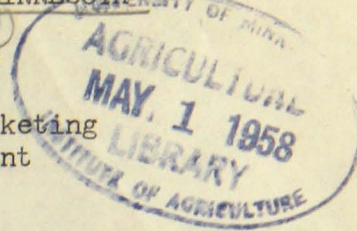


The Dairy Situation - Highlights

W. H. Dankers, Extension Economist - Marketing  
 F. L. Olson, Extension Marketing Assistant



A. Trends in Milk Production - U. S.

Year	Number of Milk Cows on Farms January 1 (million)	Production per Milk Cow		Total Milk Production on Farms		Milk Consumption Per Capita (lbs.)
		Milk (lbs.)	Milkfat (lbs.)	Total (bil. lbs.)	Per Capita (lbs.)	
1925-29	22.4	4437	174	94.7	797	798
1930-34	24.9	4497	169	102.6	823	812
1935-39	25.0	4403	174	103.7	803	791
1940-44	26.3	4653	185	115.4	854	782
1945-49	25.7	4999	198	116.6	809	750
1950-54	23.6	5444	213	117.7	749	700
1954	23.9	5657	219	122.1	752	691
1955	23.5	5810	224	123.1	745	700
1956	23.2	6006	233	125.7	748	708
1957	23.0*			(129.0)	(754)	

\* Lowest figure since 1929

- Note: 1. The number of cows on farms declined from 1945 to 1952. Then it increased until 1954 and decreased again during the last three years.
2. The increase in total production of milk was due largely to a steady increase in production per cow.
3. Although there has been a steady increase in milk production per cow, the average is still much too low for efficient milk production.
4. Milk production is expected to be 3 billion pounds larger in 1957 than in 1956. This expected increase in milk production is greater than the expected increase in population.

B. Trends in Utilization of Milk Fat - U. S.

Year	Fluid Milk	Fluid Cream	Butter	All Wholesale Cheese	Evaporated and Cond. Milk	Ice Cream	Other (Dried Wholemilk, Dried Cream, etc.)	Total
							Percent of the total milkfat in milk used in each product	
1925-29	33.8	8.5	44.9	5.8	3.3	3.0	0.7	100.0
1935-39	33.4	8.3	42.6	7.0	4.6	3.2	0.9	100.0
1940-44	37.5	7.8	36.8	7.0	5.0	4.2	1.7	100.0
1945-49	41.3	8.2	28.0	9.1	5.6	6.3	1.5	100.0
1950-54	42.8	7.2	25.9	10.6	5.5	6.6	1.4	100.0
1954	43.6	6.8	25.0	11.3	5.2	6.8	1.3	100.0
1955	43.6	6.7	25.3	11.0	5.0	6.9	1.5	100.0
1956								

This archival publication may not reflect current scientific knowledge or recommendations. Current information available from University of Minnesota Extension: <http://www.extension.umn.edu>

- Note: 1. The figures in this table are based on milkfat in milk. Consequently, this table does not indicate changes in the utilization of non-fat solids in such products as cottage cheese and fluid and dried non-fat milk.
2. There have been substantial increases over a period of years in the percent of the total supply of milkfat used in ice cream, cheese, and fluid milk.
3. There has been a drastic decline in the percent of total milkfat used in butter, to a low point of about 25 percent.

C. Trends in Consumption of Dairy Products - U. S.

1. Per capita consumption of various dairy products

Year	Fluid Milk and Cream	Evap. and Cond. Milk	Dry Whole-milk	Dry Non-fat Milk	Ice Cream (milk equiv.)	Cheese	Butter	Margarine
				(pounds)				
1935-39	330	16.5	0.1	1.9	24.6	5.5	16.8	2.8
1940-44	354	17.9	0.2	2.9	36.0	5.5	14.3	3.1
1945-49	373	19.1	0.4	2.9	47.1	6.8	10.5	4.9
1950-54	350	17.8	0.3	4.3	46.0	7.5	9.2	7.3
1954	348	16.5	0.2	5.1*	47.0	7.8*	8.7*	8.4
1955	352	15.9	0.2	5.3*	49.0	7.7*	8.9*	8.0
1956	356	15.7	0.3	5.7	48.8	7.8	9.0	8.0

\* When domestic donations are excluded, the totals are:

	<u>Dry nonfat-milk</u>	<u>Cheese</u>	<u>Butter</u>
1954	4.8	7.4	8.1
1955	4.8	7.2	8.2

- Note: 1. Per capita consumption of fluid milk and cream was low during 1935-39. It reached a peak during 1945-49, but since 1950 has changed only slightly around the 350 pound mark.
2. After a long period of decline in butter consumption, there was a slight increase during the last few years. However, some of the increase resulted from the "give away" program - butter given to public institutions.
3. There has been a relatively large increase in per capita consumption of non-fat dry milk. Nevertheless, during the last several years the available supply has been nearly double the amount used for human consumption.

