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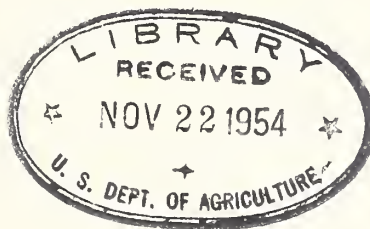
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PRODUCTION CONSIDERATIONS
IN THE DAIRY OUTLOOK

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Research Branch, Agricultural Research Service, USDA.

PRODUCTION CONSIDERATIONS IN THE DAIRY OUTLOOK

Background

Milk production on farms in the United States increased from 115 billion pounds in 1952 to 121 billion pounds in 1953, the largest increase on record for one year. The level reached in 1953 will be exceeded in 1954 when production will be about 124 billion pounds. Expansion has taken place in all regions of the country (tables 1-2).

The recent upsurge in milk production began in the late fall of 1952 and has continued into 1954. Total production was 8 percent larger in December of 1952 than in December of 1951 (table 3). Production was higher in each month of 1953 than in the corresponding month of 1952. This has also been true in 1954 as compared to 1953 until July-August when production was about the same as a year earlier.

The recent widespread expansion in milk production on farms is an abrupt departure in several regions from trends in the preceding 10 years. Total production in the country as a whole was about the same in 1952 as in 1941, 115 billion pounds. But production increased from 1941 to 1952 in most States east of the Mississippi River. It decreased in States west of the Mississippi, except in Missouri, Utah, Arizona, and California. Changes for selected States are shown below.

<u>Increases from 1941 to 1952</u>		<u>Decreases from 1941 to 1952</u>	
New York	14 percent	Illinois	9 percent
Pennsylvania	18 "	Iowa	18 "
Michigan	6 "	Minnesota	8 "
Wisconsin	12 "	North Dakota	23 "
North Carolina	17 "	Nebraska	24 "
Florida	63 "	Kansas	27 "
Kentucky	17 "	Oklahoma	32 "
Mississippi	13 "	Texas	28 "
Missouri	12 "	Montana	30 "
California	19 "	Washington	17 "

Regional shifts in the location of milk production achieved from 1941 to 1952 generally were in line with those needed as market outlets for fluid milk expanded and those for butterfat declined. In contrast, the expansion since the fall of 1952 has meant more production than markets would absorb at prevailing prices in almost all areas of the country. It occurred despite the generally declining farm prices for milk. The expansion from 1952 to 1953 was about equal to the total milk equivalent of dairy products purchased by the Department of Agriculture under price-support programs. In other words, about 115 billion pounds of milk moved into consumption in 1953, and surplus production at prevailing prices amounted to about 6 billion pounds.

Why Have We Had Surplus Production?

The expansion of milk production which began in late 1952 was not widely anticipated and even now it is difficult to explain fully. Any explanation needs to look both at the incentives that stimulated the upsurge and at the methods by which it was achieved.

Incentives

On the question of incentives it is generally agreed that dairy farmers respond to economic forces, including changing price relationships for milk and for alternative farm enterprises. But the process may require several years for completion and the response may be confused by changing technology in the production and marketing of milk and alternative products.

Production of milk increased during 1941-52 in States where markets for milk in fluid form increased with the rapid growth in population. It decreased in States in which market outlets for butterfat decreased with reductions in consumption of butter. Markets and prices for alternative products also affected milk production. For example, in States west of the Mississippi River, many farmers discontinued or curtailed dairying and put greater emphasis on beef cattle, hogs, and cash crops. However, farmers increased milk production in the specialized dairy areas where natural conditions favor production of roughage feed and more profitable alternatives were not available, and in much of the South where markets for additional fluid milk have been developing.

Some indication of the relative economic position of dairying and certain farming alternatives since 1941 is shown by the following indexes of United States farm prices:

Index numbers, 1910 - 14 = 100

<u>Item</u>	<u>1941</u>	<u>1945</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>
Dairy products	140	230	286	302	273
Poultry and eggs	120	194	228	206	221
Meat animals	143	207	409	353	298
Food grains	97	172	243	244	231
Cotton	112	178	336	310	268

Much of the recent expansion in milk production can be attributed to efforts by farmers to use their resources more fully. The dairy enterprise uses labor intensively. It is possible to obtain more gross income from a fixed quantity of feed by using it to produce milk than in most other ways. More labor is required but many farmers apparently have been willing to work longer in order to improve their incomes.

Lower prices of beef since 1952 have caused farmers to retain some cows which otherwise would have been culled. Prices of canner and cutter grade slaughter cows at Chicago declined 50 percent in 2 years, to an average of 10.7 cents per pound in 1953 as compared with 16.8 cents in 1952 and 20.9 cents in 1951.

