462.00	49.46	511.46	451.02	60.44	106.67
	20	349	1.05	5.12	364.37	104.20	468.57	338.37	130.20	163.27
	21	418	1.05	5.22	437.95	92.26	530.21	424.67	105.54	210.12
	22	371	1.04	4.29	386.57	113.24	499.81	408.91	90.90	208.42
	23	293	1.08	5.25	316.35	8.96	325.31	260.20	65.11	137.64
	24	416	1.06	5.18	442.07	48.95	491.02	435.97	55.05	175.11
	25	325	1.06	4.55	343.56	65.84	409.40	392.12	17.28	144.17
Sixteen	26	307	1.07	4.96	328.17	55.13	383.30	367.39	15.91	118.18
Manufac-	27	367	1.06	5.32	386.83	87.38	474.21	459.39	14.82	165.39
turing										
Milk	28	336	1.08	5.31	363.72	54.09	417.81	408.75	9.06	124.41
Dairies	29	388	1.06	5.98	415.83	75.24	491.07	487.69	3.38	168.38
	30	425	1.04	5.58	439.23	72.92	512.15	512.46	-.31	135.46
	31	316	1.04	4.63	328.11	41.25	369.36	387.01	-17.65	64.18
	32	314	1.05	4.01	331.09	80.95	412.04	444.12	-32.08	162.02
	33	311	1.04	3.47	323.23	85.16	408.39	443.51	-35.12	68.40
	34	246	1.10	4.87	271.28	17.05	288.33	327.11	-38.78	72.30
	35	202	1.00	4.48	202.96	42.87	245.83	355.03	-109.20	4.76
	Av. B	340	1.06	4.92	358.50	65.81	424.31	390.95	33.36	137.20