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PRODUCTION CONSIDERATIONS IN THE D.IRY OUTLOOK

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Prepared for the National Outlook Conference, Dairy Work Session, October 29, 1954, by the Production Economics 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).

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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.

Increases from	1941	to 1952	Decreases from	1941	to 1952
New York	1)4	percent	Illinois	9	percent
Pennsylvania	18	- ir	Іоџа	18	11
Michigan	6	11	Minnesota	8	11
Wisconsin	12	17	North Dakota	23	11
North Carolina	17	11	Nebraska	24	п
Florida	63	11	Kansas	27	11
Kentucky	17	31	Oklahoma	32	ti -
Mississippi	13	87	Texas	28	11
Missouri	12	11	Montana	30	11
California	19	11	Washington	17	13

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

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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	
Item	1941	1945	<u>1951</u>	1952	1953
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	3 36	310	268

duch 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.



Lover 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:

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Increase
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North Atlantic	4	percent	South Atlantic	3 percent
East North Central	9	11		
West North Central	21	11		
South Central	10	51		
West	13	11		

Thus, in most Northern and Western States, mumbers 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 (reatly reduced from 1911 to 1952.

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Milk Per Cou

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 ir 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.

Decion	: Milk con : farms	ws on s l/ s	Milk pr	roduction cow 2/	: Total milk : production 2/			
netion	1952	1953	1952	: 1953	1952	1953		
	:Thousands	Thousands	Pounds	Pounds	Million	Million		
North Atlantic E. N. Central W. N. Central South Atlantic South Central West	: 3,036 : 5,470 : 4,958 : 1,897 : 4,308 : 1,946	3,145 5,611 5,074 1,960 4,453 2,013	6,567 6,340 5,085 4,307 3,306 6,657	6,638 6,470 5,224 4,384 3,395 6,868	pounds 19,938 34,679 25,210 8,171 14,244 12,955	pounds 20,876 36,301 26,509 8,592 15,116 13,825		
United States	: 21,615	22,256	5,329	5,447	115,197	121 ,21 9		

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

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, Vashington, D. C., February 1954.

Region	: Milk :1953 a	cows on : is percent	farms: tage of	: Production per cow: :Total milk production: :1953 as percentage of:1953 as percentage of								
1061011	1941	1951	1952	1941	1951	1952	1941	1951	1952			
	: Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.			
lorth 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			

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

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	-5l	ļ
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			:	1952 1/ :			:	: 1953 2/				: 1954 2/			
Month	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1951	0 .	Produc- tion		Percent- age of 1951	•	Produc- tion	88 08 00	Percent- age of 1952	••• •• •• ••	Produc- tion	:Perce: :age o: : 1953	nt- f	
	0	Million		Million		· · · · · · · · · · · · · · · · · · ·		Million				Million			
	:	pounds		pounds		Percent		pounds		Percent		pounds	Perc	ent	
January	:	8,263		8,151		99		8,800		108		9,172	10	4	
February	•	8,004		8,155		102		8,555		105		8,980	10	5	
March	* 0	9,596		9,430		98		10,191		108		10,713	10	5	
April	:	10,160		10,148		100		10,910		108		11,345	10)	4	
May	•	12,086		12,073		100		12,637		105		13,178	10	4	
June	:	12,123		11,896		98		12,449		105		12,740	10	2	
July	•	11,341		11,027		97		11,603		105		11,625	10	0	
August	:	10,421		10,265		99		10,624		103		10,494	9	9	
September	•	9,073		9,131		101		9,306		102		9,391	10	1	
October	e •	8,463		8,660		102		8,878		103					
Movember	•	7,554		7,884		1.04		8,359		106					
December	•	7,757		8,377		108		8,907		106					
Year	•	114,841		115,197		100		121,219		105					

1/ Revised.

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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.

