

SIXTY YEARS OF CHANGE IN FARM BUSINESSES

Dryden, New York, 1907-1967

	<u>Average per farm</u>	
	<u>1907</u>	<u>1967</u>
Capital	\$6,400	\$86,800
Crop acres	69	131
Number of cows	11	48
Months of hired labor	6	6

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INTRODUCTION

The farm business management survey of Tompkins County conducted in 1908 is considered the first successful study of its kind in the world. It was comprehensive in nature and developed a valid description of the entire farming community. In one of the towns, Dryden, this survey has been repeated every ten years.

Objectives

The purposes of this study were:

1. To continue the study of farm business management trends in the Town of Dryden;
2. To provide up-to-date information on factors affecting profits in farming;
3. To study the use of credit on farms in the Town of Dryden;
4. To study the development of rural residences in the Town of Dryden since 1948.

Methodology

It has been the intent of this continuing study to include the entire population of commercial farmers in the Town of Dryden. In the more recent studies these were restricted to commercial dairy farms as there were very few farms of any other type. A commercial dairy farm, for the purposes of this study, was defined as a farm having at least one man equivalent of labor and fluid milk as the primary product.

Each eligible farmer was contacted personally to obtain the necessary information about his farm. All eligible farmers, however, were not included in the study for various reasons. Residences were enumerated and classified by a simple road count.

Description of the Area

Dryden is located in Tompkins County, east of Cayuga Lake in New York State. Typical of the glaciated northeast, the soils and topography of

Dryden are variable. The soils range from alluvial to rock-outcropping, well-drained to marsh, and from deep to shallow. The topography varies from nearly level to steep. The full range of soils and topography often occur on one farm.

Most farms are between elevations of 1000 and 1500 feet and have an average growing season of 145 days. Growing season rainfall (May-September) is typically between 15 and 22 inches with short periods of excessive or deficient moisture not uncommon.

The milk produced on these farms in recent years has been, for the most part, hauled to local receiving stations, transferred to refrigerated tank trucks and transported to New York City for fluid consumption.

CHANGES IN THE FARM BUSINESS 1907-1967

Certainly many changes had already taken place on the farms when the first survey was made in 1908. Subsistence farming was being replaced by a system that was market oriented. The farmer of 1907 was diversified and produced most of the food for his table. In contrast, the farmer of 1967 was specialized. Today the market is the master and the farmer is entirely dependent on it for his livelihood. The farmer in 1907 could produce what he wanted and needed whereas today he must produce what the market demands or he will not be producing for long. Specialization and commercialization seem to describe most, if not all, of the changes that have occurred during the past sixty years.

Census Data

The census definition of a farm changed during the period of the study. Included as "farms" were many small and part-time farms where the principal income was not from farming. Consequently the number of farms enumerated by the census is more than the number that met the requirements for this study.

Table 1. CENSUS DATA
Town of Dryden, Tompkins County, New York

Item	1935	1945	1954	1964
Number of farms	534	349	255	150
Total acres in farms	48,460	39,173	37,683	26,367
Acres per farm	91	112	148	176
Number of milk cows	3,006	3,008	3,195	2,940

Since 1935 the number of census farms and total acres in farms decreased rapidly. The acres per farm nearly doubled and the total number of cows remained essentially the same - approximately 3000. Interestingly enough, the number of cows in the Town of Dryden has not changed much since 1845.

Survey Comparison

There were more farms in the township than were included in the study. Some of these did not meet the requirements of the study and others did not participate for one reason or another. In 1948, seventy of 116 eligible farms were included in the study and in 1968 fifty-one of 60 eligible were studied.

Table 2.

