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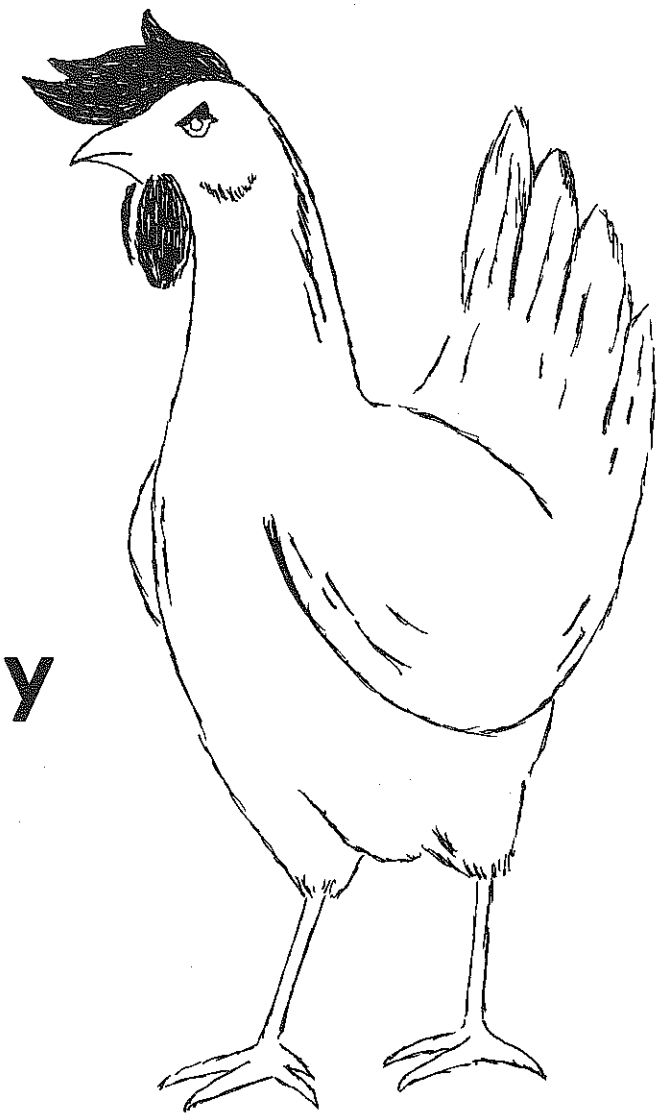

Poultry Farm Business Summary 1979

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POULTRY FARM BUSINESS SUMMARY

Large nonfarm businesses usually prepare and publish an annual report in which they review and analyze the business for the year. This provides a basis for evaluating past operations and for making plans for the future. A similar summary and analysis is useful in managing a farm business. The Cooperative Extension business management projects provide farm operators an annual business report which can be used much the same as nonfarm business annual reports.

Poultry farm business management records have been summarized by the College of Agriculture and Life Sciences at Cornell for a number of years. For the 1979 record year, 25 poultrymen submitted records for summary and analysis. Extension field staff working with poultrymen collected the figures for each farm and the College staff summarized them. The summary results are presented in this workbook.

Poultry farm businesses vary in organizational makeup. The farms included in this report were divided into two groups; poultry (egg production) only, and poultry and others which include those with other major enterprises such as crops, dairy or hogs.

The economic climate for poultrymen in 1979 was better than 1978. Egg prices averaged 6.3¢ per dozen higher in 1979 than 1978. Layer feed prices for 1979 averaged higher than 1978. However, the egg to feed ratio was about the same as 1978 and poultrymen averaged $4,598 more for labor income in 1979.

This workbook is designed to provide a systematic summarization and analysis of a poultry business. The group averages can be used in making comparisons. Working through this report step by step provides a good checkup for a poultry operation. In addition to the persons whose records are in the summary, this report should be useful to other poultrymen in the State, to teachers of agriculture, college farm management instructors, agency representatives, and to agribusiness persons.

Acknowledgements

This summary was prepared by D. L. Cunningham, Department of Poultry & Avian Sciences, New York State College of Agriculture and Life Sciences, in cooperation with Cooperative Extension Specialists S. E. Ackerman, A. Aja and W. J. Toleman. Myrtle Voorheis supervised the summarization of the records and Barbara Smagner typed this report.

GOOD MANAGEMENT IS BASIC

HOW DO YOU MEASURE UP

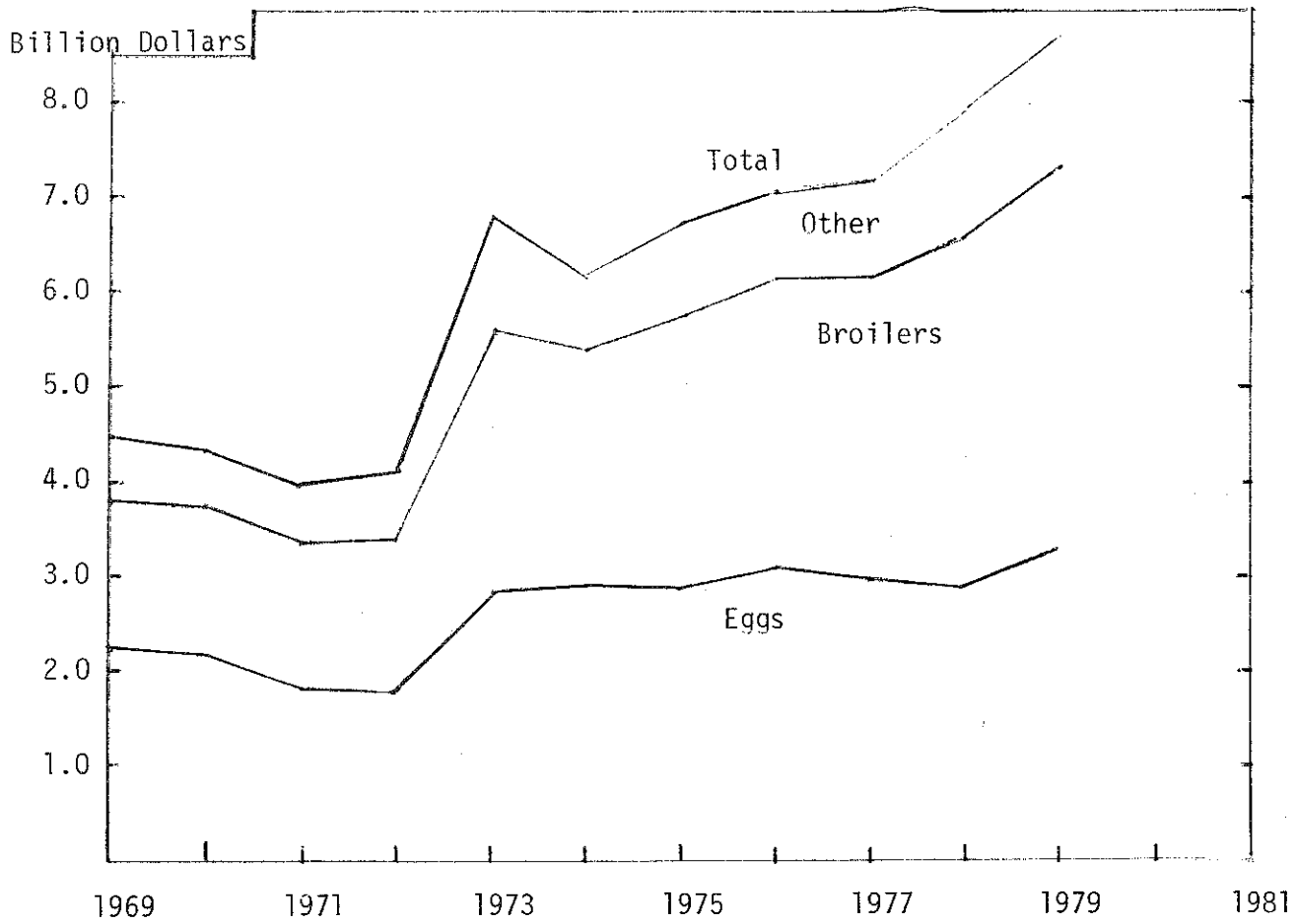
1. **Have you developed a systematic approach to management problems?**
2. **Do you have the facts on your business?**
3. **Are you improving your managerial skills?**

Steps in making a management decision:

1. Locate the trouble spot (problem)
2. What is your objective? (goal)
3. Size up what you have to work with (resources)
4. Look for various ways to solve the the problem (alternatives)
5. Consider probable results of each way (consequences)
6. Compare the expected results (evaluate)
7. Select way best suited to your situation (decision)
8. Put the decision into operation (action)

This workbook can help you!

