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NATIONAL SOIL RECORDS

A DECADE OF CHANGE  
IN THE  
DAIRY INDUSTRY  
1950-1960

United States Department of Agriculture

ERS-44

NOVEMBER 1961

Civilian consumption from CCC supplies or bought wholly or partly with Government funds -- 1950-61

Year	Fluid milk <sup>1/</sup>		Butter	American cheese	Nonfat dry milk
	National School Lunch	Special milk			
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
1950	642	---	51	25	32
1951	698	---	---	17	16
1952	776	---	---	14	21
1953	820	---	55	23	17
1954	893	49	93	62	50
1955	933	489	112	90	90
1956	927	840	115	108	101
1957	967	984	65	100	114
1958	1,039	1,108	130	143	154
1959	1,103	1,210	116	44	161
1960	1,166	1,304	84	28	134
1961 <sup>2/</sup>	1,200	1,300	168	40	238

As a percentage of total consumption					
	Pct.	Pct.	Pct.	Pct.	Pct.
1950	1.2	---	3.2	3.0	5.8
1951	1.3	---	---	2.2	2.5
1952	1.4	---	---	1.7	3.0
1953	1.5	---	4.1	2.9	2.6
1954	1.6	0.1	6.6	7.1	7.0
1955	1.6	.9	7.7	10.3	10.1
1956	1.6	1.5	8.0	12.0	11.7
1957	1.7	1.7	4.6	11.6	12.7
1958	1.8	1.9	9.2	15.2	16.1
1959	1.9	2.1	8.5	4.9	15.0
1960	2.0	2.3	6.3	2.9	12.1
1961 <sup>2/</sup>	2.1	2.3	12.4	3.8	19.5

<sup>1/</sup> Recipients have paid part of cost.

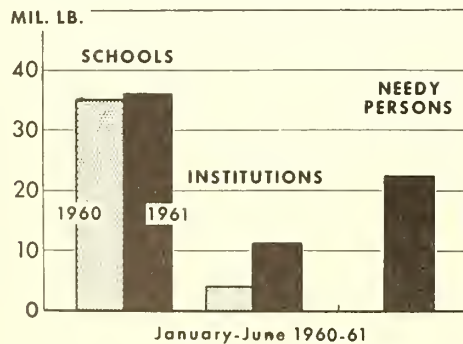
<sup>2/</sup> Partly forecast.

During periods when milk supplies exceed quantities that can be sold at prevailing market prices, there is interest in seeking noncommercial outlets, first domestically and then overseas. Some of these outlets, which were initiated as a means of handling supplies that were temporarily in excess, have become regular programs because they were considered to be worthwhile in themselves.

Direct distributions of dairy products from supplies acquired by the CCC under the price support program have added substantial quantities to domestic consumption. Large quantities of cheese were distributed between 1955 and 1958, and for butter and nonfat dry milk CCC donations have been substantial in most years since 1953. The table on the left shows the quantities of butter, cheese and nonfat dry milk that have been effectively used in distribution programs in the past.

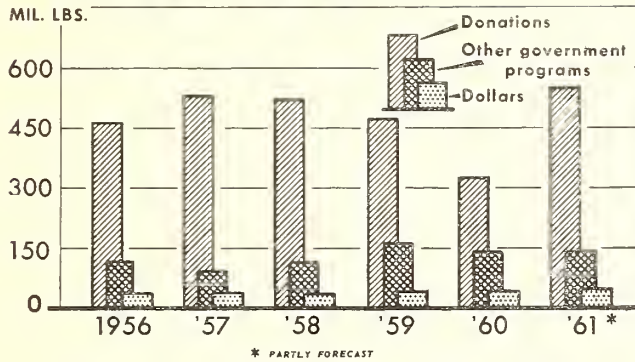
Under the Special Milk Program, schools and nonprofit child care institutions serving fluid milk are partially reimbursed for the cost of milk served.