FARMS STUDIED Town of Dryden, Tompkins County, New York

Year	Number of farms
1907	206
1917	159
1927	118
1937	111
1947	70
1957	65
1967	51

Size of Business

Often the first question asked concerning a farm business is, "How big is it?" As it is when measuring most things, whether it be human beings, automobiles, or lunar rockets, there are numerous ways of measuring size. Each measure of size gives a little different view of the object in question. Some of the more common measures of size concerning dairy farm businesses are: 1) total acres, 2) crop acres, 3) number of cows, 4) pounds of milk sold, 5) productive man work units, 6) average capital invested and 7) man equivalent.

The data in Table 3 summarize much of the change that occurred on dairy farms during the past sixty years. A clear trend is apparent from

the data and is evident to the most casual observer of American agriculture - farms have been increasing in size.

Table 3. AVERAGE SIZE OF FARM BUSINESS
Town of Dryden, Tompkins County, New York

Measure	1907	1917	1927	1937	1947	1957	1967
Total acres operated	132	148	152	147	191	226	278
Crop acres	69	75	72	66	76	107	131
Number of cows	11	10	10	14	25	35	48
Pounds of milk sold*		44,564	58,878	80,051	169,895	300,919	544,222
Work units	340	359	346	415	595	555	547
Average capital invested	\$6,365	\$10,286	\$10,688	\$9,435	\$23,141	\$45,994	\$86,825
Man equivalent	1.7	1.8	1.8	1.8	2.0	1.9	1.9

* Cream and butter converted to milk equivalent.
Information not available for 1907.

Acres

The increase in farm size is the result of a combination of small farms into larger producing units. It is not uncommon for a farm today to consist of what was 5 or 6 independent farms in 1907. As farming became more competitive and it required larger units to be profitable, many farmers found they could not provide a satisfactory standard of living for their families. There were many reasons for this inability to make a suitable living from farming. Some farmers were poor managers and could not cope with the changes occurring in the economic framework of farming. Some were laboring against the insurmountable odds of poor land. Others lacked the capital required for expansion and could not borrow it. Some were forced to discontinue farming while others made a rational decision and decided their best alternative was doing something else.

As a consequence production on these farms was discontinued or the farm was sold to a neighbor who wanted to increase the size of his business. Much of this land went out of production because it was too poorly drained or too steep to farm economically. It must be remembered that during this same period farmers were replacing their horses with tractors and labor was becoming more expensive. The abandoned land could not be farmed profitably

with the newer methods of production. The land that would respond to modern farm technology was kept in production and made it possible for other farmers to expand their operations. The total acres per farm increased from 132 to 278 while the acreage of harvested crops increased from 69 to 131.

Cows and milk

The most commonly used measure of size for dairy farms, the number of cows, increased from 11 in 1907 to 48 in 1967. The percentage increase in the number of cows per farm was much greater than that of crop acres, resulting in more cows per crop acre in 1967. Farmers were able to support more cows per acre because many factors were changing simultaneously. The crop yields per acre were increasing and farmers were eliminating small acreages of other crops and growing more acres of roughage crops.

The measure of size that is most comparable to that of industry is the pounds of milk sold per farm. This directly measures the output of the business. This measure of size experienced the most real growth during the period. A brief glance at the data in Table 3 indicates that the pounds of milk sold per farm increased much more rapidly than did the number of cows. The growth in this measure of size is the result of increases that occurred in two other factors. The increase in cow numbers and production per cow had a pyramiding affect on milk sold per farm. In 1917 the average farm sold somewhat over 44,000 pounds of milk and fifty years later it sold approximately 544,000 pounds, an increase of one-half million pounds per farm. This growth in the productivity of American farms has been the envy of the rest of the world.

Work units

The number of work units on a farm is a measure of the amount of work under average conditions, there is on a farm. One must remember that these conditions changed during the period. The work units per farm increased from 340 in 1907 to 547 in 1967.

Capital investment

The capital invested is an estimate of the dollar value of all the assets of the farm business. This was the measure of size that had the greatest relative increase. In 1907, the average farmer had approximately \$6,000 invested in his farm business and in 1967 he had nearly \$87,000 invested. There are a number of reasons for this increase - inflation, mechanization, modernization, and more and better land, buildings, and livestock.