GROSS FARM INCOME FROM POULTRY AND EGGS
United States, 1969-1979



SOURCE: USDA Poultry & Egg Situation

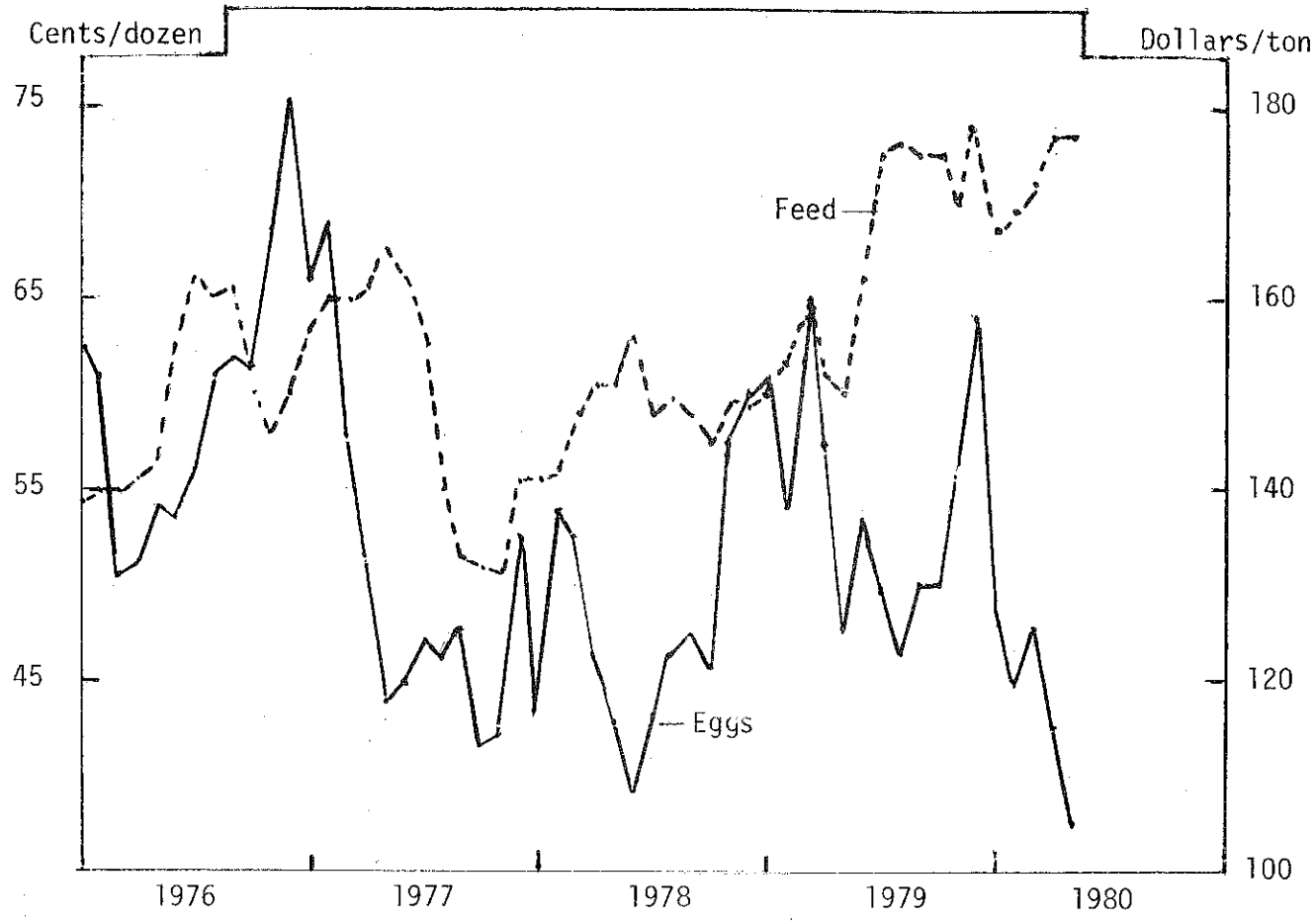
Gross farm income from poultry and eggs in the United States reached a new high in 1979 with a total value of 8.7 billion dollars. This is almost double the value in 1969. Eggs accounted for 38 percent of the total gross income, broilers 46 percent, and turkeys 14 percent. In 1979 income from broilers was 700 million dollars larger than the total income from egg sales.

Table 1. GROSS FARM INCOME FROM POULTRY AND EGGS, U.S. 1967-1979

Year	Sales				Home Consumption		Gross Income
	Eggs	Broilers	Turkeys	Poultry	Eggs	Other	
	- million dollars -						
1969	2,212	1,531	454	185	38	8	4,428
1970	2,190	1,475	498	102	30	6	4,302
1971	1,801	1,487	500	99	20	5	3,906
1972	1,764	1,623	537	101	17	5	4,046
1973	2,859	2,690	936	169	27	8	6,689
1974	2,884	2,436	683	116	25	5	6,151
1975	2,797	2,915	793	104	22	5	6,637
1976	3,110	2,953	825	135	24	6	7,053
1977	2,973	3,067	910	130	21	6	7,107
1978	2,900	3,682	1,157	129	19	5	7,892
1979	3,335	4,020	1,215	164	21	6	8,760

