

# SUMMARY AND ANALYSIS OF 1961 DAIRY FARM BUSINESSES



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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	1
HOW DO YOU MEASURE UP AS A MANAGER?.....	2
NEW YORK FARM PRICES.....	3
PART I - SUMMARY OF THE FARM BUSINESS.....	4
RESOURCES.....	4
CAPITAL INVESTMENT.....	5
WHERE THE MONEY CAME FROM.....	6
WHERE THE MONEY WENT.....	7
FINANCIAL SUMMARY OF THE YEAR'S BUSINESS.....	8
NET CASH OPERATING INCOME.....	8
LABOR INCOME.....	9
COST OF PRODUCING MILK.....	10
RETURN ON INVESTMENT.....	11
PART II - ANALYSIS OF THE FARM BUSINESS.....	11
MACHINERY COSTS.....	12
LABOR AND MACHINERY COST.....	13
FEED COSTS.....	14
IMPORTANT FACTORS AFFECTING FARM INCOMES.....	15
COST CONTROL.....	16
BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS.....	17
COWS PER FARM AND LABOR INCOME.....	18
MILK SOLD PER COW AND LABOR INCOME.....	19
MILK SOLD PER MAN AND LABOR INCOME.....	20
PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR INCOME.....	21
MACHINERY COST PER COW AND LABOR INCOME.....	22
LABOR AND MACHINERY COST PER COW AND LABOR INCOME.....	23
COMBINATION OF FACTORS.....	24
NET WORTH STATEMENT, 74 FARMS.....	25
PART III - SUPPLEMENTARY INFORMATION.....	27
COMPARISON OF BUSINESS SUMMARIES OF DAIRY FARMS WITH OTHER MAJOR SOURCES OF INCOME.....	28
COMPARISON OF BUSINESS SUMMARIES BY SIZE OF FARM.....	30
COMPARISON OF BUSINESS SUMMARIES OF 30 FARMS WITH HIGHEST LABOR INCOMES AND THE 30 FARMS WITH LOWEST LABOR INCOMES.....	32
COMPARISON OF SELECTED FARM BUSINESS FACTORS FOR 1961 24 Counties Included in General Farm Business Summary.....	34
14 Counties Not in General Farm Business Summary.....	40
COMPARISON OF SELECTED FARM BUSINESS FACTORS, NEW YORK DAIRY FARMS 1957 - 61.....	43
PART IV - SUMMARY OF THE ANALYSIS; GOALS, AND BUDGETING.....	44
SUMMARIZING THE ANALYSIS.....	44
WHAT ARE YOU WORKING FOR?.....	45
BUDGETING A CHANGE IN YOUR FARM BUSINESS.....	46

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In 1961, farmers in 38 New York counties cooperated in Farm Business Management Projects. These projects were sponsored jointly by the County Agricultural Extension Services and the Department of Agricultural Economics at Cornell.

Part of the purpose of these projects is to teach farmers to keep better records. A more important purpose is to teach the farmers how to analyze these records and use them as a basis for improving the farm business. In total, the aim is to help farmers improve their management ability to enable them to compete in today's commercial agriculture.

Each farm family whose record is included in this summary took a farm inventory at the beginning and end of 1961. During the year they recorded receipts and expenses and certain other information such as crop acreages and yields. At the end of the year, each record was checked by a county agricultural agent or farm management specialist. Farm business summaries were prepared for the cooperating group of farmers in each county.

The averages presented here do not represent the average for all the dairy farms in the state. Enrollment by the farmers is voluntary. As a group, the farmers are somewhat better than the average dairy farmers in the state.