Table 4. AVERAGE CAPITAL INVESTED PER FARM
Town of Dryden, Tompkins County, New York

Item	1907	1917	1927	1937	1947	1957	1967
Real estate	\$4,624	\$7,293	\$7,234	\$6,069	\$10,459	\$22,567	\$42,343
Livestock	1,096	2,008	2,271	2,180	8,402	13,063	23,354
Equipment	436	715	899	993	3,998	9,650	15,592
Feed and supplies	209	270	284	193	282	714	5,536
Total	\$6,365	\$10,286	\$10,688	\$9,435	\$23,141	\$45,994	\$86,825

Table 5. DISTRIBUTION OF CAPITAL
Town of Dryden, Tompkins County, New York

Item	Percent of total capital						
	1907	1917	1927	1937	1947	1957	1967
Real estate	73	71	68	64	45	49	49
Livestock	17	19	21	23	37	28	27
Equipment	7	7	8	11	17	21	18
Feed and supplies	3	3	3	2	1	2	6
Total	100	100	100	100	100	100	100

Part of the story of change on Dryden farms is evident from the trends in the distribution of farm capital. A clear trend exists for each of the major categories of farm capital. Real estate - land and buildings - decreased as a proportion of total capital. It accounted for seventy-three percent of the total in 1907 and about fifty percent in 1967. Livestock investment increased from seventeen to twenty-seven percent of the total. Previous data indicated that cow numbers expanded more rapidly than did acres of land which would result in livestock becoming a larger proportion of the total. The mechanization that has occurred is evident in the growth of equipment investment. In 1907 only 7 percent of the total investment was in equipment. Horses and men were the sources of power in 1907. In 1967 tractors had replaced horses and intricately designed equipment was performing much of what was manual labor in 1907. Equipment accounted for nearly twenty percent of the farm capital in 1967.

Part of the increase in feed and supplies in 1967 was owing to a shift in inventory date from early spring to January 1.

Labor Force

If there is one fact concerning farming that stands out above all others it is the size of the labor force. Everything but man equivalent - the number of workers per farm - has changed on the farms in Dryden. This is also true of the entire United States. The man equivalent has been 2 or slightly less throughout the entire period. The fact that it has remained essentially the same while all the other measures of size has increased so dramatically is the reason for it being so important.

Table 6.

FARM LABOR Town of Dryden, Tompkins County, New York

Item	Months of labor per farm						
	1907	1917	1927	1937	1947	1957	1967
Operator	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Partners						1.7	2.3
Unpaid family labor	2.0	4.5	4.9	3.9	4.1	3.1	2.6
Hired labor	<u>6.4</u>	<u>5.2</u>	<u>4.6</u>	<u>5.8</u>	<u>7.6</u>	<u>6.1</u>	<u>5.6</u>
Total	20.4	21.7	21.5	21.7	23.7	22.9	22.5
Man equivalent	1.7	1.8	1.8	1.8	2.0	1.9	1.9

Table 7.

DISTRIBUTION OF LABOR Town of Dryden, Tompkins County, New York

Item	Percent of total labor force						
	1907	1917	1927	1937	1947	1957	1967
Operator	59	55	56	55	51	52	53
Partners						8	10
Unpaid family labor	10	21	23	18	17	14	12
Hired labor	<u>31</u>	<u>24</u>	<u>21</u>	<u>27</u>	<u>32</u>	<u>26</u>	<u>25</u>
Total	100	100	100	100	100	100	100

While the total labor force has remained about the same some interesting changes occurred in the composition of the labor force. Much controversy exists over the question of corporate farms replacing the family

farm in the United States. The data in Tables 6 and 7 certainly refute any notion that this is taking place. In fact, the proportion of farm labor supplied by the operators and their families increased during the period (they accounted for sixty-nine percent of the total in 1907 and seventy-five percent in 1967). Correspondingly, the percentage of hired labor decreased. A major change occurred in the area of partner labor. Some of the labor before 1957 was partners, but it was insignificant and was included as part of the unpaid family labor. Partner labor became an increasingly important segment of farm labor. The trend seems to be toward a higher proportion of partnership arrangements.