**NEEDY PERSONS RECEIVE LARGE QUANTITIES OF BUTTER IN FIRST HALF OF 1961**



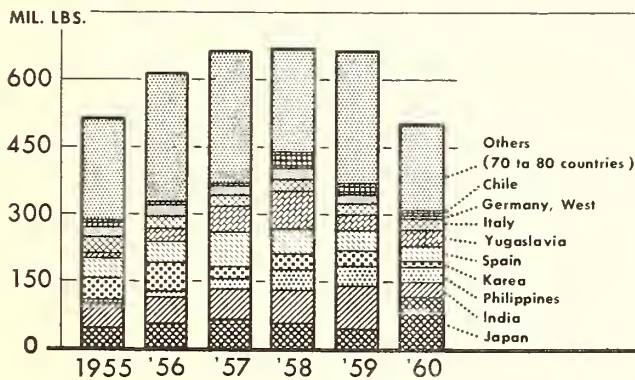
In carrying out the domestic distribution programs, priority has generally been given to schools and institutions. Needy persons usually become eligible for CCC acquired dairy products only when the needs of these two outlets are satisfied. Therefore, donations to needy persons through welfare agencies is the volatile element in the distribution picture. Welfare agencies have already distributed substantial quantities of butter in the first half of this year; in 1960 this outlet received no butter. In 1962, needy persons will probably receive more butter and nonfat dry milk and larger quantities of cheese than in 1961.

### Donations Account for Bulk of U. S. Nonfat Dry Milk Exports



Since 1954, the excess of solids-not-fat over domestic requirements has been large. This has permitted the export of large quantities of nonfat dry milk abroad under Government programs, particularly P.L. 480. Essentially, all U.S. exports of nonfat dry milk are financed, in whole or in part, by the Government, and the bulk of them are donated to foreign countries. Large supplies of CCC butter in prospect for 1962 may permit substantial exports of butter under Government programs for the first time since 1956.

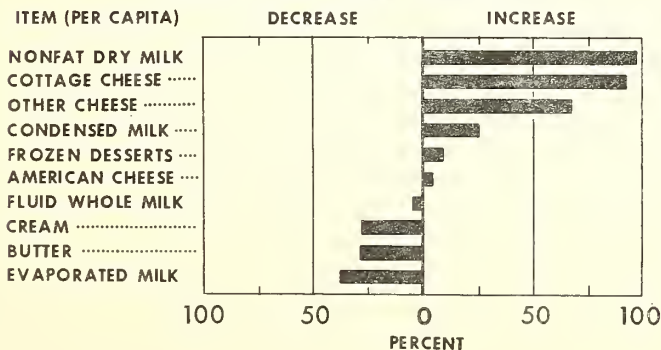
### Japan and India Big Outlets for U. S. Nonfat Dry Milk



In recent years, the United States has exported nonfat dry milk to 70 to 80 foreign countries. Shipments to India and Japan have been particularly large. There has been considerable variation in the annual quantities shipped to individual countries. This suggests that the potential foreign outlets for nonfat dry milk may be greater than the quantities actually shipped.

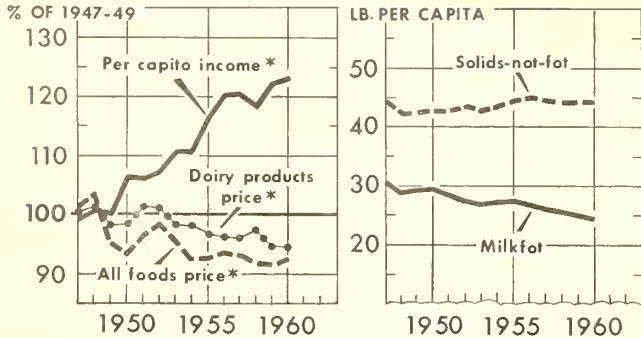
### Consumers Shift to Dairy Products Rich in Solids-Not-Fat

Change From 1947-49 to 1960



The demand for a number of dairy products, particularly some high in fat, has declined despite rising incomes. However, the use of products which are heavy carriers of solids-not-fat enjoyed a substantial rise. Increasing competition from foods made with low-priced vegetable oils, and a desire on the part of consumers to restrict their intake of certain fats, have been the principal reasons.

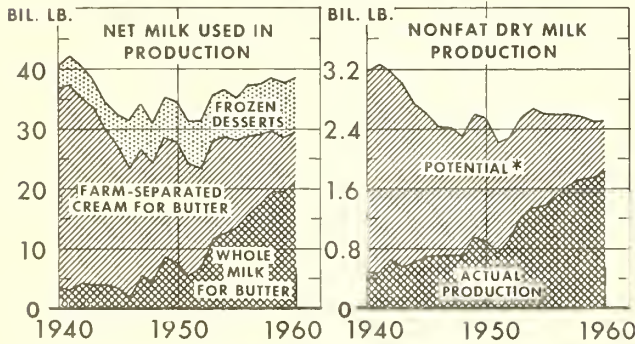
### Use of Solids-Not-Fat Levels Off; Milkfat Continues Decline



\* DEFLATED BY CONSUMER PRICE INDEX.