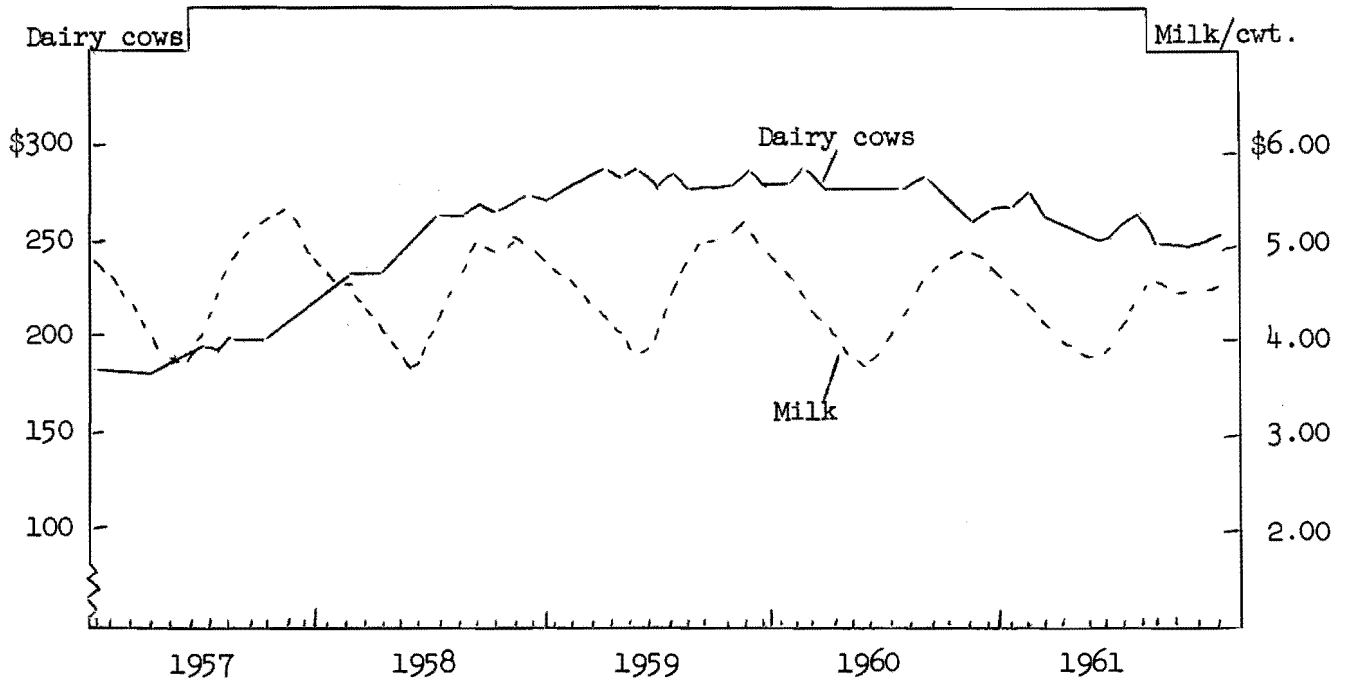
The records from 24 counties were summarized and analyzed at Cornell. In the other 14 counties, the farmers summarized their own records but these were analyzed and the summary reports prepared at Cornell. A total of 1,057 records were summarized from farms that had dairy herds. The 633 records from the 24 counties summarized at Cornell have been combined into a general summary for special analysis.

These 633 farms all had commercial dairy herds. On many farms there were other enterprises in addition to dairy. Farms with large receipts from either egg, fruit, or cash crop sales, rented farms and farms with large amounts of non-farm income were separated from the specialized dairy farms. The number of farms in each group was: 490 dairy; 25 dairy-poultry; 19 dairy-fruit; 49 dairy-cash crops; 17 dairy-renters; 26 part-time dairy farms, and 7 unusual farms. Many of the farmers in the part-time group had large farm businesses but on each there was a large amount of off-farm work and income.

The individual farm records are confidential. The averages are widely used by extension workers, vocational agriculture teachers, and others interested in agriculture. This summary has been prepared primarily for their use. The farmers in each county farm management group have already received copies of their county summary. However, these and other farmers may have use for this summary. Blank spaces have been provided to allow filling in of individual farm figures.

This publication has been divided into four major sections. The first section is a summary of the farm business on 490 dairy farms. Part II consists of an analysis of some of the factors affecting incomes and an examination of the relationship between these factors and labor incomes. Part III is a compilation of supplementary data gathered from the farm business records in the 38 counties. Part IV provides a place for farmers to summarize the business analysis, review their goals and objectives, and do some budgeting for the future.

NEW YORK FARM PRICES OF COWS AND MILK, 1957-1961



Source: Current Economic Situation

Prices are one of several important factors affecting farm incomes. When studying farm incomes for any period, we must consider the price situation. This includes both prices received and prices paid. The general level of farm incomes is determined by the relationship of prices received and prices paid by farmers.