Labor Efficiency

The constant labor force of Dryden farms along with the great increases in size implies a change in labor efficiency. It is of course the increased labor efficiency that has permitted the size of farms to increase without increasing the labor required. One of the keys to the success of American agriculture is its labor efficiency. The growth in output per man on United States farms has far exceeded the expectations of our forefathers. About the only thing a 1907 farmer would recognize on a farm in 1967 would be the labor force, but the production per man would be incomprehensible. How one man could accomplish so much work and produce so much product would bewilder a 1907 farmer. Increased yields, specialization, and mechanization are the building blocks of this tremendous change.

Some commonly used measures of labor efficiency on dairy farms are: cows per man, pounds of milk sold per man, and productive man work units per man.

Table 8. AVERAGE LABOR EFFICIENCY
Town of Dryden, Tompkins County, New York

Measure	1907	1917	1927	1937	1947	1957	1967
Cows per man	6.5	5.6	5.6	7.8	12.5	18.4	25.3
Milk sold per man (lbs.)		24,758	32,710	44,473	84,948	158,378	286,433
Work units per man	200	199	192	231	298	292	288

The number of cows per man increased from approximately 7 in 1907 to 25 in 1967. One man was able to care for 4 times as many cows in 1967 as in 1907. The increase in milk sold per man is still more astounding. In 1917 the average farm sold approximately 25,000 pounds of milk or milk equivalent per man. In 1967, the average farm sold 286,000 pounds of milk per man, all of which was fluid milk. The production per man in 1967 was twelve times

that of 1907. Another, yet not quite so striking, indication of increased labor efficiency is the fact that the work units per man increased. In 1917 one man was accomplishing in a year the work that could normally be done in 200 ten hour days and in 1967 it was 288 days.

Rates of Production

United States farmers have truly fulfilled, and in most cases exceeded, the adage - "grow two blades of grass where one grew before". The production per animal and per acre increased greatly during the period. The farmers in the Town of Dryden certainly have kept pace with others in this respect. Common measures of rates of production on dairy farms are pounds of milk sold per cow and tons of feed per acre for corn silage and hay, the two most important crops.

Table 9.

AVERAGE RATES OF PRODUCTION Town of Dryden, Tompkins County, New York

Measure	1907	1917	1927	1937	1947	1957	1967
Milk sold per cow (pounds)		4,412	5,712	5,718	6,927	8,493	11,338
Corn silage per acre (tons)	9.4	7.6	9.2	8.7	9.0	10.7	17.8
Hay per acre (tons)	1.3	1.2	1.3	1.5	2.1	2.5	2.5

The pounds of milk sold per cow increased from about 4,000 to 11,000 between 1917 and 1967. This increase resulted from better feeding, better breeding and selection, and generally improved dairy cattle husbandry. Corn silage production increased from 9 tons to approximately 18 tons per acre and hay production per acre increased to 2.5 tons in 1967 from 1.3 in 1907.

Financial Summary

Expenses

The total expenses per farm, including a charge for unpaid family labor, increased throughout the period. The expenses per farm averaged \$657 in 1907 and nearly \$26,000 in 1967. All of the major categories of

increased but some interesting trends are apparent in Tables 10 and 11. Labor, the largest item of expense in 1907, accounted for thirty-four percent of the expenses in 1907 and only ten percent in 1967. At the same time the proportion of expenses spent on equipment increased. The amount spent on new equipment and operating costs increased from 7 to approximately 30 percent of all farm expenses. Real estate expenses became a lesser proportion of the total. While the dollars spent for concentrate feed increased greatly, the proportion of total expenses spent on concentrates did not change. Approximately 25 percent of all expenses was used to purchase concentrate throughout the period. Other livestock expenses increased slightly in their proportion of the total. The percentage of the total spent on crops remained about the same.