Changes in the individual dairy products used by consumers have been reflected in divergent trends in total consumption when measured in terms of milk solids. On a per capita basis, the milkfat consumed amounted to 29½ pounds in 1947-49, compared with only 24 pounds estimated for 1961. In terms of solids-not-fat, however, per capita consumption has been unusually stable over the last decade at close to 44 pounds.

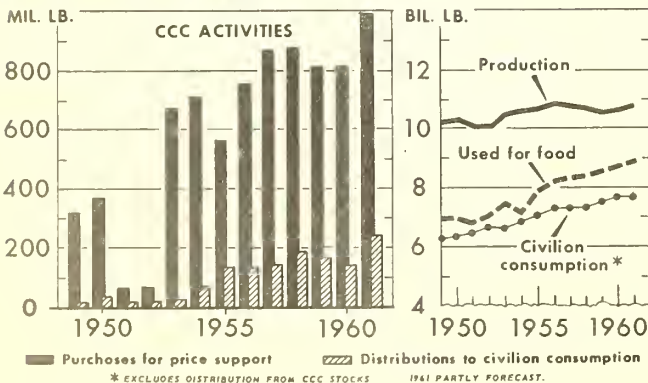
### NONFAT DRY-MILK OUTPUT AND MILK USED IN CREAMERY BUTTER AND FROZEN DESSERTS



\* ASSUMES ALL FARM-SEPARATED CREAM SOLD AS WHOLE MILK.

About two decades ago, nearly all creamery butter was made from cream that was separated on the farm. The skim milk left over from this separation process was used primarily as an animal feed, and did not enter into the commercial food supply. However, as farmers switched from selling cream to whole milk, more of the skim milk entered commercial channels. This was reflected in a sharply rising production of nonfat dry milk; a potential of 500 million pounds is still on the farm.

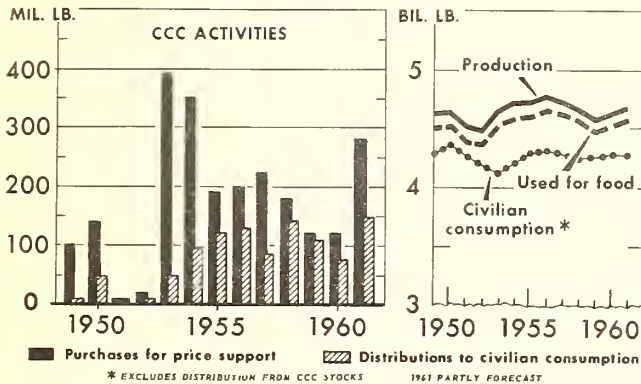
### More Milk-Solids-Not-Fat Now Used for Food



\* EXCLUDES DISTRIBUTION FROM CCC STOCKS 1961 PARTLY FORECAST.

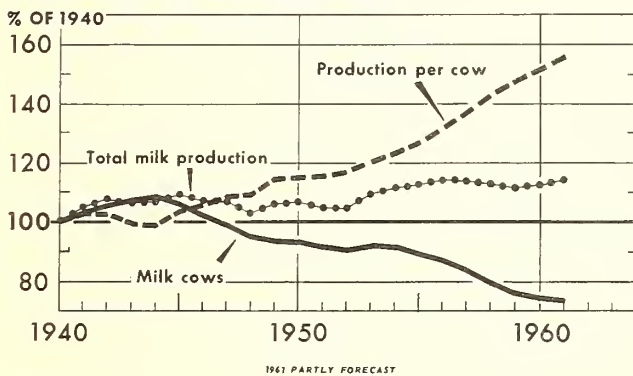
Although the production of milk solids-not-fat has increased only 4 percent between 1950 and 1960, quantities of this product coming to market increased 31 percent. However, consumption of dairy products, measured in terms of solids-not-fat, has been increasing just about as fast, the surplus of nonfat dry milk has remained relatively stable.