The blended farm price for milk in 1961 averaged \$4.30 which was 13¢ below the average for 1960 and 28¢ below 1959. The 1961 milk price was 13¢ below the average price for the ten-year period 1951-60. Dairy cow prices which started to weaken the latter part of 1960 continued to drift downward in 1961. The average price per head in 1961 was down about \$25 from 1959. The index of prices paid by dairy farmers, which had increased each year since 1954, remained stable in 1961.

AVERAGE YEARLY PRICES RECEIVED AND PAID BY N.Y. FARMERS, 1952-61

Year	Milk (cwt.)	Dairy cows (head)	Prices paid by N.Y. dairy farms (1910-14=100)	Year	Milk (cwt.)	Dairy cows (head)	Prices paid by N.Y. dairy farms (1910-14=100)
1952	\$4.76	\$300	350	1957	\$4.58	\$196	363
1953	4.34	209	346	1958	4.55	255	376
1954	4.11	176	343	1959	4.58	284	387
1955	4.09	174	346	1960	4.43	278	394
1956	4.20	180	352	1961	4.30	260	394

CAPITAL INVESTMENT

"It takes money to make money in a farm business." This money we call "capital investment." In this report, the farm inventory at the end of the year is used as a measure of capital investment.

FARM INVENTORY VALUES, JANUARY 1, 1962  
490 New York Dairy Farms

Item	Amount per farm		Amount per cow	
	Average per farm	Your farm	Average per farm	Your farm
Machinery and equipment	\$11,062	\$ _____	\$ 291	\$ _____
Cattle	14,263	_____	375	_____
Feed and supplies, other	3,961	_____	104	_____
Land and buildings	<u>25,827</u>	_____	<u>680</u>	_____
TOTAL INVESTMENT	\$55,113	\$ _____	\$1,450	\$ _____

Total investment on these dairy farms averaged about \$55,000 per farm. The average investment per man on these farms was \$30,618. This is about double the capital investment per worker in many industries.

The total investment per cow on these farms averaged \$1,450. Land and buildings amounted to 47 percent, cattle 26 percent, and machinery 20 percent of the total investment.

High capital investment per "productive unit" (per cow) in a business tends to cause a heavier overhead cost per unit. In some cases, it may indicate that the capital resources are not being used to capacity.

The land and buildings investment per crop acre on these farms averaged \$261. On dairy farms, the buildings are a big factor affecting the total value of a farm. It is important, however, that there be sufficient cropland to provide roughage for the cattle kept.

Capital turnover (years required for receipts to equal capital) is sometimes used to measure efficiency in the use of capital. On these farms, it would require 2.4 years for the 1961 farm receipts to equal the capital investment.

WHERE THE MONEY WENT

FARM EXPENSES  
490 New York Dairy Farms, 1961

Item	Your farm 1961	Average per farm	Percent of total
Hired labor	\$ _____	\$ 1,319	11
Dairy feed	_____	4,742	39
Other feed	_____	34	--
Machine hire	_____	104	1
Machinery, small tool expense	_____	799	7
Auto expense (farm share)	_____	165	1
Gas and oil	_____	703	6
Breeding fees	_____	193	2
Veterinary, medicine	_____	246	2
Other livestock, poultry expense*	_____	824	7
Lime and fertilizer	_____	697	6
Seeds and plants	_____	215	2
Spray, other crop expense	_____	152	1
Land, building and fence repair	_____	373	3
Taxes, insurance	_____	802	7
Electricity, telephone (farm share)	_____	346	3
Miscellaneous	_____	240	2
Total Cash Operating Expenses	\$ _____	\$11,954	100
New machinery	_____	2,065	
New real estate	_____	923	
Livestock purchases	_____	810	
Unpaid labor	_____	373	
Decrease in inventory	_____	--	
TOTAL FARM EXPENSES	\$ _____	\$16,125	

\*Includes milk hauling, \$353.

LABOR INCOME  
490 New York Dairy Farms, 1961

Item	Your farm	Average per farm
Total Farm Receipts	\$ _____	\$22,505
Total Farm Expenses	\$ _____	\$16,125
Farm Income	\$ _____	\$ 6,380
Interest on average Capital of \$53,722 at 5%	\$ _____	\$ 2,686
LABOR INCOME per farm	\$ _____	\$ 3,694
Number of operators on 490 farms	_____	540
LABOR INCOME per operator	\$ _____	\$ 3,352

"Labor Income" is a measure used to determine the return the farm operator receives for his labor and management. It is the amount left after paying all farm expenses, and deducting a charge for unpaid family labor and for interest on the capital invested. Labor income is the measure used most commonly when studying or comparing farm businesses.