SOURCE: USDA Poultry & Egg Situation

FARM PRICE OF EGGS AND LAYING FEED PRICES
New York, 1976 to 1980



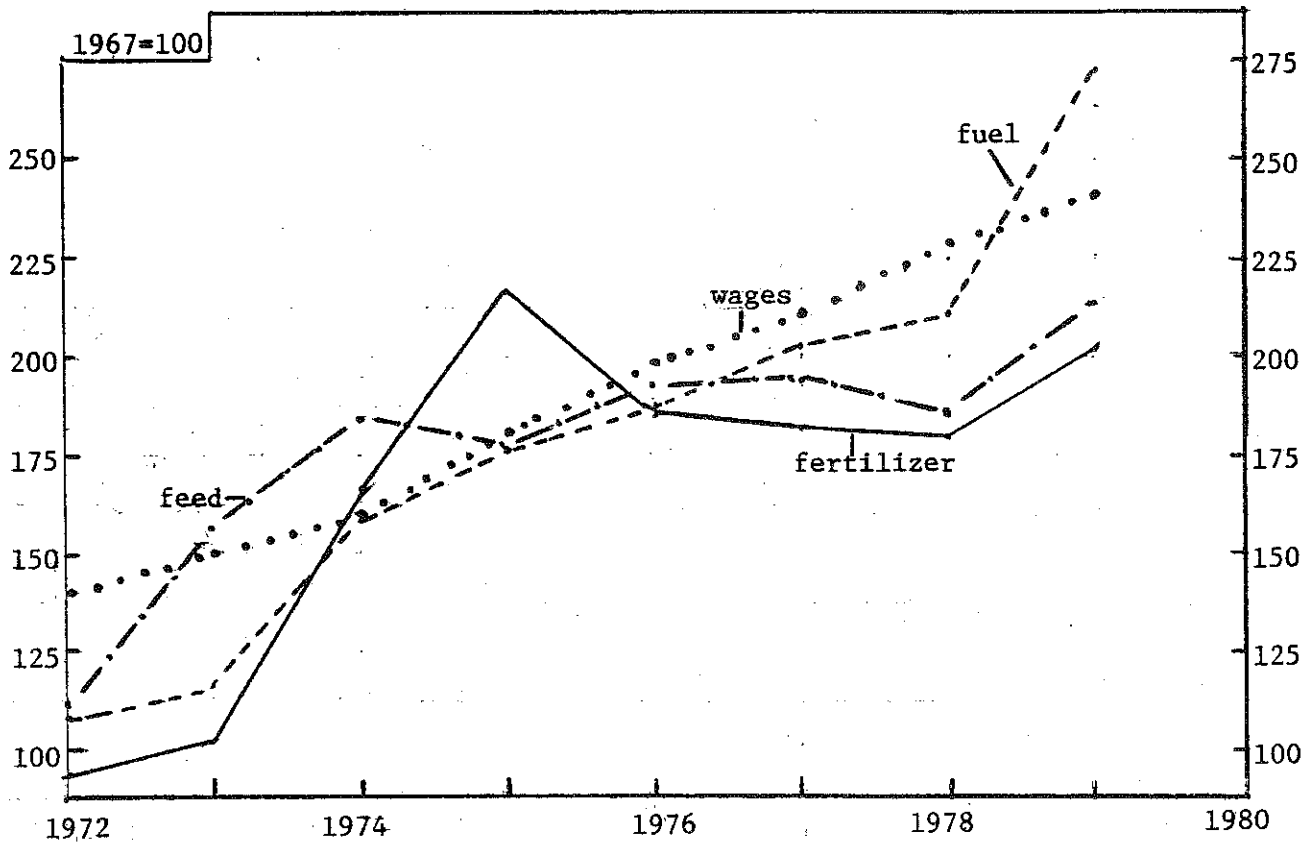
The relationship of feed and egg prices is a major factor affecting poultry incomes. Egg prices in 1979 averaged 6.3¢ more than 1978. Egg prices tend to fluctuate more than feed prices. The egg-feed ratio as expressed in pounds of feed a dozen eggs will buy was 6.6 for 1979 compared with 6.5 for 1978 and 7.0 for 1977.

Table 2. FARM PRICE OF EGGS AND LAYING FEED PRICES

Month	Egg Prices				Laying Feed Prices			
	1977	1978	1979	1980	1977	1978	1979	1980
January	66.2¢	43.3¢	60.9¢	48.5¢	$157	$141	$150	$167
February	68.9	54.1	54.1	45.1	160	142	153	169
March	57.9	52.6	65.0	47.8	160	148	159	172
April	51.6	46.3	57.2	42.5	161	151	152	177
May	43.9	43.0	47.6	37.6	165	151	150	177
June	45.1	39.4	53.3	___	162	156	162	___
July	47.0	43.2	49.9	___	150	148	175	___
August	46.2	46.5	46.6	___	140	149	176	___
September	48.0	47.4	50.3	___	133	148	175	___
October	41.8	45.8	50.1	___	132	145	175	___
November	42.3	57.5	55.8	___	132	149	170	___
December	52.6	60.2	64.1	___	141	149	178	___
Annual Avg.	51.0	48.3	54.6	___	149	148	165	___
Egg-feed ratio (lbs./doz.)	7.0	6.5	6.6					

SOURCE: USDA Agricultural Prices

PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1972-1979



Prices of major farm inputs have all increased since 1972 but only wages paid by farmers have increased at a fairly constant rate. Feed prices rose 15 percent in 1979 following a four year period of stable prices. Fertilizer prices increased 12 percent in 1979 after declining for three consecutive years. Fuel prices jumped 29 percent last year following four years of single digit increases.

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1973-1979

	Index 1967=100				
Year	Feed	Fertilizer	Fuel	Wages	Taxes
1973	157	102	116	150	146
1974	185	167	159	160	154
1975	177	217	177	180	166
1976	192	185	187	199	176
1977	194	182	203	212	195
1978	186	180	212	229	210
1979	213	202	273	241	221
Percent increase:					
1972 to 1978 (ave./year)	13%	16%	22%	10%	8%
1978 to 1979	15%	12%	29%	5%	5%

SOURCE: U.S.D.A. - Agricultural Prices

General Summary of All Farms

Twenty-four poultry farm reocrds for 1979 were used for this summary. The organization of these farms varied widely. There were nine poultry with other major enterprises, and fifteen straight layer operations. In this general section, all businesses are included. For the more detailed analysis in the sections that follow, the 15 layer operations and the nine layer with other operations are included.

Table 4. FARM BUSINESS FINANCIAL SUMMARY
24 New York Poultry Farms, 1979

Item	Average 24 Farms
Average Capital Investment	$454,200
Total Farm Receipts	549,879
Total Farm Expenses	501,097
Farm Income	$ 48,782
Interest @ 9% on Equity Capital	31,711
Labor and Management Income Per farm	$ 17,071
Number of Operators	1.29
LABOR AND MANAGEMENT INCOME PER OPERATOR	$ 13,233

Labor and management income is a measure of the return to the operator for his labor and management. It is the most commonly used measure for comparing the overall results of farm operations. For these 24 poultry farms, the average labor and management income per operator was $13,233. In addition to the labor and management income, the operator usually has certain privileges such as a house to live in, eggs and poultry to use, and other miscellaneous items.

Labor and management income per operator varied widely. There were 7 farms with minus labor incomes, and 6 with incomes per operator of over $25,000. Only three of the farms with minus incomes were in the layer group, while 5 of the 6 with incomes over $25,000 were in the layer group.

The average capital investment on these 24 farms was $454,200. The receipts averaged $550,000, and the expenses $501,000. On these farms, the receipts were considerably more than the capital investment giving a "capital turnover" (as measured by the number of years for the receipts to equal the capital) of about 0.8. This is in contrast to dairy businesses where commonly it takes two to three years for receipts to equal capital.

The average labor and management income per operator for 610 New York dairy farm businesses in 1979 was $21,962.

Table 5. GENERAL FARM BUSINESS FACTORS
24 New York Poultry Farms, 1979

Business Factor	Average 24 Farms
Man equivalent	4.6
Months unpaid labor	2.5
Months hired labor	37.9
Total months of labor	55.2
Percent of labor hired	69%
Average labor cost/month hired	$878
Average number hens for year	36,350
Average number crop acres (9 poultry 7 other farms)	368
Total work units	1,928
Eggs sold per hen	240
Pounds feed per dozen eggs	4.0
Average price per cwt. layer feed	$7.74
Average price per dozen eggs	55.6

Poultry farm operations differ a great deal in their organization. Poultry only versus poultry combined with other enterprises is another, while contract versus independent operations is still another. The range in the capital investment is a reflection of these. The low capital investment was $45,000, while the high was $2,500,000. Similarly, the low expense reported was $64,300, while the high was $2,250,000. The wide range indicates that one should recognize limitations in the "averages" when they are used.

The labor force on these farms ranged from 1.1 to 12.6 man equivalent with an average of 4.6. For all 24 farms, 69% of the labor was hired and the rest was furnished by the operator and his family. The average labor expense per month of hired labor was $878. Unpaid family labor was valued at $450 per month.

Number of hens is a common measure of size for a laying operation. The numbers varied from 6,000 to 258,000. These reflect the average number of layers for the year. The number of eggs sold per hen averaged 240 but with a range from 186 to 297.

