If the smaller farms were to use as much fertilizer per acre as their largest neighbors they would have to buy 50 to 75 percent more than they did in 1954 (Table 27). The per acre rate of application was practically the same for all farms although the larger farms paid a little more per ton which suggests the use of fertilizers with higher nutrient content.

Table 27.—Use of Fertilizer and Lime on Dairy Farms, By Economic Class of Farm, for the Northern Lake Region: 1954

Item	Economic class of farm						
	Total	I	II	III	IV	V	VI
Number of farms	124,501	425	10,548	41,266	46,789	20,843	4,630
Fertilizer:							
Percent of farms using	66	99	91	79	63	42	23
Tons used per farm reporting	3	19	7	4	2	1	1
Acres upon which used per farm reporting	34	175	70	37	22	15	12
Average per acre fertilized:							
Pounds	200	213	201	197	198	202	207
Cost, dollars	6.05	6.80	6.45	5.90	5.89	5.78	5.90
Lime:							
Percent of farms using	23	38	39	30	20	12	6
Acres upon which used per farm reporting	14	52	22	14	11	9	11
Average per acre limed:							
Pounds	3,649	4,153	3,934	3,631	3,468	3,396	2,643
Cost, dollars	5.53	4.83	5.33	5.52	5.82	5.64	4.00

One-fourth to one-third more farmers used fertilizer or lime in the eastern part of the area than in the western part. Of the farmers in Economic Subregion 67 fertilizer was used by 76 percent; only 48 percent in Economic Subregion 88 used it. This latter subregion also applied fertilizer to fewer acres although the rate of application was approximately the same for all subregions.

Farms vary more among the subregions in the intensity of operation, or in the relation of feed produced to livestock numbers, than in the proportion of the several classes of livestock maintained on individual farms. The number of milk cows, along with the young stock raised for replacement, constitute by far the largest proportion of livestock. The presence or absence of a few more hogs or sheep or even a few hundred head of poultry scarcely changes the capital and labor requirements on the usual dairy farm, yet these minor enterprises contribute materially to income.

Economic Subregion 67, which has the least productive soil, also has the least livestock per farm. Because of poor yields of crops it buys more feed than the other subregions. On the other hand, Economic Subregion 65 has the most intensively operated farms with the greatest gross income per acre.

EASTERN OHIO-WESTERN PENNSYLVANIA REGION
(Economic Subregions 17, 27, 28, 29, 30)

The story of the settlement and development of this region which consists of the western two-thirds of Pennsylvania and the eastern half of Ohio, along with a little of West Virginia and one small Kentucky county, is similar to that of the Northeastern Dairy Region except that it has not gone so strongly into dairying. The shift from a self-sufficing home economy to a highly specialized and commercialized production was gradual and practically continuous until a generation ago. During the last 30 years, however, the change in production practices and output have been almost revolutionary. The use of improved seed, better cultural practices, more selective breeding programs, and a more realistic interpretation of market needs, has resulted in a greatly enhanced output per man and higher living standards for the farm families.

EASTERN OHIO-WESTERN PENNSYLVANIA DAIRY AREA

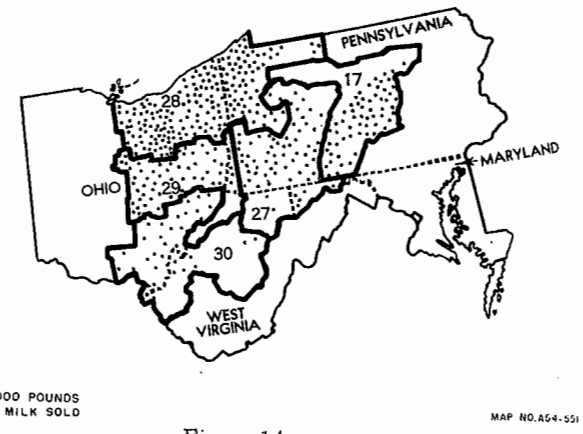

Figure 14.

There are more livestock farms other than dairy and poultry in Economic Subregions 29 and 30 than in other subregions of the region. Economic Subregion 28 has a good distribution of field crops, other livestock and general farms; and Economic Subregion 17 replaces other livestock farms with poultry farms.

The region has a varied soil and topographic pattern. Soils of Northwestern Pennsylvania are derived from sandstones and are less fertile than the ridge and valley country in the rougher parts of the State. The hilly land in the central part of the plateau gives way to a rolling to fairly level topography along the Ohio border. This type of topography continues into Northern Ohio where soils are generally productive. Southeastern Ohio and the bordering land of West Virginia is nonglaciated, of limestone origin and has a rolling to rough topography.

The cropping system is fairly well described as a 3-year rotation of corn, small grains, and hay. Cash crops, mostly field crops, account for around one-tenth of the sale of farm products from these dairy farms. Some feed is shipped out to the Northeastern Dairy Region although the dairy farms within this area have little, if any, surplus feed. It is farmed less intensively as shown by fewer milk cows per crop acre and less is spent for specified expenses. The production of dairy products seems to have developed in Northeastern Ohio when it was still a part of the Western Reserve of Connecticut. The Connecticut Yankees brought in cheesemaking over a century ago and it has consistently been considered a dairy section since then. It, too, went through the stage of homemade to factory manufacture of cheese and butter.

Dairy farming is only one of several, though the most important, farming enterprises of the region. There are more other livestock farms in Economic Subregions 29 and 30 than in other of the subregions while Economic Subregion 28 has a good distribution of field crops, other livestock, and general farms; Economic Subregion 17 replaces other livestock farms with poultry farms.

The dairy farms are considerably more diversified than is true in the Northeastern Region. They have only 71 percent of the total income from milk in comparison with 86 percent in the Northeast (Table 28). This diversification includes both livestock and crops. Sales of pigs, poultry, and eggs are relatively important in every economic subregion, accounting for 7 to 11 percent of the total income. Crop sales, on the other hand, show a greater range than do the sales of livestock. Economic Subregion 30 derives 8 percent of the total income of its dairy farms from the sale of field and cash crops. Economic Subregion 17 gets 14 percent from these sources.