Changes in inventories during the year are included in figuring labor income. Increases in inventories due to expanding the business are considered as farm receipts and decreases in inventories are included as farm expenses.

Interest payments and payments on debts are not included in the farm expenses. To make all farms comparable, a five percent interest charge on the average capital investment (average of beginning and end inventories) is deducted to get labor income.

The average labor income per operator was \$3,352 or \$279 per month. The labor incomes ranged from minus \$10,500 to \$16,500, or a difference of \$27,000. The distribution of the labor incomes is shown below.

<u>Labor income per operator</u>	<u>No. of farms</u>	<u>Percent</u>
\$5,000 and over	122	25
\$2,500 to \$4,999	180	37
0 to \$2,499	153	31
Minus return	35	7

RATE OF RETURN ON INVESTMENT  
490 New York Dairy Farms, 1961

Item	Your farm	Average per farm
Total Farm Receipts	\$ _____	\$22,505
Total Farm Expenses	\$ _____	\$16,125
Farm Income	\$ _____	\$ 6,380
Value Operator's Labor *	\$ _____	\$ 3,967
Return on Investment of \$53,722	\$ _____	\$ 2,413
Rate of Return on Investment	_____ %	4.5%

\* \$3,600 per year. There were 540 operators on 490 farms.

The return on investment is calculated by deducting from the "Farm Income" a charge for the operator's labor. This return is then divided by the average investment for the year to determine the rate of return on investment.

The average return on investment was 4.5 percent or slightly more than the rate of interest many people earn on their savings.

PART II - ANALYSIS OF THE FARM BUSINESS

It is important that farmers learn how to keep good records and continue to keep these records to check on the financial success of their businesses. It is much more important that farmers use these records to analyze the farm business to determine the strong and weak points and use this analysis as a basis for making changes in the business. This section of the publication presents averages for various business factors with which farmers can compare their own businesses. Feed costs and labor and machinery costs are studied in detail. Also included are some tables and graphs to show the relationship of some of the business factors to labor incomes.

The relationship of size of business, rates of production, labor efficiency, and cost control to labor income is examined. The measures used for each of these factors are:

Size of business:	Number of cows
Rates of production:	Pounds of milk sold per cow
Labor efficiency:	Pounds of milk sold per man
Cost control:	Percent purchased feed is of milk receipts
	Machinery cost per cow
	Labor and machinery cost per cow

Complete asset and liability information for a group of 74 farms from five counties is included to help farmers do some analysis of their own financial situation.



LABOR AND MACHINERY COST  
490 New York Dairy Farms, 1961

Item	Your farm	Average per farm
<b>Labor costs:</b>		
Value operators' labor*	\$ _____	\$3,967
Hired labor	\$ _____	1,319
Unpaid family labor	_____	373
Total labor	\$ _____	\$5,659
<b>Machinery cost:</b>		
Total machinery cost	_____	4,056
Total labor and machinery cost	\$ _____	\$9,715
-----		
<b>Labor and machinery cost:</b>		
Per crop acre	\$ _____	\$ 98
Per cow	\$ _____	256
Per cwt. milk sold	\$ _____	2.57

\*Operator's labor valued at \$3,600 per year. There were 540 operators on the 490 farms.

Farmers frequently justify high machinery costs on the basis that the machinery has saved labor. To check on this, one can figure the combined labor and machinery cost per unit.

Since the operator is not paid, it is necessary to estimate the value of his labor. Here the operator's labor has been valued at \$3,600 per year. This gives some basis for studying the total labor and machinery costs on a farm.

The total cost of labor to a farm business is many times overlooked. The operator and his family supply about two-thirds of the labor on the average of these dairy farms. Much of this labor cost doesn't show in a farm record because it is not paid directly. With the operator's labor valued at \$300 per month, the total labor cost was 40 percent greater than the machinery cost.

Of the total cost of producing milk, labor made up 25 percent while feed was 21 percent, machinery cost 18 percent and all other costs 36 percent. Labor becomes the largest single cost in the operation of a dairy farm when the value of the operator's labor is included. It is highly important that all farm labor be used efficiently.

IMPORTANT FACTORS AFFECTING FARM INCOMES

Research has shown that size of business, rates of production, and labor efficiency are three important factors affecting farm incomes. Below are the group averages of selected measures for each of these three factors.