### Milkfat Consumption From Commercial Sources Declines



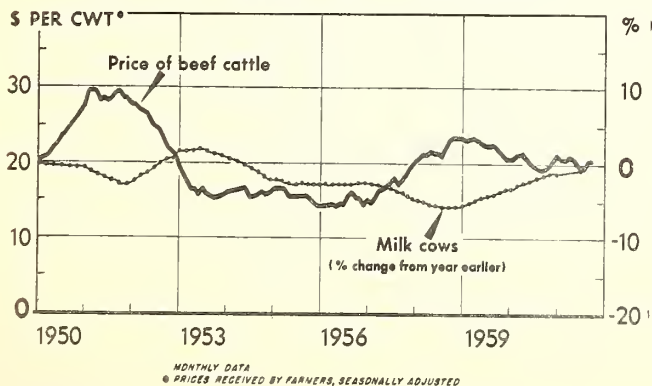
Aggregate production and consumption of milkfat over the last decade has shown little trend although consumption from commercial sources has tended to decline. During the same period, CCC acquired substantial quantities of dairy products under the price support program. In some years, quantities of dairy products acquired have been substantially larger than could be effectively used in domestic distribution programs.

### Milk Production Up; Decline in Cow Numbers Slows



After declining substantially in 1958 and 1959, the number of milk cows dropped only 2 percent in 1960 and about 1 percent this year. Because output per cow has continued to show substantial year-to-year increases, the slackening in the decline in milk cow numbers was accompanied by an increase in milk production, beginning in 1960. A greater increase in production is occurring this year, and another significant gain is in prospect for 1962.

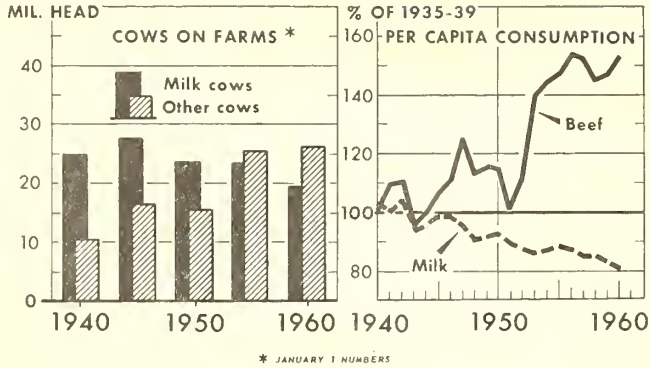
### CHANGE IN NUMBER OF MILK COWS AND PRICES OF BEEF CATTLE



The number of milk cows in the United States has declined in each year since 1944 except in 1953. In the last decade there apparently was a net transfer of resources out of dairying. Since beef farming uses many of the same resources as dairy farming, the relationship of milk prices to beef prices helps determine the rate of exodus out of dairying.

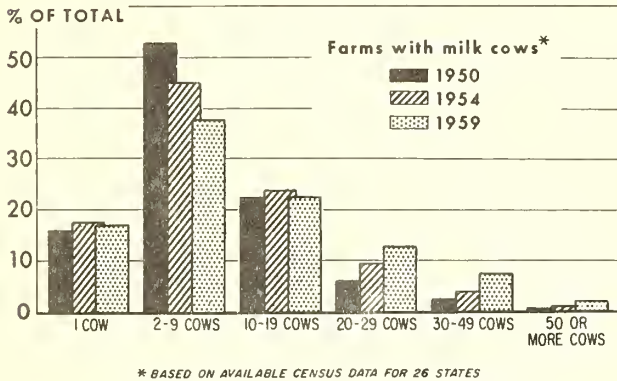


### Farm Resources Move From Milk to Beef Production



This transfer of resources from milk to beef production has occurred because the demand for beef has been increasing rapidly, particularly in the last decade, while the use of milk has been steadily drifting lower. The shift was particularly pronounced in 1958 and 1959 because of rising beef cattle prices and letup in 1960 and this year as beef prices moved down from the cyclical high in 1959.

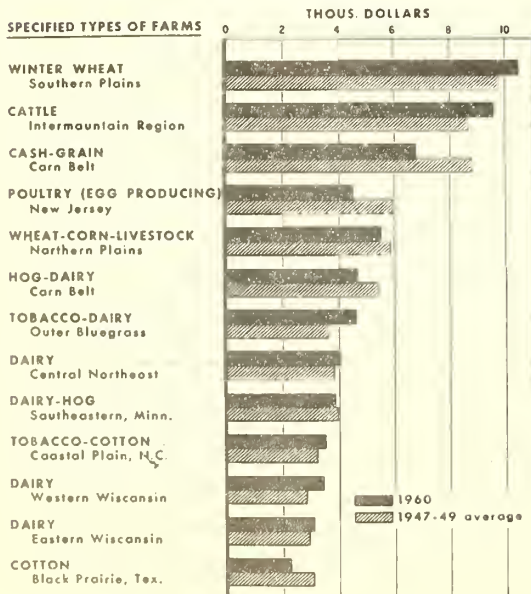
### SHARPEST DECLINE OCCURS IN FARMS WITH 2 TO 9 MILK COWS



Many farmers who have continued to produce milk have increased the size of their operations to take advantage of improvements in technology and to tap better markets. Many others have found better economic opportunities in other lines of agriculture or in nonfarm employment. The number of milk-producing farms with 2 to 9 cows declined the most. Increases occurred in the number of farms with 20-29 cows or more.

