

A Look At . . .

DISTRICT DAIRY FARMING

Like most other sectors of the District's agricultural establishment, dairy farming has undergone significant changes since 1950. These changes furnish the basis for this look at dairying in the five-state area.

Production and Marketing Trends Milk production in the District has declined steadily since 1957, when it was at an all-time high. By 1968, production amounted to 5,690 million pounds, 14% below the 1957 figure. The number of milk cows has been decreasing since 1953, however, and at a much faster rate than the decline in production. Milk cow numbers by 1968 totaled 733,000, down 47% from the 1953 count. But the large reduction in numbers has been partially offset by an upward trend in output per cow. Production per cow, having risen more than 70% since 1950, was a record 7,763 pounds in 1968.

Milk utilization patterns have also changed substantially over the past two decades. Milk used on farms where it was produced accounted for 37% of total production in 1950, while marketings comprised the remaining 63%. During the years since 1950, farm use of milk has dropped nearly 80%, but total marketings of milk and cream have increased 33%. By 1968, the proportion of total milk production used on farms had fallen to 8% and the percentage marketed had risen to 92%.

Of the milk used on farms in 1950, 49% was consumed in farm households as milk and cream, 44% was churned for butter, and 7% was fed to calves. These proportions gradually shifted, and by 1968 some 68% was consumed as milk and cream, only 15% was used in making butter, and 17% was fed to calves.

Milk and cream marketed by District farmers in 1968 totaled 5,212 million pounds of milk equivalent. These marketings consist of whole milk and farm-separated cream sold to plants and dealers and milk sold directly to consumers. The 33% increase in these combined marketings noted earlier was due entirely to a 63% expansion in the volume of whole milk sold to plants. Milk separated for sale as cream dropped around 90% and milk sold directly

to consumers fell more than 80%. As a result of these changes, sales of whole milk to plants rose from 80% to 98% of total marketings, marketings of farm-separated cream declined from 9% to less than 1%, and sales to consumers decreased from 11% to about 2%.

Despite the decline in milk production, the expansion in the quantity sold and the somewhat better prices of the past several years have combined to produce an upward trend in cash receipts from dairying. Dairy receipts in 1968, in fact, were a record \$328.5 million and accounted for 12.7% of total cash receipts from farm marketings as against 10.5% in 1950.

Total Dairying and Commercial Dairy Farms Although there are many farms which produce dairy products, all of these are not classified as commercial dairy farms as defined in the Census of Agriculture. Commercial farms in general are those farms having an annual value of sales of \$2,500 or more. Farms with sales valued at \$50 to \$2,499 are also classified as commercial if the farm operator is under 65 years of age and does not work off the farm 100 or more days during the year. There are six different classes of these farms, each of which is determined by its total value of sales. (See accompanying chart.) Commercial dairy farms are further characterized as those from which sales of dairy products account for 50% or more of the total value of farm products sold. Farms are also classified as dairy farms if they meet the following three requirements: (1) sales of dairy products account for more than 30% of total sales, (2) milk cows represent 50% or more of all cows, and (3) sales of dairy products plus sales of cattle and calves amount to 50% or more of all sales.

There were 31,452 District farms which reported sales of dairy products in 1964, a drop of 64% from 1954. On a per-farm basis, these farms sold roughly 155,000 pounds of milk and cream valued at \$8,034. Herd size, quantity sold, and value of sales per farm had expanded sharply since 1954 when average quantity sold was approximately 45,500 pounds and the value of sales averaged \$2,040.

The number of farms classified as commercial

dairy farms in 1964 totaled 15,935 compared with 26,644 ten years earlier. Although the number of dairy farms, like other types of farms, declined between 1954 and 1964, they also became larger. During this ten-year period, average herd size increased from 21 milk cows to 34, and marketings per farm jumped from nearly 121,500 pounds to around 279,600 pounds. Reflecting these increases, the value of dairy product sales per farm expanded from \$5,741 to \$14,476.