BUSINESS FACTORS  
490 New York Dairy Farms, 1961

Factor	Your farm	Average per farm
<u>Size of Business</u>		
Total work units	_____	516
Man equivalent	_____	1.8
Number of cows	_____	38
Pounds of 3.7 milk sold	_____	378,684
<u>Rates of Production</u>		
Pounds of 3.7 milk sold per cow	_____	9,965
Tons of hay per acre	_____	2.6
Tons of corn silage per acre	_____	12
Bushels of oats per acre	_____	50
<u>Labor Efficiency</u>		
Work units per man	_____	287
Number of cows per man	_____	21
Pounds of 3.7 milk sold per man	_____	210,380
Crop acres per man	_____	55

Farm management studies show that, in general, larger farms pay better than smaller farms. Larger farms make it possible to make better use of labor and equipment. However, size alone does not always mean profitable operation.

High rates of production are obtained by following the best known practices in both crop and animal production.

Good labor efficiency can be accomplished in many ways. Some farmers do it by long hours of work. Others get efficiency by wise use of labor saving equipment. Still others develop efficient work habits and practices.

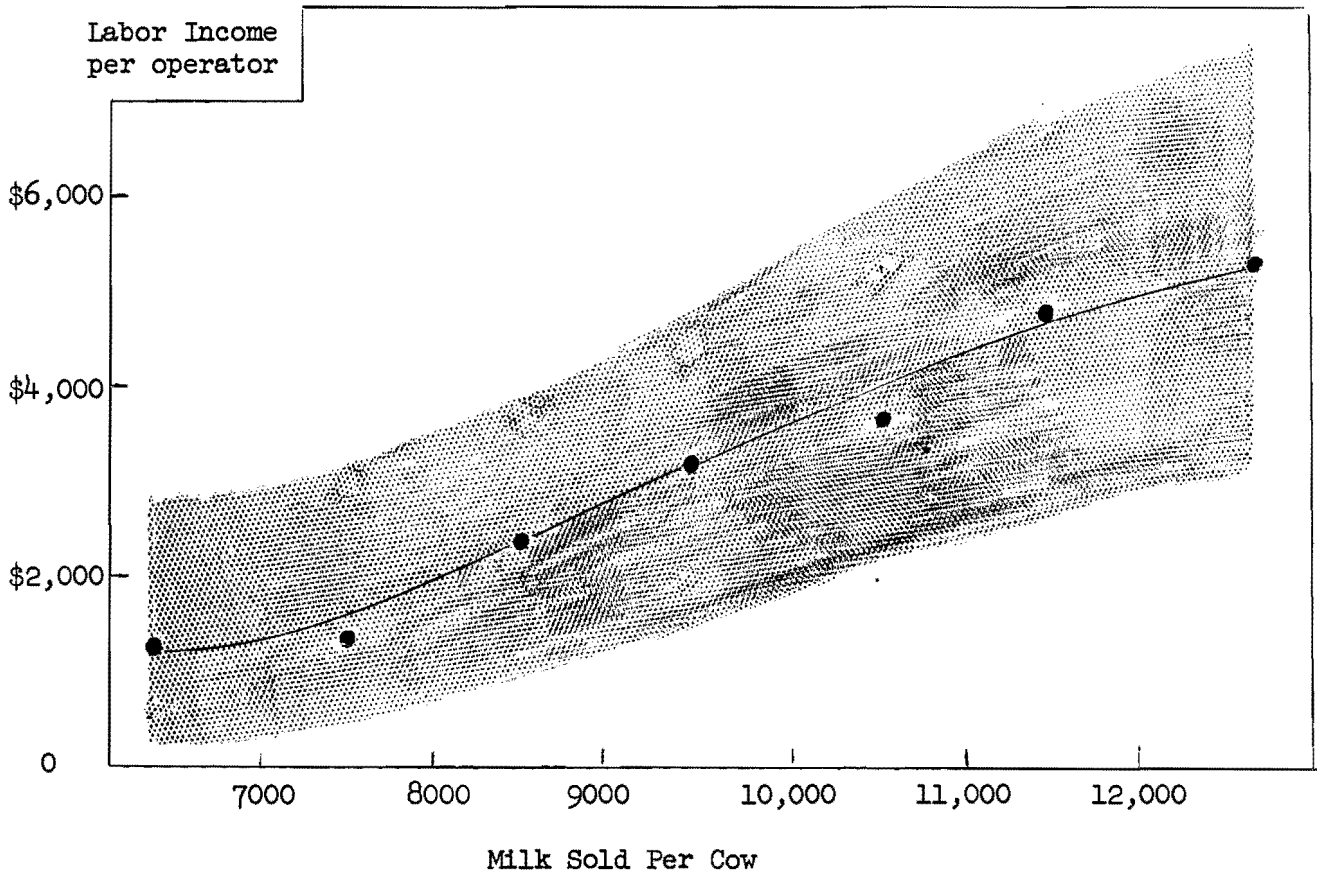
FARM BUSINESS CHART FOR FARM MANAGEMENT COOPERATORS