Table 10. EXPENSES PER FARM
Town of Dryden, Tompkins County, New York

Item	Amount per farm						
	1907	1917	1927	1937	1947	1957	1967
Labor	\$224	\$418	\$493	\$436	\$1,545	\$1,604	\$2,659
Equipment	47	128	273	396	1,952	4,420	7,374
Real estate	103	183	313	290	972	2,030	2,670
Concentrate feed	159	399	458	632	3,124	3,160	7,115
Other livestock expense	49	204	369	291	917	1,502	3,021
Crop expense	48	102	133	174	538	1,352	2,090
Other farm expense	<u>27</u>	<u>44</u>	<u>52</u>	<u>104</u>	<u>200</u>	<u>275</u>	<u>1,034</u>
Total farm expenses	\$657	\$1,478	\$2,091	\$2,323	\$9,248	\$14,343	\$25,963

Table 11.

DISTRIBUTION OF FARM EXPENSES
Town of Dryden, Tompkins County, New York

Item	Percent of total expenses						
	1907	1917	1927	1937	1947	1957	1967
Labor	34	28	24	19	17	11	10
Equipment	7	9	13	17	21	31	29
Real estate	16	12	15	13	10	14	10
Concentrate feed	24	27	22	27	34	22	27
Other livestock expense	8	14	18	13	10	11	12
Crop expense	7	7	6	7	6	9	8
Other farm expense	<u>4</u>	<u>3</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>2</u>	<u>4</u>
Total	100	100	100	100	100	100	100

Receipts

Total receipts per farm, including the increase in inventory, increased from about \$1,500 in 1907 to more than \$36,000 in 1967. The changing picture of where the receipts came from reflects the specialization that has occurred on these farms in Dryden. Milk was the primary source of income on these farms for the entire period and the proportion of income derived from this source increased from 44 to 77 percent of total receipts. The sale of dairy cattle increased slightly as proportion of total receipts. The dairy enterprise accounted for 54 percent of cash receipts in 1907 and 97 percent in 1967. Other livestock and crops provided a substantial proportion of farm receipts in 1907 and essentially nothing in 1967.

Each year farmers invest a substantial part of their income in their business and this shows up in the records as increased inventory. The amount they invested per year increased from \$78 in 1907 to over \$4,000 in 1967. This investment was used to enlarge, mechanize, modernize, and improve their farm businesses.

Table 12.

RECEIPTS PER FARM
Town of Dryden, Tompkins County, New York

Item	Amount per farm						
	1907	1917	1927	1937	1947	1957	1967
Milk and milk products	\$655	\$1,207	\$1,664	\$1,753	\$8,312	\$14,064	\$28,159
Dairy cattle sold	107	258	424	298	1,347	1,637	3,110
Other livestock and livestock products	191	318	302	354	724	542	59
Crops sold	421	470	329	214	724	296	119
Other cash receipts	43	85	186	140	219	684	875
Increase in inventory	<u>78</u>	<u>246</u>	<u>293</u>	<u>245</u>	<u>1,396</u>	<u>3,479</u>	<u>4,286</u>
Total farm receipts	\$1,495	\$2,584	\$3,198	\$3,004	\$12,722	\$20,702	\$36,608

Table 13.

DISTRIBUTION OF FARM RECEIPTS
Town of Dryden, Tompkins County, New York

Item	Percent of total receipts						
	1907	1917	1927	1937	1947	1957	1967
Milk and milk products	44	47	52	58	65	68	77
Dairy cattle sold	7	10	13	10	10	8	9
Other livestock and livestock products	13	12	10	12	6	3	*
Crops sold	28	18	10	7	6	1	*
Other cash receipts	3	3	6	5	2	3	2
Increase in inventory	<u>5</u>	<u>10</u>	<u>9</u>	<u>8</u>	<u>11</u>	<u>17</u>	<u>12</u>
Total	100	100	100	100	100	100	100

* Less than 0.5 percent.