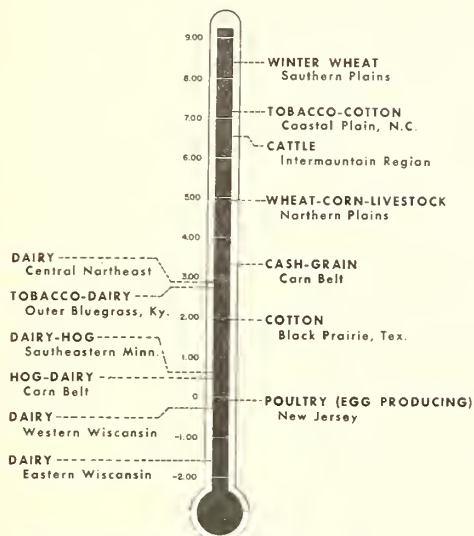
### NET FARM INCOME

1947-49 and 1960



Availability of more attractive economic opportunities is an important consideration in the exodus of farmers from dairying. Another is the mobility of milk producers or their willingness or ability to avail themselves of these opportunities. Net farm income varies considerably among the different types of commercial farms in the United States. Generally, net incomes on dairy farms are lower than they are for most other farm types.

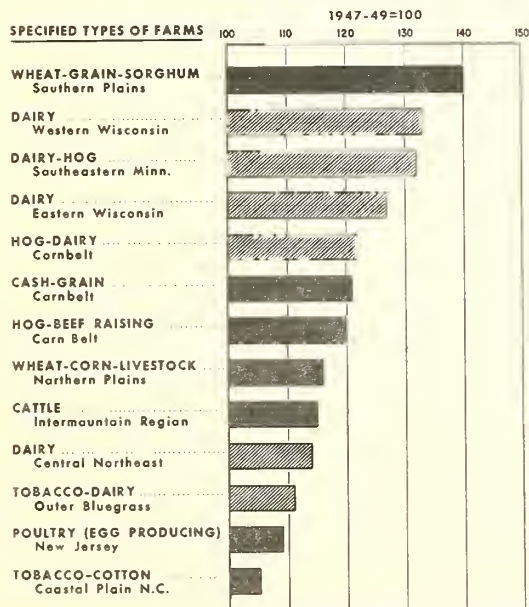
**RETURN PER \$100 INVESTED,  
SPECIFIED TYPES OF  
COMMERCIAL FARMS, 1960\***



\* OPERATOR AND FAMILY LABOR AT WAGE RATES FOR HIRED LABOR

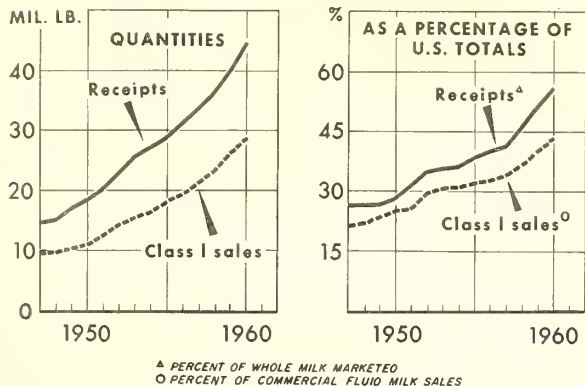
Another measure describing the position of farmers on typical farms is the return per \$100 invested. In computing these returns, operator and family labor are valued at the prevailing rate for hired labor in the area. Returns on investment in dairy farms are lower than in many other lines of agriculture because dairy farms require substantially more capital investment per dollar of net farm income.