In 1961, a total of 490 farms were included in the general dairy farm business summary. Business analysis of these farms show them to be above the state average in most factors affecting profits. Information from these farms has been used to construct the chart below. The figure at the top of each column is the average for the highest (or lowest) ten percent of the farms in that factor. The next figure in the column is for the next highest ten percent of the farms and so forth down the column. Each of the columns is independent of the others.

Man equiv- alent	Size		Rates of Production			Labor Efficiency		Feed Factors	
	Number of cows	Pounds of milk sold	Pounds milk sold per cow	Tons hay per acre	Tons corn silage per acre	Cows per man	Pounds milk sold per man	Hay equiv. per cow	Percent feed is of milk receipts
3.3	75	802,800	12,900	4.2	20	32	337,800	10.3	12
2.4	52	540,700	11,700	3.4	16	26	273,100	8.0	18
2.2	45	454,600	11,100	3.0	15	25	248,500	7.1	21
2.0	39	400,000	10,600	2.8	13	22	229,700	6.5	24
1.8	36	361,300	10,200	2.5	12	21	208,700	6.1	27
-----									
1.6	33	326,800	9,700	2.4	11	20	190,700	5.7	29
1.5	31	287,400	9,200	2.2	10	19	178,300	5.4	31
1.3	27	251,900	8,700	2.0	10	17	163,000	5.0	34
1.2	23	211,600	7,900	1.9	8	15	141,300	4.3	38
1.1	18	150,000	6,900	1.4	6	12	105,200	3.2	44

How does your business measure up against this group of commercial dairy farms? Take a pencil and draw a line through each column which will show where your business stands. Are you in the "first division" (above the center line) on more than half of these factors?