Labor income

Labor income is the return to a farmer for his labor and management after all business expenses are paid and a charge is made for unpaid labor and interest on capital. In addition a farmer receives the use of a house and farm products for home consumption. Before 1957 each farm was considered to have only one operator. In 1957 and 1967 it was quite clear that some farms had two or more partners who shared not only labor but the management as well. Consequently in 1957 and 1967 there were more operators than farms and labor income per operator was less than labor income per farm.

Labor income per operator increased from \$520 in 1907 to \$5,279 in 1967. The cost-price relationships of 1967 were more favorable than in any of the other years studied. They were very favorable in 1947 also. The higher labor incomes in 1967 were the result of the favorable cost-price relationship, good weather, and more efficient businesses.

Table 14.

FINANCIAL SUMMARY Town of Dryden, Tompkins County, New York

Item	Amount per farm						
	1907	1917	1927	1937	1947	1957	1967
Total receipts	\$1,495	\$2,584	\$3,198	\$3,004	\$12,722	\$20,702	\$36,608
Total expenses	<u>657</u>	<u>1,478</u>	<u>2,091</u>	<u>2,323</u>	<u>9,248</u>	<u>14,343</u>	<u>25,963</u>
Farm income	\$ 838	\$1,106	\$1,107	\$ 681	\$ 3,474	\$ 6,359	\$10,645
Interest on average capital @5%	<u>318</u>	<u>514</u>	<u>534</u>	<u>472</u>	<u>1,157</u>	<u>2,300</u>	<u>4,341</u>
Labor income	\$ 520	\$ 592	\$ 573	\$ 209	\$ 2,317	\$ 4,059	\$ 6,304
Number of operators	206	159	118	111	70	74	^{60.9} 669
Labor income per operator	\$ 520	\$ 592	\$ 573	\$ 209	\$ 2,317	\$ 3,565	\$ 5,279

Since the level of prices has changed during this 60-year period, it is desirable to compare these dollar figures with the general price level in the United States. The indexes of wholesale prices as reported by the United States Bureau of Labor Statistics are shown in Table 15.

Table 15.

WHOLESALE PRICES
Index numbers of wholesale prices
of all commodities, 1957=100
From United States Bureau of Labor Statistics

1907	36	1937	48
1917	65	1947	82
1927	53	1957	100
		1967	107

Using these indexes, the labor incomes per operator have been converted to "1957 dollars". This information is shown in Table 16.

Table 16.

LABOR INCOME PER OPERATOR IN 1957 DOLLARS
Town of Dryden, Tompkins County, New York

Year	Labor income per operator
1907	\$1,444
1917	911
1927	1,081
1937	435
1947	2,826
1967	4,934

FARM CREDIT SUMMARY
1968

The availability and wise use of credit by farmers has played a major role in the enlargement, specialization, mechanization, and modernization of farms in the Town of Dryden.

Source of Financing

Commercial banks and the Cooperative Farm Credit System were the lenders most often cited as the primary source of credit. Together they accounted for 64 percent of the farms. Relatives of the operators were the next most frequent source of credit. The Farmers Home Administration and other lenders were equal in frequency at eight percent, as were merchants and dealers and other individuals at 4 percent of the farms.

Table 17. PRIMARY SOURCE OF FINANCING, 1968
Town of Dryden, Tompkins County, New York

Source	Number of farms	Percent of farms
Commercial banks	18	35
Cooperative Farm Credit	15	29
Life insurance company	0	0
Farmers Home Administration	4	8
Merchants and dealers	2	4
Relatives	6	12
Previous owner*	0	0
Other individuals	2	4
Other	<u>4</u>	<u>8</u>
Total	51	100

* If previous owner was a relative the major source was considered as being a relative.