The decline in prices of certain other farm products in recent years probably has caused some farmers to shift resources to dairying. Furthermore, the rate of feeding grain and other concentrates was increased slightly in 1953, possibly because of lower prices of feed grains as well as drought in some areas. This may account for a part of the increase in milk production per cow in 1953 and also for the further increase in 1954 when these influences were similar.

Cow Numbers

Increases in milk production can come only from more cows or from more milk per cow. The total number of milk cows on farms averaged 3 percent more in 1953 than in 1952 and a small increase is in evidence for 1954. The increase has been general throughout the country but with some notable exceptions in 1954 in several of the Western States. It is a sharp reversal from the gradual reduction in number of milk cows which had occurred in most regions in preceding years. Changes from 1941 to 1952 by regions were as follows:

<u>Decreases</u>		<u>Increase</u>	
North Atlantic	4 percent	South Atlantic	3 percent
East North Central	9 "		
West North Central	21 "		
South Central	10 "		
West	13 "		

Thus, in most Northern and Western States, numbers of milk cows on farms in 1953 and 1954 were much smaller than in earlier years, even after the increase of 3 percent from 1952 to 1953.

For several years, the number of heifers raised and kept in herds has been high in relation to the number of milk cows on hand. Therefore, it was readily possible for many farmers to increase the size of their herds. They did this in 1952 and 1953 by adding a large number of replacements from heifers and by culling at a lower rate. In 1952 and 1953 the number eliminated during the year from cows and heifers on hand at the beginning of the year was only 22 percent compared with 25 percent in 1945-50. This decrease in culling rate was equivalent to the 3-percent increase in number of milk cows from 1952 to 1953.

Except for those in drought areas many farmers have had ample supplies of roughage feeds and pasture in recent years. Labor and building space as well as feed supplies have been utilized more fully in the last year or two by keeping more cows. This has been true in most of the specialized dairy areas as well as in the less specialized dairy areas where numbers of cows were greatly reduced from 1941 to 1952.

Milk Per Cow

Milk production per cow increased 2 percent from 1952 to 1953 for the country as a whole, with almost all States showing increases. Production per cow has increased gradually in recent years. It averaged 15 percent higher in 1953 than in 1941 and a small further increase is likely in 1954. Thus, the increase in the last 2 years has been only a little higher than the average increase for preceding years.

Favorable weather at harvesttime and wider use of improved harvesting methods resulted in good quality roughage in 1952 and 1953. This was an important factor in bringing about the large increases in production per cow in late fall and winter beginning in 1952. Relatively mild weather in the fall and winter of the last 2 years also has contributed to the increase in milk production per cow. In areas affected by drought in 1953, many farmers fed larger quantities of feed concentrates which helped to maintain and in some instances increased production per cow.

Another development of some importance is a recent shift toward fall freshening of cows. This usually results in a larger total production during a lactation period. It also affects the seasonal pattern of production and it is partly responsible for the large increases in production in late fall and winter of the last 2 years.

The long-term increase in production per cow is due mainly to improvement in quality of roughage feeds, improvement in the basic productive capacity of cows, and heavier feeding of concentrates. The rate of feeding grain and other concentrates per 100 pounds of milk has changed very little, however.

Longer Time Producer Decisions

Dairy farmers are interested in the outlook for 1955, but they are perhaps even more interested in the longer time outlook. The basic nature of the dairy enterprise limits the adjustments that dairymen can make largely to those changes that are sound from a long-run point of view.

The longer run outlook is always less definite than the outlook for the year ahead. But fortunately many adjustment opportunities of dairy farmers are sound for individuals within any likely range of future conditions. For example, adjustments that reduce unit costs are generally profitable, at least in the sense that the farmer concerned is better off for having made them than he would otherwise be.

The details of cost-reduction opportunities in dairying need not be repeated here. In general, opportunities hinge on wider use of improved technology in breeding, feeding, labor utilization, and other aspects of dairy-farm management. ^{1/} These programs which, taken together, provide

^{1/} For details see "Production Adjustments in Dairying in View of the Outlook," by R. P. Christensen and M. S. Parsons, Bur. Agr. Econ. 1953. (Processed.) It was distributed at the 1953 Outlook Conference and was mailed to a number of Extension workers. Copies may be obtained from the Production Economics Research Branch, Agricultural Research Service, United States Department of Agriculture, Washington 25, D. C.

the basis for a gradual but impressive revolution in dairying, appear to offer the main hope for reducing costs and for maintaining or improving net incomes on dairy farms in 1955 and the years beyond. Most farmers have not yet made full use of available technical knowledge; they can make further adjustments during the years to improve production efficiency. The result will usually be more milk on the farm in question, and also in total unless offset by reductions on other farms where operators find better opportunities in other farm enterprises or in off-farm employment.