MILK SOLD PER COW AND LABOR INCOME  
490 New York Dairy Farms, 1961

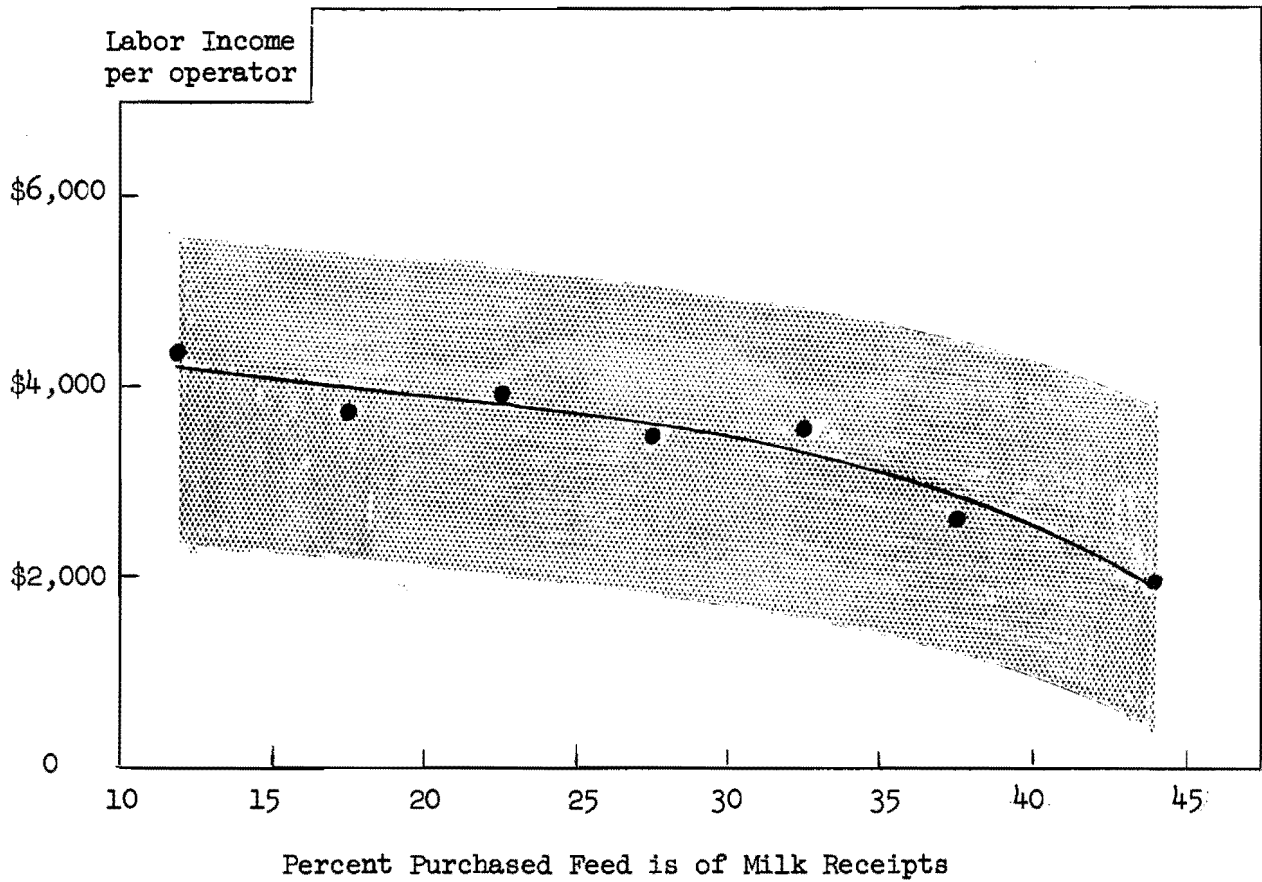


The average income per operator was over four times as great on the farms that sold over 12,000 pounds of milk per cow as on those that sold less than 7,000 pounds. The shaded area shows that there is somewhat more variation in labor income among farms as the milk sold per cow increases. The farms with higher producing cows had slightly larger herds and sold more milk per man.

MILK SOLD PER COW AND LABOR INCOME  
490 New York Dairy Farms, 1961

Pounds milk sold per cow	Number of farms	Number of cows	Pounds milk sold per man	Operator's labor income per cow	Labor income per operator
Under 7,000	24	34	135,100	\$ 37	\$1,250
7,000 to 8,000	50	33	145,900	40	1,330
8,000 to 9,000	72	38	177,400	61	2,330
9,000 to 10,000	100	37	204,100	86	3,170
10,000 to 11,000	106	39	215,200	93	3,630
11,000 to 12,000	79	40	225,800	119	4,780
12,000 and over	59	42	278,800	126	5,290

PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR INCOME  
490 New York Dairy Farms, 1961