Marketing arrangements differ with some selling all eggs wholesale, while other sell all retail. The average price received per dozen sold by the 24 farms during 1979 was 55.6 cents. A number of poultrymen in the summary had premium markets.

Feed is the major cost item on poultry farms. Efficiency of feed conversion is an important factor affecting incomes. It is not easy to arrive at this figure on many farms but efforts were made to calculate this factor. The average for the 24 farms was 4.0 pounds per dozen eggs. Layer feed costs per hundredweight averaged $7.74.

SUMMARY OF THE EGG PRODUCING BUSINESSES

The first step in examining any business operation is a systematic summary of the business. In this section we will examine the physical resources, business practices, captial investment, receipts, expenses, and the financial summary for the year.

Physical Resources and Business Practices

Below is a summary of the physical resources and business practices used by the 15 farms with poultry only and the 9 farms with poultry and other for the year 1979.

Table 6. LABOR FORCE, LIVESTOCK, CROPS GROWN, AND BUSINESS PRACTICES
24 New York Poultry Farms, 1979

Item	My Farm	Aver. Per Farm & Numbers Reporting			
		15 Farms with Poultry Only		9 Farms with Poultry & Other	
Labor					
Months of:					
Operators	_____	(15 farms)	13.3	(9 farms)	17.3*
Family--unpaid	_____	(8 farms)	2.7	(3 farms)	2.3
Hired	_____	(14 farms)	38.8	(9 farms)	36.4
Total	_____		54.8		56.0
Man equivalent (no. men)	_____		4.6		4.7
Number of operators	_____		1.1		1.4
Percent of labor hired	_____ %		71%		94%
Livestock (number)					
Laying hens	_____		44,460		23,000
Pullets raised	_____	(5 farms)	52,740**	(2 farms)	58,500
Crops (acres grown)					
Hay	_____			(5 farms)	32**
Corn for grain	_____			(8 farms)	316**
Oats	_____			(5 farms)	26**
Wheat	_____			(6 farms)	51*
Total acres of crops	_____				360
Business Practices					
Percent of eggs marketed:					
Wholesale	_____ %		36%		71%
Premium outlet	_____ %		44%		22%
Retail	_____ %		20%		7%
Percent of replacement pullets:					
Raised	_____ %		42%		57%
Bought	_____ %		48%		43%
Percent of layer feed:					
Purchased	_____ %		98%		65%
Mixed on farm	_____ %		2%		35%

*Four farms were partnerships.
**Average of number reporting.

Capital Investment

The capital used to operate a poultry business is invested in machinery and equipment, poultry, feed and supplies, and land and buildings. Some of the capital used is owned by the operator and some is borrowed. The end-of-year farm inventory is used as a measure of the capital investment in the business. It is suggested that the inventory reflect "market value".

Table 7. FARM INVENTORY VALUES, JANUARY 1, 1980
24 New York Poultry Farms

Item	My Farm	Amount Per Farm	
		15 Farms With Poultry Only	9 Farms With Poultry & Other
Machinery & equipment	$_____	$117,444	$ 96,169
Poultry	_____	66,930	29,128
Other livestock	_____	1,640	28,856
Feed & supplies	_____	22,673	86,378
Land & buildings	_____	267,358	235,778
TOTAL INVESTMENT	$_____	$476,045	$476,309

Total investment on these farms ranged from $45,000 to $2,465,000. Eight of the poultry and other farms, and eight of the poultry only farms had investments of more than $250,000. The inventories of land and buildings, machinery, and feed and supplies were larger on the farms with other enterprises, which is logical.

How the capital is used is more important than the amount. Below are some measures used in analyzing the efficiency of the use of capital. Farms having other enterprises have larger investments because of the added land and machinery used.

Table 8. CAPITAL INVESTMENT ANALYSIS

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Total investment/man	$_____	$103,490	$101,340
Total investment/hen	$_____	$10.70	$20.70
Machinery investment/hen	$_____	$2.64	$4.18
Land & buildings/hen	$_____	$6.00	$10.25
%Land & buildings are of total investment	_____ %	56%	50%
Capital turnover (years)	_____	.76	1.1

Receipts

The source and amount of receipts tells us about the nature and size of the business. The size of many nonfarm businesses often is measured in terms of gross sales. However, in poultry businesses, egg price fluctuations from year to year cause total receipts also to fluctuate.

Table 9. FARM RECEIPTS
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Egg sales	$_____	$551,955	$332,156
Poultry sales	_____	9,088	13,608
Other livestock sales	_____	321	34,076
Crop sales	_____	618	16,079
Work off farm	_____	71	2,986
Government payments & refunds	_____	48	701
Miscellaneous	_____	6,223	2,268
Total Cash Farm Receipts	$_____	$568,324	$401,874
Increase in Inventory	_____	58,875	19,143
TOTAL FARM RECEIPTS	$_____	$627,199	$421,017

Total cash receipts averaged $568,324 for the farms with poultry only, and $401,874 for the farms with poultry and other. Egg sales accounted for 97 percent and 83 percent respectively of the cash receipts on the two groups of farms. Crop sales accounted for 4 percent of the cash receipts on the farms with other enterprizes, and the poultry sales accounted for 3 percent of the cash receipts.

Increases in inventory are usually due to expansion or improvements in the business. Inventory increases are considered as farm receipts. The increases could have been sold and converted to cash, therefore, they are considered as receipts in summarizing the year's business. Costs associated with the increases are reported as farm expenses.

Table 10. INCOME ANALYSIS

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Av. price/doz. of eggs sold	_____¢	56.5¢	53.2¢
Total cash receipts/man	$_____	$123,550	$85,490
Total cash receipts per $1,000 investment	$_____	$ 1,194	$ 884

Expenses

Knowing where the money went is important in any business analysis. The first step in controlling costs on poultry farms is to know what the expenses are and how they compare with those of other businesses. Below is a summary of the average farm expenses for these two groups of poultry farms.

Table 11. FARM EXPENSES
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only		9 Farms With Poultry & Other	
Chicks purchased	$_____	(5 farms)	$ 11,025	(4 farms)	$ 5,826
Pullets purchased	_____	(13 farms)	53,404	(6 farms)	21,886
Layer feed bought	_____		253,391		110,413
Other feed	_____		25,157		12,330
Hired labor	_____		31,817		35,693
Machine hire	_____		4,032		766
Machinery expense	_____		5,636		9,798
Gas and oil	_____		4,594		13,459
Poultry supplies, etc.	_____		26,546		18,254
Crop expense	_____		2,370		27,109
Building expense	_____		2,634		812
Taxes	_____		3,098		4,680
Insurance	_____		4,982		3,516
Utilities	_____		7,708		5,688
Eggs bought for resale	_____	(11 farms)	49,200	(2 farms)	80,604
Interest paid	_____		8,005		9,633
Miscellaneous*	_____		9,786		12,250
TOTAL CASH OPERATING EXPENSE	$_____		$503,385		$372,717
New machinery	_____		37,892		10,290
Real estate	_____		25,395		6,139
Unpaid labor	_____		997		1,000
Decrease in inventory	_____		0		0
TOTAL FARM EXPENSES	$_____		$567,669		$390,146

*Advertising expense included $902 with 5 farms reporting.

Interest paid was included as a cash expense in the 1976 summary for the first time. Prior summaries only had an interest charge calculated on the average capital for the year.

Financial Summary

The financial success of a poultry business can be measured in various ways. There is no one best measure so in this summary several are used.

Farm income measures the return from the business to the operator for his labor and management and equity capital. Farm income is the difference between total receipts (including increase in inventory) and total expenses (including decrease in inventory and interest paid on debts).