2. Per Capita consumption of total milk fat and non-fat solids

Year	Consumption of Milk fat	Consumption of Non-fat Milk Solids (pounds)	Consumption of Total Milk Solids
1925-29	31.3	37.7	69.0
1935-39	31.2	39.6	70.8
1945-49	29.9	47.8	77.7
1950-54	27.5	47.3	74.8
1954	26.7	48.2	74.9
1955	27.0	49.3	76.3
1956	27.4	49.5	76.9
1956 compared with the 1935-39 period	-3.8	+9.9	+6.1
1956 compared with the 1945-49 period	-2.5	+1.7	-0.8

- Note: 1. There was a continuous decline in per capita consumption of milkfat (total fat consumed in all dairy products) to a low point in 1953, then an increase of 1.0 pounds from 1953 to 1956. Most of the increase in milk fat consumption during the last few years was the result of "government give away" programs.
2. There was a rapid upswing in per capita consumption of non-fat milk solids until it reached the peak of 50.3 pounds in 1946. It dropped sharply during the next few years. Since the early 50's it has been rising slowly. With the substantial shift from the sale of cream to the sale of wholemilk from farms, the supply of total non-fat milk solids has been considerably in excess of the volume required for domestic human consumption during the last several years.
3. The consumption of total milk solids (fat and non-fat) is considerably higher than in earlier periods, lower than in the immediate post-war period, and has increased slightly during the last several years.

D. Government Purchases of Dairy Products

Year	BUTTER			CHEESE			NON-FAT DRY MILK		
	Production (million pounds)	CCC Purchases (Million Pounds)	% of Production	Production (million pounds)	CCC Purchases (Million Pounds)	% of Production	Production (million pounds)	CCC Purchases (Million Pounds)	% of Production
1952	1,188	16	1.3	851	3	0.4	863	51	5.9
1953	1,412	359	25.4	1,022	291	28.5	1,214	587	48.4
1954	1,449	320	22.1	1,045	275	26.3	1,402	651	46.4
1955	1,386	162	11.7	1,003	150	15.0	1,410	556	39.4
1956	1,409	165	11.7	1,007	188	18.7	1,484	754	50.8

Note: CCC purchases of butter, cheese and non-fat dry milk constituted a smaller percentage of total production in 1955 than in the two earlier years. However, there was a slight increase in government purchases from 1955 to 1956.

E. Disposal of Dairy Products Purchased Under the Price Support Program

Year beginning April 1	Purchased by CCC	DISPOSAL			Uncommitted Supply - end of period	
		Domestic	Foreign	Total	Quantity	Percent of Year's Purchases
Million pounds						
<u>BUTTER</u>						
1952	143.3	20.9	-	20.9	122.5	85
1953	375.0 / <u>1</u>	93.3	45.8	139.1	359.0	96
1954	210.5	164.2	170.5	334.7	236.6	112
1955	177.6	150.4	263.7	414.1	0.0	0
1956 / <u>2</u>	115.1	88.0	27.1	115.1	0.0 / <u>3</u>	0
<u>AMERICAN CHEESE</u>						
1952	75.2	1.1	-	1.1	74.2	99
1953	369.4 / <u>1</u>	31.7	22.6	54.3	390.0	106
1954	153.4	123.1	90.8	213.9	328.6	214
1955	157.4	92.5	165.3	257.8	228.2	145
1956 / <u>2</u>	151.4	104.8	128.8	233.6	146.1 / <u>3</u>	96
<u>NONFAT DRY MILK</u>						
1952	210.4	20.5	47.4	67.9	169.3	80
1953	665.9	11.8	227.6	239.4	598.8	90
1954	523.2	659.6	374.2	1033.8	86.3	16
1955	623.7	106.2	558.1	664.3	46.4	7
1956 / <u>2</u>	576.1	161.8	429.2	591.0	31.6 / <u>3</u>	5

/1 Excludes 5,137,000 pounds of butter and 83,083,000 pounds of cheese purchased in March for resale in April.