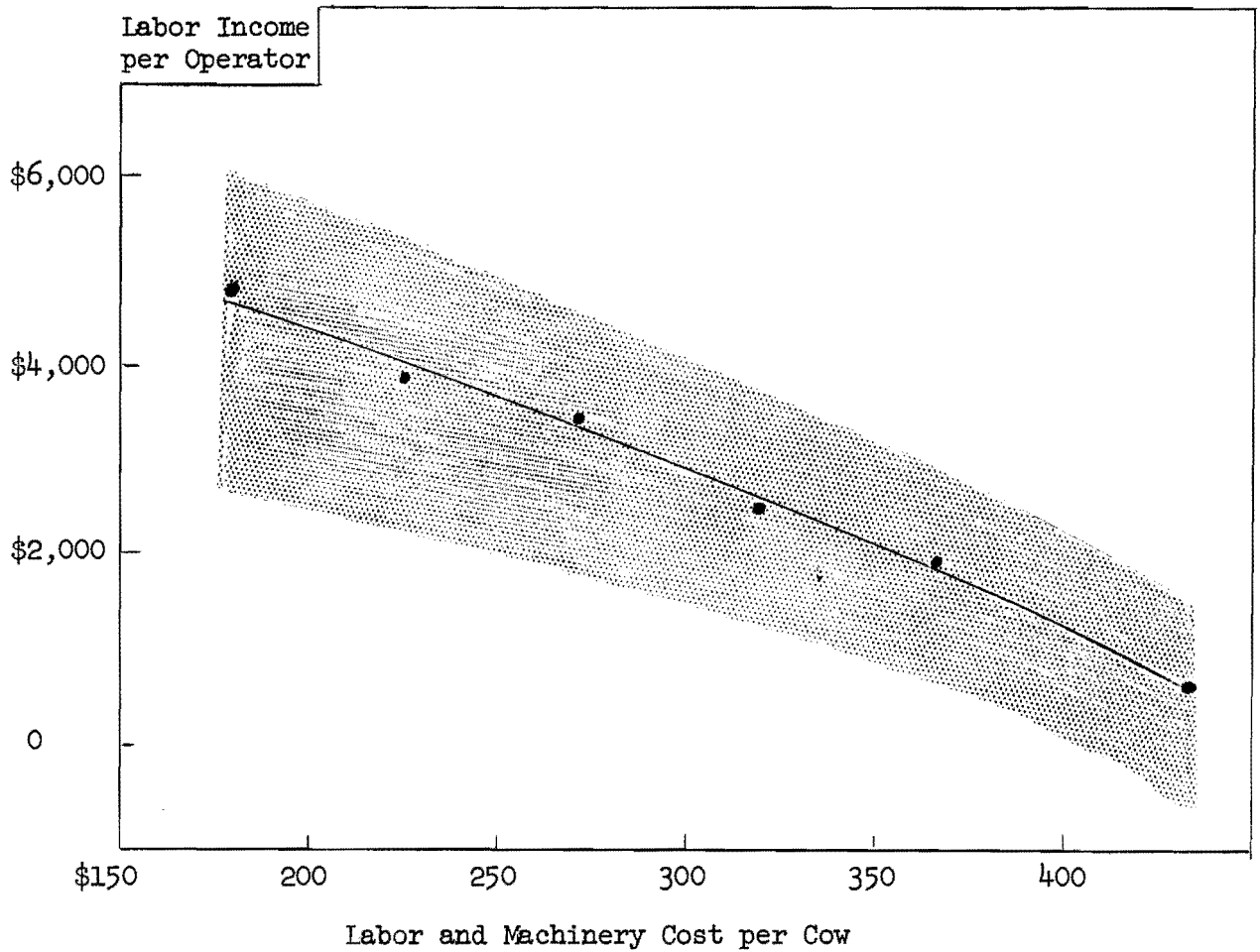


The farmers that paid out 35 percent or more of their milk receipts for purchased feed had considerably lower labor incomes than those that paid out a smaller percentage. There was little difference in labor incomes in the 15 to 35 percent range but farmers that paid out less than 15 percent of the milk check for feed had somewhat higher incomes.

PERCENT PURCHASED FEED IS OF MILK RECEIPTS AND LABOR INCOME  
490 New York Dairy Farms, 1961

%Feed bought is of milk sales	Number of farms	Number of cows	Pounds of milk sold		Labor income per operator
			per cow	per man	
Under 15	36	34	9,760	184,300	\$4,350
15 - 19	61	38	9,460	189,200	3,700
20 - 24	85	38	10,030	200,600	3,880
25 - 29	105	39	10,070	206,700	3,500
30 - 34	84	40	10,110	224,700	3,590
35 - 39	63	34	9,980	199,500	2,620
40 and over	56	41	9,890	213,500	1,960

LABOR AND MACHINERY COST PER COW AND LABOR INCOME  
490 New York Dairy Farms, 1961



The average labor income was much higher on farms with labor and machinery costs under \$200 than on those with costs of \$400 or more per cow. Average herd size and pounds of milk sold per man were greater on farms with low labor and machinery cost per cow. Milk sold per cow was slightly higher on farms with higher labor and machinery costs.

LABOR AND MACHINERY COST PER COW AND LABOR INCOME  
490 New York Dairy Farms, 1961

Labor & Mach. cost per cow	Number of farms	Number of cows	Pounds milk sold		Labor Income per operator
			per cow	per man	
Under \$200	52	47	9,220	255,000	\$4,825
\$200 to \$250	134	43	9,870	235,700	3,900
\$250 to \$300	169	38	10,420	208,300	3,462
\$300 to \$350	86	31	10,280	177,100	2,603
\$350 to \$400	28	26	10,210	156,200	2,054
\$400 and over	21	20	10,538	131,700	738