Amount of Debt

There were 13 farms that indicated no debt at the time of the interview, 33 had financing that amounted to less than 50 percent, and five farms indicated a debt load of 50 percent or more of total capital. One-fourth of the farms were using no borrowed capital, nearly two-thirds (65 percent) were using some credit but less than 50 percent of total farm assets, and 10 percent of the farms were using borrowed money equal to 50 percent or more of their total capital investment.

Table 18.

AMOUNT OF DEBT, 1968
Town of Dryden, Tompkins County, New York

Percent of total capital borrowed	Number of farms	Percent of farms
0	13	25
1 - 24	22	43
25 - 49	11	22
50 - 74	5	10
75 or more	<u>0</u>	<u>0</u>
Total	51	100

Relation of Debt to Various Items

A comparison of farms with no debt and those with debts less than 50 percent of assets is given in Table 19. These comments concerning the relationship of debt to various factors will not include those farms that were 50 percent or more in debt. There were too few farms in this category to draw any meaningful conclusions.

Farms where some credit was used tended to be larger more efficient businesses, operated by younger men than farms using no outside capital. The farms using moderate amounts of borrowed capital were average or above in all the factors considered, and had a higher than average labor income. On the other hand, farms with no borrowed capital were below average in all factors except milk per cow, and had an average labor income less than that for all farms.

Size

The average farm with no credit had a 1.7 man equivalent, 36 cows, sold about 412,000 pounds of milk, and had an average capital investment of more than \$62,000. All these measures of size were below the average of all farms studied. Farms using credit amounting to less than 50 percent of total capital tended to be larger. The average farm in this group had a 1.9 man equivalent, 50 cows, sold nearly 567,000 pounds of milk, and had an average of about \$90,000 invested. These farms were above or equal to the average for all farms in these measures of size.

Labor efficiency

The farms using no credit had a labor efficiency below the average of all farms and below that of farms using modest amounts of borrowed capital. They averaged about 243,000 pounds of milk sold per man and 21 cows per man. Farms with credit of less than 50 percent of total capital tended to have higher measures of labor efficiency than either the average of all farms or those using no credit. These farms sold an average of 298,000 pounds of milk per man and had 26 cows per man.

Milk per cow

The milk production per cow was not significantly different for the average of all farms, for those with no borrowed capital, or for those that borrowed less than 50 percent of their capital.

Age

The farms using credit tended to be operated by younger men. Sixty-two percent of the farms that used no credit had an operator who was at least 50 years old, while 39 percent of the farms where borrowed capital was less than 50 percent had an operator who was 50 or older. There are a number of reasons for this difference in age. Prime among these are:

- 1) Young men adapt to changes more readily;
- 2) Young men tend to be more aggressive and expansion minded;
- 3) Young men tend to have a less conservative view of using credit;
- 4) Young men don't have the cash reserves that some older farmers have;
- 5) Young men are building for their future and the older farmers are nearing retirement.

Labor income

Higher labor incomes tended to be earned on farms using some credit but less than 50 percent of total capital. The average labor income on

these farms was \$6,248 which was above the average for all farms and considerably more than the \$2,704 earned on farms not using credit. The higher labor is partially accounted for by the larger size and higher labor efficiency of farms using manageable amounts of borrowed money.