Table 12. FARM INCOME, AND LABOR AND MANAGEMENT INCOME
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Total farm receipts	$_____	$627,199	$421,017
Total farm expenses	_____	567,669	390,146
FARM INCOME	$_____	$ 59,530	$ 30,871
Interest on Equity Capital @ 9%	_____	29,872	34,776
Labor income per farm	$_____	$ 29,658	$- 3,906
Number of operators	_____	(18) 1.2	(13) 1.44
LABOR AND MANAGEMENT INCOME PER OPERATOR	$_____	$ 24,715	$- 2,712

Labor and management income is the return to the farm operator for his time and efforts. This is the measure most commonly used when studying farm businesses. To get labor and management income, a 9% interest charge on the operator's equity capital is subtracted from the farm income. The charge on equity capital represents an "opportunity cost" or what could have been earned had this capital been invested in something such as a certificate of deposit.

The average labor income per operator for the 15 farms was $24,715 and for the 9 farms $-2,712. Farms with poultry and other enterprises had lower farm receipts for egg sales and higher figures for interest on equity capital resulting in a negative value for average labor income per operator.

The labor and management incomes varied widely as shown below. Twenty-nine percent of the farms had a minus income, while 35 percent had incomes of $20,000 or more.

DISTRIBUTION OF LABOR INCOMES FOR 24 POULTRY OPERATIONS

Labor and Management Income Per Operator	Farms	
	Number	Percent
Minus	7	29
0 - $ 9,999	5	25
$10,000 - $19,999	3	13
$20,000 - or more	8	33

Table 13. RATE OR RETURN ON INVESTMENT
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Farm Income	$_____	$ 59,530	$ 30,871
Plus interest paid	_____	8,005	9,633
		$ 67,535	$ 40,504
Minus value of operator's labor and management*	_____	12,000	14,000
Return on investment	$_____	$ 55,535	$ 26,504
Average capital investment	$_____	$466,608	$466,738
RATE OF RETURN ON INVESTMENT	_____%	12%	6%

*$10,000 per operator - some farms had more than one operator.

Rate of return on investment is calculated by adding to the "farm income" the interest paid and then deducting a charge for the operator's labor and management, and then dividing by the average investment for the year. In the above calculation, $10,000 has been used as the value of the operator's labor and management. This is a modest charge for the operator's labor and management.

Net farm cash flow reflects the cash available from the year's operation of the farm business for family living, interest and debt payments, and new capital purchases or investments. A family may have had additional cash available if some member of the family had a nonfarm income or if money was inherited or borrowed.

Debt repayment ability is a measure of the amount of cash available for debt payments. It is calculated by deducting family living expenses from the farm cash operating income. Since actual living expenses were not available, they were estimated at $10,000 per operator. It is assumed here that new machinery and real estate are purchased with borrowed capital. This measure is useful in planning debt repayment schedules.

Table 14. NET FARM CASH FLOW AND DEBT REPAYMENT ABILITY
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Total cash receipts	$_____	$568,324	$401,874
Total cash operating expense	_____	503,385	372,717
NET FARM CASH FLOW	$_____	$ 64,939	$ 29,157
Plus Interest Paid	_____	8,005	8,615
Total Available	$_____	$ 72,944	$ 37,772
Family cash living expense*	_____	12,000	14,000
DEBT REPAYMENT ABILITY	$_____	$ 60,944	$ 23,772

*Estimated at $10,000 per operator per year.

ANALYSIS OF THE EGG PRODUCTION BUSINESSES

The "summary" of a business provides an overall look at the operation. It shows what you did. The "analysis" which follows includes a more detailed examination of the different parts of the business. The analysis helps to show WHY you did what you did and to find ways to improve the operation. Measures have been developed to aid in analyzing farm business strengths and weaknesses.

In this section, several business factors are examined. Among these are: size of business, rates of production, labor efficiency, and cost control. Since many of the measures are interrelated, all of the factors should be examined before arriving at major conclusions. A complete analysis of the factors should point up the major strong and weak points of a business.

Size of Business

Size is usually the first factor examined when analyzing a business. Size affects other factors such as labor efficiency and cost control. Prices received and paid by poultrymen are often affected by volume which is a function of the size factor.

Farm management research has shown that in general large farm businesses make larger incomes. There are two basic reasons for this. Larger businesses make possible more efficient use of inputs such as equipment, the regular labor foce, and other fixed cost items. Secondly, there are more units of production (hens) on which to make a profit. However, when a business is unprofitable, these same factors operate and large farms have larger losses.

Table 15. MEASURES OF SIZE OF BUSINESS
24 New York Poultry Farms, 1979

Measure	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Number of hens	_____	44,465	22,825
Dozens of eggs sold*	_____	977,553	623,893
Dozens of eggs produced	_____	886,235	465,412
Man equivalent	_____	4.6	4.7
Total work units	_____	2,067	1,698
Total farm receipts	$_____	$627,199	$421,017
Total investment (end year)	$_____	$476,045	$476,309

*Includes eggs bought for resale.

Rates of Production

Rates of production for both poultry and crops are factors contributing to the success of poultry businesses. It is a challenge to find the levels of inputs, such as feed and fertilizer, which will give rates of production that yield the highest net income. This means a consideration of both the physical and economic returns from production.

Table 16. MEASURES OF RATES OF PRODUCTION
24 New York Poultry Farms, 1979

Measure	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Eggs sold/hen	_____	239	245
Bushels corn/acre	_____	---	NA
Bushels oats/acre	_____	---	NA
Bushels wheat/acre	_____	---	NA

Eggs produced and sold per hen is used in measuring the rate of production on poultry farms. Production per hen is calculated by dividing total eggs produced and sold by the average number of hens for the year. Some farmers bought eggs for resale. For eggs per hen, the eggs bought have been deducted from the dozens sold to get the eggs produced and sold.

The eggs sold per hen averaged 239 and 245 for the two groups. The range for the 24 farms was from 186 to 297 eggs sold per hen. This is a range of more than 100 eggs per hen from the lowest to the highest.

The relationship of eggs sold per hen and labor and management income is illustrated below. The farms with higher production were larger and more profitable.

Table 17. EGGS SOLD PER HEN AND LABOR AND MANAGEMENT INCOME
24 New York Poultry Farms, 1979

Eggs Sold Per Hen	Number of Farms	Average Number of Hens	Labor & Mgt. Income/Operator
Less than 220	7	17,522	$-5,026
220 - 240	3	65,293	$918
More than 240	14	39,561	$33,636

Labor Efficiency

Labor efficiency is sometimes claimed to be the most important single business factor affecting incomes on farms today. This is brought about by the fact that the operator's labor and management income is a function of the labor output. Rising farm wage rates over time have meant that generally more output is required to pay those wages. If a poultryman wants top efficiency from his hired worker's time as well as his own, he must keep a close watch on the factors which affect labor efficiency.

Table 18. MEASURES OF LABOR EFFICIENCY
24 New York Poultry Farms, 1979

Measure	My Farm	15 Farms With Poultry Only	9 Farms With Poultry & Other
Dozens eggs sold/man*	_____	212,500	132,700
Dozen eggs produced/man	_____	192,660	99,000
Number hens/man	_____	9,700	4,900
Work units per man	_____	449	361

*Includes eggs bought for resale.

The farms with poultry only as measured above had higher labor efficiency than the farms with poultry and other. In part, the higher dozen eggs sold per man reflects that practice of the poultry only group of buying eggs for resale. Also, on the poultry and other farms, a considerable amount of work is on the crops. This means more total time per hen or per dozen of eggs than on a poultry only operation.

When analyzing your labor efficiency consider:

1. Size of operation - it tends to reduce the overhead time per unit.
2. Extent of work performed - i.e., wholesale vs. retail marketing.
3. Arrangement of buildings and work areas.
4. Work methods - the easy way vs. the hard way.
5. The human factor or how fast persons work.
6. Clarity of directions given to workers.
7. Kind of hired workers employed.