**PRODUCTION PER UNIT OF INPUT  
1958-60 Average**



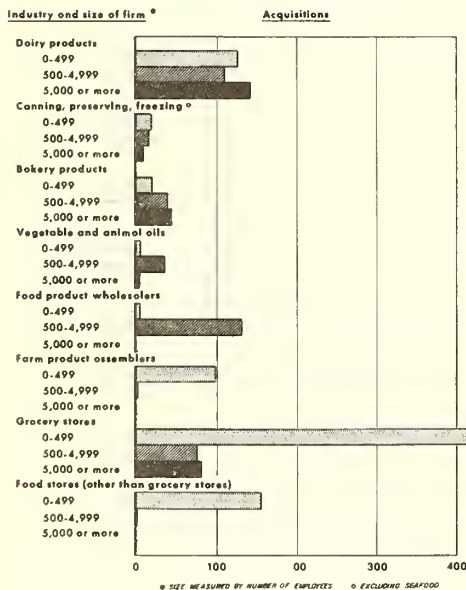
Production per unit of input has risen faster on most dairy farms than on many other farm types. The largest gains in dairy farm efficiency occurred in the Midwest. Dairy farmers have taken advantage of the new technologies in both their livestock and cropping enterprises. A substantial increase in milk production per cow since 1947-49 has accounted for a considerable proportion of this increase in efficiency.

### MILK MARKETED UNDER FEDERAL ORDERS EXPANDS RAPIDLY



The Federal milk order program has continued to expand. In the last ten years the amount of milk delivered by producers to regulated handlers has increased from 19 billion pounds to nearly 45 billion pounds, and the number of markets in which orders are in effect increased from 39 to 80. About three-fourths of the urban population is presently served by milk dealers regulated under Federal orders.

### ACQUISITIONS BY EMPLOYMENT SIZE OF ACQUIRING COMPANY



There were more mergers and acquisitions in the dairy industry between 1952 and 1958 than in five other agricultural marketing industries, but fewer than in grocery retailing. Large firms in the dairy industry (those with 5,000 or more employees) made a higher proportion of mergers and acquisitions than in any of the other industries, but acquisitions by the large companies in three other industries--canning, preserving and freezing; bakery products; and grocery stores--averaged larger in terms of number of employees than those of dairy firms.

### Fluid milk plants operated by retail store organizations, 1954 and 1958

Item	Corporate chains		Retailer co-operatives	
	1954	1958	1954	1958
Chains reporting	9	12	0	2
Number of plants	22	27	0	2
Value of shipments <sup>1/</sup> (millions of dollars)				
To own stores	---	80.8	0	9.4
To others	---	15.1	0	0.015
Total	57.5	95.9	0	9.4

<sup>1/</sup>Fluid milk and other products, including ice cream, cottage cheese.

The number of retail organizations--corporate chains and retailer co-operatives--operating fluid milk plants increased from 9 to 14 between 1954 and 1958. They operated 22 plants in 1954 and 29 in 1958. Shipments from chain-owned fluid milk plants were 1.8 percent of total shipments of bottled milk and cream by bottling plants as reported by Census in 1954 and 2.3 percent in 1958. The 3 largest chainstores did not increase their aggregate ownership of fluid milk plants in this period. The expansion was made by somewhat smaller chains.

<u>Chart</u>	<u>Negative Number</u>
Needy Persons Receive Large Quantities of Butter in First Half of 1961	ERS 641-61(10)
Donations Account for Bulk of U. S. Nonfat Dry Milk Exports	FAS 2257
Japan and India Big Outlets for U. S. Nonfat Dry Milk	FAS 2258
Consumers Shift to Dairy Products Rich in Solids-Not-Fat	ERS 426-61(8)
Use of Solids-Not-Fat Levels Off; Milkfat Continues Decline	ERS 425-61(8)
Nonfat Dry-Milk Output and Milk Used in Creamery Butter and Frozen Desserts	ERS 621-61(10)
More Milk-Solids-Not-Fat Now Used for Food	ERS 479-61(9)
Milkfat Consumption From Commercial Sources Declines	ERS 476-61(9)
Milk Production Up; Decline in Cow Numbers Slows	ERS 478-61(9)
Change in Number of Milk Cows and Prices of Beef Cattle	ERS 643-61(10)
Farm Resources Move From Milk to Beef Production	ERS 477-61(9)
Sharpest Decline Occurs in Farms with 2 to 9 Milk Cows	ERS 640-61(10)
Net Farm Income 1947-49 and 1960	ERS 635-61(10)
Return Per \$100 Invested, Specified Types of Commercial Farms, 1960	ERS 636-61(10)
Production Per Unit of Input	ERS 642-61(10)
Milk Marketed Under Federal Orders Expands Rapidly	ERS 639-61(10)
Acquisitions By Employment Size of Acquiring Company	ERS 659-61(10)