Table 1.- Milk cows and milk production on farms by regions, 1952 and 1953

Region	Milk cows on farms 1/		Milk production per cow 2/		Total milk production 2/	
	1952	1953	1952	1953	1952	1953
	Thousands	Thousands	Pounds	Pounds	Million pounds	Million pounds
North Atlantic	3,036	3,145	6,567	6,638	19,938	20,876
E. N. Central	5,470	5,611	6,340	6,470	34,679	36,301
W. N. Central	4,958	5,074	5,085	5,224	25,210	26,509
South Atlantic	1,897	1,960	4,307	4,384	8,171	8,592
South Central	4,308	4,453	3,306	3,395	14,244	15,116
West	1,946	2,013	6,657	6,868	12,955	13,825
United States:	21,615	22,256	5,329	5,447	115,197	121,219

1/ Average number on farms during year, heifers that have not freshened excluded.

2/ Excludes milk sucked by calves and milk produced by cows not on farms.

"Milk Production on Farms and Statistics of Dairy Plant Products, 1953," U. S. Department of Agriculture, Washington, D. C., February 1954.

Table 2.- Milk cows and milk production on farms by regions, 1953 as percent of 1941, 1951 and 1952

Region	: Milk cows on farms:			: Production per cow:			: Total milk production:		
	: 1953 as percentage of			: 1953 as percentage of			: 1953 as percentage of		
	: 1941	: 1951	: 1952	: 1941	: 1951	: 1952	: 1941	: 1951	: 1952
	: Pct.	: Pct.	: Pct.	: Pct.	: Pct.	: Pct.	: Pct.	: Pct.	: Pct.
North Atlantic	: 101	: 105	: 104	: 116	: 101	: 101	: 117	: 107	: 105
E. N. Central	: 93	: 102	: 103	: 120	: 104	: 102	: 112	: 106	: 105
W. N. Central	: 80	: 101	: 102	: 113	: 102	: 103	: 91	: 103	: 105
South Atlantic	: 108	: 105	: 103	: 115	: 101	: 102	: 125	: 106	: 105
South Central	: 93	: 103	: 103	: 105	: 101	: 103	: 98	: 105	: 106
West	: 91	: 104	: 103	: 115	: 103	: 103	: 105	: 107	: 107
United States:	: 92	: 103	: 103	: 115	: 103	: 102	: 105	: 106	: 105

Computed from annual reports of "Milk Production on Farms and Statistics of Dairy Plant Products," U. S. Department of Agriculture, Washington, D. C.

Table 3.- Monthly milk production on farms, United States, 1951-54

Month	: 1952 1/			: 1953 2/			: 1954 2/		
	: 1951	: Produc-	: Percent-	: Produc-	: Percent-	: Produc-	: Percent-		
	: million	: tion	: age of	: tion	: age of	: tion	: age of		
	: pounds	: Million	: 1951	: Million	: 1952	: Million	: 1953		
	: pounds	: pounds	: Percent	: pounds	: Percent	: pounds	: Percent		
January	: 8,263	: 8,151	: 99	: 8,800	: 108	: 9,172	: 104		
February	: 8,004	: 8,155	: 102	: 8,555	: 105	: 8,980	: 105		
March	: 9,596	: 9,430	: 98	: 10,191	: 108	: 10,713	: 105		
April	: 10,160	: 10,148	: 100	: 10,910	: 108	: 11,345	: 104		
May	: 12,086	: 12,073	: 100	: 12,637	: 105	: 13,178	: 104		
June	: 12,123	: 11,896	: 98	: 12,449	: 105	: 12,740	: 102		
July	: 11,341	: 11,027	: 97	: 11,603	: 105	: 11,625	: 100		
August	: 10,421	: 10,265	: 99	: 10,624	: 103	: 10,494	: 99		
September	: 9,073	: 9,131	: 101	: 9,306	: 102	: 9,391	: 101		
October	: 8,463	: 8,660	: 102	: 8,878	: 103				
November	: 7,554	: 7,884	: 104	: 8,359	: 106				
December	: 7,757	: 8,377	: 108	: 8,907	: 106				
Year	: 114,841	: 115,197	: 100	: 121,219	: 105				

1/ Revised.

2/ Preliminary.

"Milk Production on Farms and Statistics of Dairy Plant Products, 1953," U. S. Department of Agriculture, Washington, D. C., Feb. 1954 and related reports during 1954.