Cost Control

Some poultry farms spend as much as $1,000 per day. With expenses of this amount, cost control is important. As more "input" items are purchased, cost control has a greater effect on incomes. Cost control is difficult to measure but an analysis of good records can provide some useful checks and point to possible areas of cutting costs.

Feed, labor, and machinery are big cost items on poultry farms, but it is important to watch the other costs too. Small leaks can build up into sizable losses. The next three pages are provided to help study your costs.

Table 19. COST CONTROL MEASURES
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry and Other
Layer feed bought per hen	$_____	$ 5.70	$ 4.84
Feed bought/doz. eggs produced	_____¢	29¢	24¢
Lbs. feed/doz. eggs produced	_____	3.9	4.5
Total labor cost per hen*	$_____	93¢	$ 2.10
Total labor cost per dozen eggs produced*	_____¢	4.7¢	10.3¢
Building repairs per hen	_____¢	5.9¢	3.6¢
Utilities per hen	_____¢	17.3¢	24.9¢
Taxes per hen	_____¢	7.0¢	20.5¢
Insurance per hen	_____¢	11.2¢	15.4¢
Total farm production expenses/ hen (total less inventory increase and eggs bought)	$_____	$10.34	$12.72
Total expenses per $100 receipts	$_____	$91	$93

*Includes operator's labor.

For the above measures, it must be kept in mind that the "poultry and other" farms had other enterprises which affect several cost control measures. The feed bought per hen is an example. Much of the crop expense on the poultry and other farms is an indirect feed cost on these operations. Also, the labor cost per dozen eggs on the poultry and other farms includes labor for the production of feed which on poultry only farms would have been purchased.

Labor and machinery costs are sizable on a poultry farm. It is important to keep these under control. Since labor and machinery work as a team, it is well to study them together.

Table 20. POWER AND MACHINERY COSTS
24 New York Poultry Farms, 1979

Item	My Farm		15 Farms With Poultry Only	9 Farms With Poultry and Other
Beginning inventory	$_____		$ 94,060	$ 95,702
New machinery bought	_____		37,892	10,290
Total (1)		$_____	$131,952	$105,992
End Inventory	$_____		117,444	96,169
Machinery Sold	_____		0	333
Total (2)		$_____	$117,444	$ 96,502
Depreciation (1 minus 2)	$_____		$ 14,508	$ 9,490
Int. @ 9% av. inventory	_____		9,518	8,634
Gas and oil	_____		4,594	13,459
Machinery repairs and auto expense	_____		5,636	9,798
Machine hire	_____		4,032	766
Electricity (farm share)	_____		6,668	5,312
Total Power and Machinery Cost		$_____	$ 44,956	$ 47,459
Less: Gas tax refund	$_____		$24	$78
Income from machine work	_____		0 24	0 -78
NET POWER AND MACHINERY COST			$ 44,932	$47,381
Net power and machinery costs:				
per hen			$1.01	$2.08
per man			$9,767	$10,081
per dozen eggs produced*			5.1¢	10.2¢

*Does not include eggs bought and resold.

Depreciation is the largest item in the power and machinery cost group. This is an indirect item and along with interest is often overlooked. Usually half or more of the cost is represented by these two "overhead" items.

With the jump in fuel prices in recent years, the gas and electricity items have taken on added importance. Look for ways to save on energy use.

Farmers sometimes justify high machinery costs on the basis that the machinery saves on high cost labor. It is well to examine this justification. The combined machinery and labor cost measure gives a good check.

Table 21. LABOR AND POWER AND MACHINERY COSTS
24 New York Poultry Farms, 1979

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry and Other
Value of labor of operator*	$_____	$ 8,645	$11,245
Hired labor	_____	31,817	35,693
Unpaid family labor	_____	997	1,000
TOTAL LABOR COSTS	$_____	$41,459	$47,938
New power & machinery cost	_____	44,932	47,381
TOTAL LABOR & MACHINERY COSTS	$_____	$86,391	$95,319
Labor cost per hen	$_____	93¢	$2.10
Labor cost/dozen eggs produced	_____¢	4.7¢	10.3¢
Labor and machinery cost: per hen	$_____	$1.94	$4.18
per dozen eggs sold	_____¢	8.8¢	15.3¢

*Valued at $7,800 per operator.

For the 15 poultry only farms, the labor cost was less than the power and machinery cost. For the poultry and other the machinery and power was less. It is important to watch the combined labor and machinery costs. It is easy to spend for additional machinery but neglect to reduce the labor used. Below are some measures for use in examining labor costs.

Table 22. LABOR USE ANALYSIS

Item	My Farm	15 Farms With Poultry Only	9 Farms With Poultry and Other
Months of hired labor	_____	38.8	36.4
Hired labor expense	$_____	$31,817	$35,693
Labor expense/month hired	$_____	$820	$981
Total labor cost/month	$_____	$757	$856
Percent of total labor by: Operator	_____%	24%	31%
Unpaid family	_____%	5%	4%
Hired	_____%	71%	65%

Capital Efficiency

The capital investment in a poultry farm business is high. For poultry only, the farm inventory value was $10.71 per hen. If the facilities were to be replaced with all new items, the per bird figure would be much higher. In any case, the efficient use of this capital investment is important.

For 1979, additional information was obtained on the types of housing in use and the percent of capacity that the layer houses were used.

Table 23. PERCENT OF LAYER CAPACITY USED AND PERCENT MORTALITY
23 New York Poultry Farms, 1979

Item	My Farm	14 Farms With Poultry Only	9 Farms With Poultry and Other
Percent Layer Capacity Used			
Number of farms reporting	_____	14	9
Capacity of laying house	_____	51,935	24,592
Average number layers	_____	47,104	22,824
% of capacity used	_____ %	91%	93%
Percent Layer Mortality			
Number of farms reporting	_____	11	4
Layer mortality, 1979	_____	3,299	2,044
Average number layers	_____	47,105	22,824
% layer mortality	_____ %	7%	9%

The percent that the average number of layers was of the reported capacity was 91% and 93% for the two groups of farms. With the high capital investment per bird capacity, it is important it be used efficiently. An "empty" cage never helped pay off the debt on layer facilities!

Mortality

Mortality is another factor affecting the returns from poultry operations. Only half of the records showed mortality for the year. The average mortality for the poultry only was 7% and for the poultry and other it was 9%. What was the mortality rate on your farm?

Housing Systems Used

Types of brooding and layer housing systems vary considerably. Twenty-three of the 24 cooperators with layers indicated the type of facilities they were using. The results reported below will provide a basis for comparison.

Table 24. LAYER HOUSING SYSTEMS AND BROODING FUELS USED
24 New York Poultry Farms, 1979

Item	Number Reporting	Percent Reporting	My Farm
Layer Cage Type			
Stair-step	8	35%	_____
Flat deck	3	13	_____
Triple deck	8	35	_____
Other	4	17	_____
Size of Layer Cage			
12 x 16	2	8	_____
12 x 18	4	17	_____
12 x 20	4	17	_____
14 x 24	2	8	_____
15 x 18	1	4	_____
16 x 36	2	8	_____
18 x 24	2	8	_____
20 x 12	1	4	_____
20 x 15	1	4	_____
20 x 20	1	4	_____
20 x 24	1	4	_____
36 x 16	1	4	_____
24 x 14	1	4	_____
24 x 18	1	4	_____
Birds Per Cage			
3	2	9	_____
4	6	26	_____
5	4	18	_____
6	2	9	_____
7	2	4	_____
8	2	9	_____
9	2	9	_____
10	3	13	_____
Square Inches Per Bird			
48	5	21	_____
54	11	52	_____
60	5	21	_____
Over 60	3	13	_____
Brooding Fuel Used			
Natural gas	1	12	_____
Oil	3	38	_____
Propane	4	50	_____

Array of Selected Farm Business Factors

Key poultry management factors were calculated for each farm. The array of those computed are given below. You can see how your factors compare with the others reporting.