Commercial dairy farms have accounted for an increasing proportion of total milk marketings and of the total number of milk cows in recent years. These farms, as noted earlier, receive most of their income from the dairy enterprise. In 1964, they comprised 51% of all farms selling milk and cream. They also accounted for 69% of all milk cows and for 91% of total milk and cream marketings. By comparison, commercial dairy farms ten years earlier represented only 31% of the farms selling milk and cream and accounted for 43% of the number of cows and for 83% of all marketings. With an increasing degree of specialization occurring in District farming, fewer farms other than dairy farms are keeping milk cows as a supplementary source of income. Although the number of commercial dairy farms declined 40% between 1954 and 1964, other farms selling milk and cream dropped 74%.

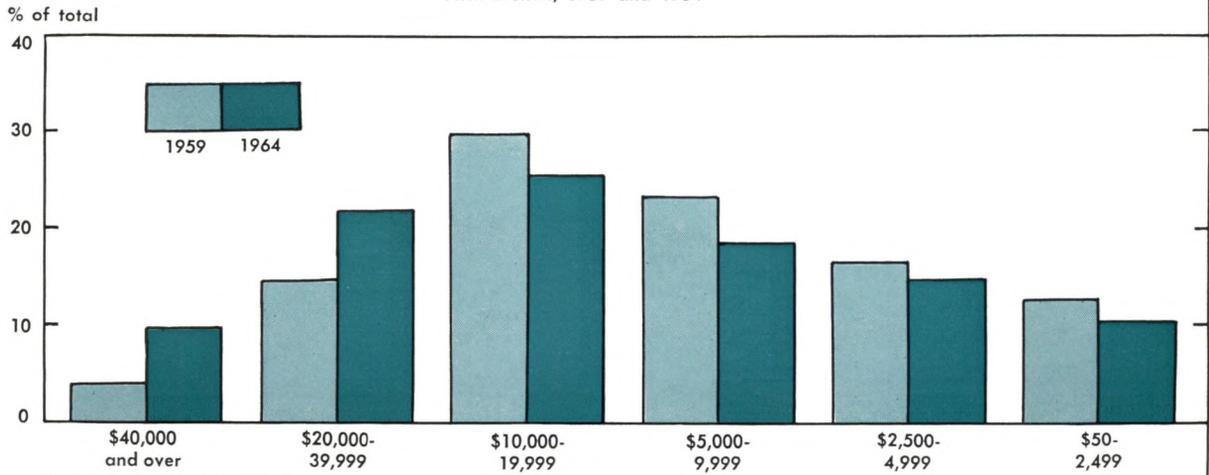
Income of Commercial Dairy Farms There is a wide variation in the average income of commercial dairy farms as well as in the proportions which are derived from the different sources. The smaller the

size of the dairy enterprise, for example, the smaller the gross farm income but the larger the proportion of gross income from all sources derived from off-farm work. Here, however, let us look at the income of the average commercial dairy farm in 1964. In that year, gross income from the sale of all farm products averaged \$18,122 per farm. Of this total, \$14,476, or 80%, came from the sale of dairy products. Another \$1,459, or 8%, was derived from sales of cattle and calves, primarily from cull dairy cattle and dairy calves. Off-farm income of the average dairy operator and his family added \$2,190 to returns from the sale of farm products. This income from off-farm sources brought average gross income from all sources to \$20,312 per farm and amounted to 11% of this total. Some 29% of the operators reported off-farm income, and 31% reported family members working off the farm.

High- and Low-Income Farms The several classes of commercial dairy farms are marked by a number of significant differences in organization, scale, and other characteristics. These differences are especially pronounced in a comparison of high- and low-income farms. In 1964, the number of cows per farm, for example, ranged from a low of 5 on farms with sales of less than \$2,500 to a high of 97 on those farms with \$40,000 or more of sales. Operators of the smaller dairy farms were generally older than those operating larger units. In fact, some 60% of the operators of dairy farms having less than \$2,500 of sales were 55 years of age or older, compared with 30% of those in the \$40,000

COMMERCIAL DAIRY FARMS BY VALUE OF SALES

Fifth District, 1959 and 1964



Source: U. S. Bureau of the Census.

plus class. Generally speaking, as the size of operation or value of sales increased, the proportion of operators in the 55 years and older category declined.