/2 April - December, 1956

/3 December 31, 1956

- Note: 1. The major portion of the 1954 CCC supply of nonfat dry milk was moved into animal feed channels.
2. The disposal of cheese did not keep pace with the purchase under the price support program in the earlier years. The uncommitted supplies at the end of 1954 and 1955 amounted to over one-fifth of a year's production of cheese. However, in 1954, 1955, and 1956 disposals exceeded purchases.

F. Donations - A Substantial Proportion of CCC Supplies Was Given Away

Year Beginning April 1	Total Disposal by CCC Million pounds	DONATIONS	
		Quantity Million pounds	Percent of Total Disposal
<u>BUTTER</u>			
1952	20.9	-	-
1953	139.1	45.8	33
1954	334.7	249.5	75
1955	414.1	317.1	77
1956*	<u>115.1</u>	<u>57.9</u>	<u>50</u>
Total to date	1,023.9	670.3	65
<u>AMERICAN CHEESE</u>			
1952	1.1	-	-
1953	54.3	22.1	41
1954	213.9	159.7	75
1955	257.8	193.4	75
1956*	<u>233.6</u>	<u>192.6</u>	<u>82</u>
Total to date	760.7	567.8	75
<u>NONFAT DRY MILK</u>			
1952	67.9	-	-
1953	239.4	90.9	38
1954	1,033.8	331.0	32
1955	664.3	428.4	64
1956*	<u>591.0</u>	<u>425.3</u>	<u>72</u>
Total to date	2,596.4	1,275.6	49

\* April - December, 1956

Note: 1. The amounts listed in the table above include only "total give away". Some CCC supplies were sold under the "two price plan" at a price to foreign buyers considerably below the government support prices.

2. About two-thirds of the butter, three-fourths of the cheese, and almost one-half of the non-fat dry milk which was disposed of by CCC was donated to domestic and foreign groups.

G. Non-fat Dry Milk For Animal Feed

Year beginning April 1	Domestic Disposal		Percent of total for Domestic Animal Feed percent
	Total	For Animal Feed	
	million pounds		
1952	20.5	5.2	25
1953	11.8	2.1	18
1954	659.6	581.4	88
1955	106.2	18.4	17
1956*	<u>161.8</u>	<u>47.6</u>	<u>29</u>
Total to date	959.9	654.7	68

\* April - December, 1956

Note: Over two-thirds of all the CCC non-fat milk powder which was disposed of domestically from 1952 to date went into animal feed.

H. Butter and Margarine - Consumption and Prices

Year	Per Capita Consumption - U. S.				Retail Prices		Ratio of butter and margarine prices
	Butter	Margarine	Butter and Margarine	Ratio of butter and margarine consumption	Butter	Margarine	
	(pounds)				(cents)		
1925-29	17.7	2.4	20.1	7.38	55.5	28.6	1.9
1935-39	16.8	2.8	19.6	6.00	36.7	18.1	2.0
1945-49	10.5	4.9	15.4	2.14	72.3	33.1	2.2
1950-54	9.2	7.3	16.5	1.26	78.3	30.9	2.5
1953	8.4*	7.9	16.3	1.06	79.0	29.4	2.7
1954	8.7*	8.4	17.1	1.04	72.4	29.9	2.4
1955	8.9*	8.0	16.9	1.11	70.9	28.9	2.5
1956	9.0	8.0	17.0	1.12	71.7	28.9	2.5

\* When domestic donations are excluded, the totals in 1953, 1954 and 1955 were 8.1, 8.1 and 8.2 pounds respectively.

- Note:
1. The milkfat problem is largely the result of changes in the pattern of fat consumption. The total per capita consumption of butter and margarine has remained fairly constant over a considerable period of time, however, the proportion of margarine consumed increased steadily until 1954.
  2. The per capita consumption of margarine is almost equal to butter.
  3. For a long period of years the ratio of butter prices to margarine prices was very close to 2 to 1. In the early 50's the ratio started rising, and reached an all time high in 1952. When the ratio was at an all time high in 1952 and 1953, butter consumption dropped to an all time low. There was a drop in the price ratio from 1953 to 1954 and 1955, and a slight increase in the consumption of butter, even if the government sales at reduced prices and donations to public institutions are excluded.