Average Number of Layers	Eggs Sold Per Layer	Av. Price Paid Per Cwt. Feed	Av. Price Received For Eggs	Lbs. Feed Per Doz. Eggs	Hens Per Man
258,333	297	$ 6.83	68.2¢	3.2	22,357
111,305	279	6.84	67.8	3.3	20,503
67,174	267	7.00	67.2	3.6	18,461
56,500	266	7.15	65.8	3.6	11,531
46,500	263	7.20	65.0	3.7	10,333
34,000	260	7.25	64.3	3.8	10,000
31,300	260	7.48	64.1	3.9	8,192
29,795	258	7.50	62.9	3.9	8,124
27,692	256	7.56	62.5	3.9	7,143
23,000	253	7.78	61.2	3.9	6,818
20,045	251	7.81	60.9	3.9	5,622
20,000	247	7.84	60.7	3.9	5,613
18,750	245	8.04	60.2	4.0	5,591
17,400	242	8.42	54.8	4.0	5,087
15,026	237	8.49	52.1	4.1	5,011
13,745	233	8.73	52.0	4.2	4,696
13,500	228	8.76	51.6	4.2	4,355
13,500	217	9.54	51.4	4.5	3,864
12,200	217	9.83	50.5	4.5	3,750
11,700	213	9.92	50.0	4.8	3,750
10,063	201	10.17	46.1	4.9	3,211
7,500	195	11.00	45.4	4.9	2,730
7,356	194	11.01	45.0	5.8	2,229
6,007	186	12.52	45.0	6.8	1,718

Comparison of Recent Summaries

Businessmen must keep abreast of changes that are taking place. The poultry industry has changed more than many types of farm businesses. Below is a comparison of selected factors from the last five New York poultry summaries.

In comparing these factors, keep in mind that the farms included from year to year vary as indicated by the number of farms and there is also some change in individuals each year.

Table 25. NEW YORK POULTRY FARM SUMMARIES, 1975-1979

Factor	1975	1976	1977	1978	1979
Number of farms	26*	26*	28*	25*	24*
Man equivalent	3.7	4.4	4.4	4.2	4.6
Number of hens	21,900	27,300	30,500	23,115	36,350
Investment					
Land & buildings	$107,492	$134,513	$158,592	$175,731	$255,515
Machinery	64,933	67,217	96,113	93,667	109,466
Livestock & poultry	35,444	40,752	52,155	42,189	64,601
Feed & other	31,935	28,695	36,501	36,654	46,562
Total	$239,804	$271,177	$343,361	$348,241	$476,144
Receipts					
Egg sales	$271,905	$327,593	$379,509	$342,575	$469,531
Livestock sales	7,829	10,960	18,094	18,724	23,762
Other	33,356	63,086	21,080	51,068	56,586
Total	$313,090	$401,639	$418,683	$412,367	$549,879
Expenses					
Feed bought	$117,336	$140,142	$170,457	$125,147	$220,121
Hired labor	17,985	22,516	24,841	24,026	33,270
Chicks & pullets	26,518	36,625	34,249	29,713	50,660
Electricity & phone	3,723	4,682	5,354	4,822	6,951
Other	119,865	164,040	156,738	200,894	190,095
Total	$285,427	$368,005	$391,639	$384,602	$501,097
Business Factors					
Av. price/doz. eggs	54.7¢	59.6¢	53.8¢	58.8¢	55.6¢
Eggs per hen	231	221	233	228	240
Hens per man	5,900	6,200	7,500	5,500	7,900
Lbs. feed/doz. eggs	4.5	4.6	4.5	4.6	4.0
Labor income/operator	$ 8,482	$17,405	$ 7,779	$ 8,635	$13,216

*Includes only layer operations, omits the contract pullet operations.

Cost of Producing Eggs

Table 26. AVERAGE FARM COST OF PRODUCING EGGS
15 New York Poultry Farms, 1979

Item	My Farm		15 Farms With Poultry Only	
Farm expenses	$_____		$567,669	
Interest on equity capital @ 9%	_____		29,872	
Operator's labor and Management*	_____		11,000	
Total Cost		$_____		$608,541
Total receipts	$_____		$627,199	
Less egg sales	_____		551,955	
Other Income		_____		75,244
Cost of Producing Eggs (Total Cost Less Other Income)		$_____		$533,297
Dozen eggs sold		_____		977,553
Cost per dozen eggs sold		_____¢		54.6¢
Average price received		_____¢		56.5¢

*Figured at $10,000 per operator.

By adding to the total farm expenses an estimate of the value of the operator's labor and management, and an interest charge on the equity capital used, the farm cost of producing eggs can be calculated. The value of the operator's labor and management was estimated at $10,000 per year. This was based on estimates made by dairymen. Receipts for items other than eggs are credited against the total cost on the assumption that these items were produced at cost.

Farm expenses include costs for eggs purchased for resale. This tends to impose some egg market values in the calculation of production costs.

This "farm unit" method of calculating the cost of producing eggs has limitations but it does give a general indication of the overall costs. This method was applied to the farms with poultry only.

Table 27. COST ITEMS IN PRODUCING A DOZEN EGGS
15 New York Poultry Farms, 1979

Item	My Farm	Cost Per Dozen Amount	Percent
Feed for layers	____¢	28.6¢	52.4%
Replacements:			
Chicks & pullets bought	____¢	7.3¢	13.4%
Grower feed	____	2.8	5.1
Total	____¢	10.1¢	18.5%
Less sale of birds	____	1.0	1.8
Net Replacement Cost	____	9.1¢	16.7%
Labor	____	4.7	8.6
Power & machinery (without interest)	____	4.0	7.3
Interest on capital	____	3.4	6.2
Poultry supplies, etc.	____	3.0	5.5
Taxes & insurance	____	1.0	1.8
All other	____	.8	1.5
Total	____¢	54.6¢	100.0

Another approach to the cost of producing eggs is to examine individual cost items. This has been done above for the 15 poultry only farms. Some items have been calculated in earlier sections and the total cost per dozen was calculated by the "farm unit" method on page 24.

The feed cost of 28.6 is the total layer feed expense divided by the dozen of eggs produced. Feed accounted for a little more than half of the total cost.

Replacement costs include the expenses for chicks and pullets bought and grower feed. Fuel and other direct costs involved in rearing are not included here but are in other items listed. Hence, this replacement cost is on the low side. Receipts from birds sold are substracted to get a "net" replacement cost. Replacements accounted for about one-eighth of the total cost.

The labor item includes a value for the operator's work but not his management. The interest charge in power and machinery costs shown on page 18 was taken out since it is included in interest on capital. Building repairs and depreciation would be an item in the "all other".

Table 28. COMPARISON OF COSTS OF PRODUCING EGGS IN RECENT YEARS

Year	Av. Price Received	Farm Unit Cost Per Doz.*	Poultry Ration (cwt.)	Feed Costs/Doz. Cents	% Total	Labor Cost Per Doz.
1972	32.6¢	34.4¢	$4.50	17.3¢	50%	4.6¢
1973	54.8	52.5	6.75	30.3	58	5.1
1974	52.4	54.2	7.09	32.0	59	3.9
1975	57.1	57.9	7.02	32.2	56	4.6
1976	59.3	57.6	6.89	31.4	55	5.5
1977	53.7	51.1	6.56	28.5	56	4.7
1978	52.8	53.1	5.67	25.8	49	5.5
1979	56.5	54.6	7.56	28.6	52	4.7

*For "Poultry Only" farms in business summaries.