Around 88% of all commercial dairy farms were owner operated in 1964, with full owners predominating. However, because of the higher capital requirements, a greater proportion of the larger commercial dairy farms were operated by part owners (who rent part of their land), managers, and tenants. Of those operators in the \$40,000 plus class, in fact, only 25% were full owners, whereas 85% of those with sales under \$2,500 were full owners.

Generally, the smaller the size of the dairy operation, the greater the proportion of operators who worked off the farm and the larger the share of their total gross income derived from off-farm sources. For instance, of the dairy farms with sales of less than \$2,500, one-third of the operators worked off the farm. Their average gross income from all sources was \$3,034, of which \$1,808, or 60%, was from nonfarm sources. Among those dairy farms with sales of \$40,000 or more, only one-fifth of the operators worked off the farm. Their gross income from all sources averaged \$68,313 per farm, and of this amount only \$3,331, or 5%, came from off-farm sources.

As a rule, as the scale of dairy farming operations increased, the relative dependence on dairying as a source of income increased. On farms with sales under \$2,500, 65% of the average gross farm income came from sales of dairy products. This compared with 79% on those farms with sales of \$40,000 or more. Many operators of farms in the smaller sales groups maintained general farming or general livestock enterprises as supplementary sources of income.

Investment in capital items and expenditures for hired labor and feed were also directly related to the scale of operations. The \$40,000 plus farms, for example, had an average investment in land and buildings of \$205,076, compared with an investment of only \$10,830 by farms with sales under \$2,500. The investment per dollar of sales was less on the larger farms than on the smaller ones, however. Some 96% of the high-income farms had bulk milk tanks, whereas only 2% of the low-income operators had invested in this capital item. The larger farms also used more hired labor and purchased feed than the smaller operations. Expenditures for these two inputs, for instance, accounted for two-thirds of the spending for major purchased inputs on the \$40,000 plus farms, compared with around one-half for those

with sales under \$2,500. The smaller dairy farms averaged about one regular hired worker per farm as against around four on the larger farms. They depended more heavily, and in some cases entirely, on operator and family labor. They also depended on home-grown feed to a greater extent than the larger farms.

Expanding Sector of Dairy Farming The expanding portion of the District's commercial dairy farming consists of those farms with sales of \$20,000 or more. The number of commercial dairy farms with sales of \$20,000 to \$39,999 increased 19% between 1959 and 1964, while those with sales of \$40,000 and over jumped 94%. Farms with \$20,000 to \$39,999 in sales in 1964 averaged 51 cows per farm and had an average gross farm income of \$27,789; those in the \$40,000 and over group had an average of 97 cows and \$64,982 in average gross farm income. Farms in these two groups accounted for 68% of the milk and cream marketed by all commercial dairy farms in 1964, while comprising only 32% of the number of such farms. By comparison, farms in these same classifications in 1959 marketed 46% of the milk and cream sold and represented only 19% of the number of farms.

The number of dairy farms with less than \$20,000 in sales declined by one-third from 1959 to 1964. Farms with \$10,000 to \$19,999 in sales, averaging 32 cows per farm and \$14,680 in gross farm income in 1964, decreased 32% between 1959 and 1964. This group of farms in 1964 made up 25% of all commercial dairy farms but accounted for only 21% of the milk and cream sold, whereas in 1959 they represented 30% of the number of farms and marketed 34% of the total volume of marketings.

Farms with sales of \$5,000 to \$9,999, averaging 19 cows per farm and with gross farm income of \$7,287 in 1964, decreased 37% during the five years from 1959 to 1964. Although accounting for 14% of milk and cream marketings in 1959, farms of this size marketed only 7% of the total in 1964.

Dairy farms with sales under \$5,000 in 1964 had 9 cows per farm and an average gross farm income of only \$2,632. Although 25% of all commercial dairy farms were in this size class in 1964, they accounted for only 3% of milk and cream marketings. The number of these farms fell 31% from 1959 to 1964. Many of the operators of these farms are older and depend on income from off-farm sources for a considerable proportion of their gross income.

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