I. Composition of Margarine - U. S. Production

Year	Animal Fat	Foreign Oil (mostly coconut)	Cottonseed Oil (percent)	Soybean Oil	Other	Total of all Fats and Oils
1925-29	34.1	52.9	11.1	-	1.8	100.0
1930-34	17.2	68.4	12.3	0.2	1.8	100.0
1935-39	7.2	39.0	41.0	11.4	1.4	100.0
1940-44	8.7	5.0	47.8	35.7	2.8	100.0
1945-49	2.0	1.5	55.0	38.7	2.8	100.0
1950	1.6	-	56.3	40.1	2.0	100.0
1951	1.3	-	39.1	55.5	4.1	100.0
1952	1.1	-	33.8	62.2	2.9	100.0
1953	2.0	-	26.2	69.2	2.6	100.0
1954	1.5	-	35.9	60.1	2.5	100.0
1955	2.0	-	25.9	69.4	2.7	100.0

Note: 1. All of the fat and oil now used in margarine comes from domestic sources and 98 percent comes from vegetable oils.

2. Margarine did not contain any soybean oil in the early period of 1925-29. In 1955 over two-thirds of the total ingredients in margarine was soybean oil. The mid-west states have become the main sources of supply for the production of margarine.

J. Soybean Production - U. S. and Minnesota

Year	United States		Percent of U. S. Total Produced in Minnesota (percent)	Index of Production (1945-49 = 100)	
	(million bushels)	Minnesota		United States	Minnesota
1935-39	56.1	0.2	0.4	27	2
1940-44	151.0	2.6	1.7	72	21
1945-49	208.9	12.3	5.9	100	100
1950-54	298.0	25.7	8.6	143	209
1954	341.6	42.3	12.3	164	343
1955	371.1	43.9	11.8	178	357
1956	461.9	55.8	12.1	221	453

Note: 1. There has been a substantial increase in the production of soybeans in the United States and especially in the middle west since the early 40's. U. S. production in 1956 was 121 percent higher than the average annual production during 1945-49. For the same period, Minnesota had an increase of 353 percent in soybean production.

2. Illinois is the top ranking state in soybean production followed by Indiana, Minnesota, Iowa, Missouri and Ohio.

3. The percent of the total United States supply of soybeans produced in Minnesota had increased substantially. In 1954, 1955 and 1956 it was about 12 percent of the total U. S. production.



## K. Soybean Oil and Milkfat Production - U. S. and Minnesota

Year	Milk Production	Milkfat Production	Soybean Oil Production	Ratio of Soybean Oil to Milkfat
(million pounds)				
<u>UNITED STATES</u>				
1935-39	103,656	3,835	561	.15
1940-44	115,415	4,270	1,510	.35
1945-49	116,623	4,315	2,089	.48
1950-54	117,654	4,353	2,980	.68
1954	122,094	4,517	3,416	.76
1955	123,128	4,556	3,711	.81
1956	125,698	4,651	4,619	.99
<u>MINNESOTA</u>				
1935-39	7,822	282	2	.06
1940-44	8,685	313	26	.08
1945-49	8,402	302	123	.41
1950-54	8,260	297	257	.87
1954	8,615	310	423	1.36
1955	8,833	318	439	1.38
1956	9,376	338	558	1.65

- Note: 1. The average milkfat tests were used in calculating the total production of milkfat, namely, 3.7% for the United States and 3.6% for Minnesota. An average yield of 10 pounds of oil per bushel of beans was used in calculating total production of soybean oil.
2. During 1935-39 about  $1\frac{1}{2}$  pounds of soybean oil was produced in the United States for each 10 pounds of milkfat. In 1956 it is almost 10 pounds of soybean oil for each 10 pounds of milkfat.
3. During 1935-39 less than 1 pound of soybean oil was produced in Minnesota for each 10 pounds of milkfat. In 1956 it is over 16 pounds of soybean oil for each 10 pounds of milkfat.
4. A large percent of the total supply of soybean oil is used in food products. Because soybean production has increased greatly, Minnesota now moves a large volume of soybean oil into food channels.