FARM BUSINESS SUMMARY
15 New York Poultry Farms, 1979

CAPITAL INVESTMENT

	1/1/79	1/1/80
Machinery & equip.	$ 94,060	$117,444
Livestock	60,084	68,570
Feed & supplies	17,962	22,673
Land & buildings	245,064	267,358
TOTAL INVESTMENT	$417,170	$476,045

EXPENSES

Replacements	
Chicks bought	$ 11,025
Pullets bought	53,404
Feed	
Layer feed bought	253,391
Other feed	25,157
Labor	
Hired	31,817
Unpaid	997
Power and Machinery	
Machine hire	4,032
Machinery repair	5,636
Gas and oil	4,594
Electricity	6,668
Poultry	
Eggs bought for resale	49,200
Livestock expense	2,443
Supplies	23,253
Fuel	850
Crop	
Crop expense	2,370
Real Estate	
Land, bldg., & fence repair	2,634
Taxes	3,098
Insurance	4,982
Capital Items	
New machinery	37,892
New real estate	25,395
Other	
Telephone	1,040
Interest paid	8,005
Advertising & promotion	902
Miscellaneous	8,884
Decrease in inventory	0
TOTAL FARM EXPENSES	$567,669

RECEIPTS

Egg sales	$551,955
Livestock sold	9,409
Crop sales	618
Miscellaneous	6,342
Total Cash Receipts	$568,324
Increase in Inventory	58,875
TOTAL FARM RECEIPTS	$627,199

FINANCIAL SUMMARY

Total Farm Receipts	$627,199
Total Farm Expenses	567,669
Farm Income	$ 59,530
Interest on equity capital @ 9%	29,872
Farm Labor Income	$ 29,658
Number of operators	1.2
LABOR INCOME/OPERATOR	$ 24,715

BUSINESS FACTORS

Man equivalent	4.6
Number of hens	44,465
Number of pullets raised (5 farms)	52,740
Dozen of eggs (produced)	886,200
Eggs produced per hen	239
Dozen of eggs produced/man	192,700
Hens per man	9,700
Lbs. feed/doz. eggs produced	3.9
Av. price/ctw. feed bought	$7.56
Av. price/doz. eggs (all)	56.5¢

FARM BUSINESS SUMMARY - AVERAGES PER HEN
15 New York Poultry Farms, 1979

CAPITAL INVESTMENT

	1/1/79	1/1/80
Machinery & equip.	$2.12	$2.64
Livestock	1.35	1.54
Feed & supplies	.40	.51
Land & buildings	5.51	6.02
TOTAL INVESTMENT	$9.38	$10.71

EXPENSES

Replacements	
Chicks bought	$ .24
Pullets bought	1.20
Feed	
Layer feed bought	5.70
Other feed	.57
Labor	
Hired	.72
Unpaid	.02
Power and Machinery	
Machine hire	.10
Machinery repair	.13
Gas and oil	.10
Electricity	.15
Poultry	
Eggs bought for resale	1.10
Livestock expense	.05
Supplies	.52
Fuel	.02
Crop	
Crop expense	.05
Real Estate	
Land, bldg., & fence repair	.06
Taxes	.07
Insurance	.11
Capital Items	
New machinery	.85
New real estate	.57
Other	
Telephone	.02
Interest paid	.18
Advertising & promotion	.02
Miscellaneous	.20
Decrease in inventory	0
TOTAL FARM EXPENSES	$12.77

RECEIPTS

Egg sales	$12.41
Livestock sold	.21
Crop sales	.02
Miscellaneous	.14
Total Cash Receipts	$12.78
Increase in Inventory	1.32
TOTAL FARM RECEIPTS	$14.10

FINANCIAL SUMMARY

Total Farm Receipts	$14.10
Total Farm Expenses	12.77
Farm Income	$ 1.33
Interest on equity capital @ 9%	.67
Farm Labor Income	$ .66
LABOR INCOME/OPERATORS/HEN	$ .55

FARM BUSINESS SUMMARY
24 New York Poultry Farms, 1979

CAPITAL INVESTMENT

	1/1/79	1/1/80
Machinery & equip.	$ 94,676	$109,466
Poultry	46,454	52,755
Other livestock	9,674	11,846
Feed & supplies	39,172	46,562
Land & buildings	239,193	255,515
TOTAL INVESTMENT	$432,169	$476,144

EXPENSES

Replacements	
Chicks bought	$ 9,075
Pullets bought	41,585
Other livestock	1,645
Feed	
Layer feed bought	199,775
Other feed	20,346
Labor	
Hired	33,270
Unpaid	998
Power and Machinery	
Machine hire	2,807
Machinery repair	7,196
Gas and oil	7,918
Electricity	6,160
Poultry	
Eggs bought for resale	60,977
Livestock expense	1,598
Supplies	19,142
Fuel	1,052
Crop	
Crop expense	11,647
Real Estate	
Land, bldg., & fence repair	1,951
Taxes	3,691
Insurance	4,433
Capital Items	
New machinery	27,541
New real estate	18,174
Other	
Telephone	791
Interest paid	8,615
Advertising & promotion	573
Miscellaneous	10,137
TOTAL FARM EXPENSES	$501,097

RECEIPTS

Egg sales	$469,531
Poultry sold	10,783
Other livestock	12,979
Crop sales	6,416
Miscellaneous	6,196
Total Cash Receipts	$505,905
Increase in Inventory	43,974
TOTAL FARM RECEIPTS	$549,879

FINANCIAL SUMMARY

Total Farm Receipts	$549,879
Total Farm Expenses	501,097
Farm Income	$ 48,782
Interest on equity capital @ 9%	31,711
Farm Labor Income	$ 17,071
Number of operators (31)	1.29
LABOR INCOME/OPERATOR	$ 13,216

BUSINESS FACTORS

Man equivalent	4.6
Number of hens	36,350
Number of pullets raised (7 farms)	54,390
Doz. of eggs (produced)	728,400
Eggs produced/hen	240
Doz. of eggs produced/man	158,400
Hens per man	7,900
Lbs. feed/doz. eggs produced	4.0
Av. price/cwt. feed bought	$7.74
Av. price/doz. eggs (all)	55.6¢

Progress of the Farm Business

There are two kinds of comparisons used in analyzing a farm business. One is that of comparing your business with that of other poultrymen. The other is comparing your current year's business with that of previous years to see the progress you are making. In looking ahead, it is suggested that you set targets for 1970 which are in line with the progress you have been making.

Your business analysis on the preceding pages provide the factors for 1979. You will need to refer to earlier summaries for the 1977 and 1978 factors.

	1977	1978	1979	Target 1980
Size of Business				
Average number of layers	_____	_____	_____	_____
Value of egg sales	$_____	$_____	$_____	$_____
Man equivalent	_____	_____	_____	_____
Rate of Production				
Eggs produced per hen	_____	_____	_____	_____
Labor Efficiency				
Hens per man	_____	_____	_____	_____
Dozen eggs sold per man	_____	_____	_____	_____
Capital Efficiency				
Total inventory value	$_____	$_____	$_____	$_____
Total investment/hen	$_____	$_____	$_____	$_____
Farm receipts per $100 investment	$_____	$_____	$_____	$_____
Cost Control				
Layer feed bought per hen	$_____	$_____	$_____	$_____
Lbs. feed per dozen eggs	_____	_____	_____	_____
Labor cost per hen	$_____	$_____	$_____	$_____
Machinery cost per hen	$_____	$_____	$_____	$_____
Total expense per $100 receipts	$_____	$_____	$_____	$_____
Prices				
Average price per dozen	$_____	$_____	$_____	$_____
Financial Summary				
Total Farm Receipts	$_____	$_____	$_____	$_____
Total Farm Expenses	$_____	$_____	$_____	$_____
Labor & management income per operator	$_____	$_____	$_____	$_____
Total debt outstanding	$_____	$_____	$_____	$_____
Debt per hen	$_____	$_____	$_____	$_____
Net Worth	$_____	$_____	$_____	$_____