Table 19. RELATION OF DEBT TO VARIOUS ITEMS, 1968
Town of Dryden, Tompkins County, New York

Item average per farm	No debt	Debt less than 50 percent of total capital	All farms
Number of farms	13	33	51
Man equivalent	1.7	1.9	1.9
Number of cows	36	50	48
Total milk sold (pounds)	412,448	566,859	544,222
Average capital	\$62,618	\$90,326	\$86,825
Milk sold per cow (pounds)	11,457	11,337	11,338
Cows per man	21	26	25
Milk sold per man (pounds)	242,616	298,347	286,433
Percent of farms with at least one operator 50 years old	62	39	41
Labor income per operator	\$2,704	\$6,248	\$5,279

RESIDENCE ENUMERATION 1948 and 1968

The many small towns located throughout the northeast were originally the center of activity for local farmers. These towns changed in character as the farms became fewer and larger and the population and local industry expanded. In recent years as better roads have been built and metropolitan areas have become overcrowded these small towns have become the abode of persons working in non-farm occupations, either locally or within commuting distance. More recently numerous homes have been built in the rural areas outlying these small villages.

With this in mind the residences in the Town of Dryden were enumerated in the summers of 1948 and 1968. The purposes of these studies were

to determine the extent of part-time farming and to study the development of rural housing.

Number of Residences

There were 1,277 residences in the Town of Dryden in 1948, and during the next 20 years this number more than doubled to 2,946. Each area of the town experienced some growth, but the increase in rural residences greatly exceeded that of any other. The percentage of residences in the villages and hamlets decreased while the percentage of residences classified as rural increased. Rural residences accounted for 58 percent of all residences in 1948 and 69 percent in 1968.

Mobile homes, the "low-cost housing" of this area were a significant proportion of the residences in 1968. Of the 2,946 residences in the Township, 21 percent (626) were mobile homes.

Table 20. NUMBER OF RESIDENCES
Town of Dryden, Tompkins County, New York

Location	1948		1968	
	Number	Percent	Number	Percent
Dryden village	259	20	418	14
Freeville village	101	8	168	6
Varna and east to Route 13	102	8	236	8
Etna, West Dryden, and Malloryville	77	6	87	3
Rural residences	<u>738</u>	<u>58</u>	<u>2,037</u>	<u>69</u>
Total	1,277	100	2,946	100

Classification of Rural Residences

The number of rural residences increased from 738 to 2,037. Farms and other farm residences represented 22 percent of the total in 1948 and only 5 percent in 1968. The trend toward increased numbers of rural non-farm residences was well underway in 1948, when 49 percent of the rural residences were non-farm. The growth in non-farm residences has continued to accelerate and in 1968 they accounted for 88 percent of all rural residences. Most of this growth resulted from the construction of new residences and apartment complexes, although some occurred as farms discontinued production and became residences for non-farm workers.

The number of small and part-time farms declined in the Town of Dryden, a contradiction of a commonly expressed view that the number of part-time farms is increasing. The more affluent population of 1968, who did not want to be "tied down" by the constant care of animals, desired a rural atmosphere and the freedom to be away from home on numerous occasions.

Table 21. CLASSIFICATION OF RURAL RESIDENCES
Town of Dryden, Tompkins County, New York

Group	1948	1968
Farm residences	129	62*
Other farm residences		
Hired men	15	5
Partner	7	6
Institutional farm	6	12
Other	<u>6</u>	<u>11</u>
Total	34	34
Small farms	131	40
Non-farm residences	363	1,794
Other		
Summer homes	23	25
Vacant	32	38
Under construction	<u>26</u>	<u>44</u>
Total	<u>81</u>	<u>107</u>
Total rural residences	738	2,037

* Two farms were within village limits.

SUMMARY

The changes that have occurred on the farms and in the community of Dryden, New York are characteristic of those that have taken place in most rural towns in the northeast. Many changes have taken place and more are coming. The farms of 1967 were larger, more specialized, more mechanized, more efficient, and more productive than those of 1907. The rural villages, and more recently the "open country", have become populated with non-farm workers. The changes on farms and in the rural population accelerated in the last twenty years is likely to continue into the future at a rapid pace.

About the only thing which has not changed in Dryden is the labor force on the average farm. This is the real story of Dryden's and American agriculture. The number of workers per farm has been 2 or slightly less for the past 60 years. During this same time farms have increased in size, production, and efficiency beyond the comprehension of a 1907 farmer.