
Broiler Production Costs *in Oregon*

A Preliminary Survey on 17
Willamette Valley Farms, 1952

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This is a preliminary survey. The sample is small and only a short period of time covered. Consequently, the averages shown here may not represent the average cost of producing broilers for the state as a whole. The report does provide, however, useful and timely data on a few broiler enterprises in the Willamette Valley.

The data contained in this report cover the cost and returns on 76,962 broilers marketed during the period January 5 through April 15, 1952. The majority of the birds were marketed during February and March. Nearly all of the producers in this study handled only one brood at a time; that is, a brood was raised and sold before another brood was started.

In computing costs of production (Table 1), feed, chicks, and supplies were charged at cost. Labor was valued at \$1 per hour for operator and family labor. Hired labor was charged at cost. It also averaged \$1 per hour on the three farms where hired labor was used. The labor charged against the broiler enterprise includes all labor used in preparing the house for the birds, extra labor at marketing time, and all labor used for feeding and caring for the birds. Producers' estimates of values for buildings and equipment were used as a basis for computing those costs. Charges include depreciation, interest on investment at 5 per cent, and insurance. Taxes were estimated and included in the charges. The yearly building and equipment costs were prorated among the flocks raised during the year. If a producer raised four broods during the year, one-fourth of the annual building and equipment costs were charged to the flock covered in this study. The charge for supplies includes cost of litter, medicine, fuel for brooding, lime, grit, insurance on chicks, and other miscellaneous charges such as use of telephone, automobile, etc., when used for the broiler enterprises.

Many different systems were used to finance the broiler enterprise. In order to make each operation comparable, a uniform rate was charged for the use of the working capital which would be tied up in cost of the chicks and feed until the birds were sold.

The author gratefully acknowledges the cooperation received from the broiler producers who furnished the basic data for the study. The personnel of the various broiler processors also contribute assistance in this study.

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Table 1. BROILER PRODUCTION COSTS, 17 Farms, Willamette Valley, Oregon,
November, 1951 through April, 1952

Item	Share of total cost	Average per bird sold	Average per pound	Your cost per pound
	<u>Per cent</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Feed	61.8	55.75	18.88	
Chicks	20.0	18.08	6.13	
Buildings and equipment	4.9	4.40	1.49	
Supplies	4.1	3.69	1.25	
Interest on working capital	0.6	0.53	.18	
Total (excluding labor)	91.4	82.45	27.93	
Labor	8.6	7.77	2.63	
Total, all costs	100.0	90.22	30.56	

Average price received per pound	29.96 cents
Average feed conversion ratio	3.214 pounds feed/pound gain
Average weight of birds when sold	2.95 pounds
Average age when sold	10.5 weeks

Range in Costs

Total production costs ranged from 27.22 cents per pound to 35.12 cents per pound. The five low-cost producers raised broilers for an average of 28.37 cents per pound. Costs for the five high-cost producers averaged 33.67 cents per pound. The seven remaining producers had costs averaging 30.58 cents per pound.

Mortality

Of the 81,050 birds started, 76,962 were sold, giving an average mortality rate of 5.04 per cent. The lowest mortality reported was 1.9 per cent on a flock of 3,200 birds. Highest mortality reported was 9.8 per cent on a 4,500 bird flock.

Size of Flocks

The smallest flock in the study started 990 birds and the largest flock started 12,250 birds (Table 2). The average number of birds started per flock was 4,768.

Table 2. SIZE DISTRIBUTION

Size of group (Number of birds started)	Number of producers	Average size per group
0 to 1,999	2	1,158
2,000 to 3,999	5	2,612
4,000 to 5,999	5	4,805
6,000 to 7,999	3	6,993
8,000 or more	2	10,335

Feed Conversion Ratio

The feed conversion ratio (pounds feed per pound of gain) ranged from a low of 2.75 to a high of 3.584. The average price of all feed (excluding the cost of medication) averaged \$5.88 per hundredweight. This is the net cost of feed delivered to the place.

Age of Birds Marketed

The birds from four flocks were marketed during the tenth week, the earliest marketing being at 65 days. Eight producers marketed their birds during the eleventh week, and five marketed during the twelfth week.

Prices Received

Prices received for broilers ranged from 26 cents per pound to 33.5 cents per pound at the farm. The average price was 29.96 cents per pound.

Out-of-Pocket Costs

Out-of-pocket costs for chicks, feed, and supplies averaged 26.26 cents per pound. Cost for these 3 items ranged from 22.50 cents to 29.94 cents per pound. This is the amount which a producer must recover before he has any return to labor and use of the buildings and equipment involved.

Returns to Labor

After making an allowance for all other costs, the labor expended on the broiler enterprise returned an average of 77 cents per hour. Five producers had nothing left for their labor after allowing for all other costs. Total labor requirements averaged 68 hours per 1,000 birds raised, and ranged from 34 to 150 hours per 1,000 birds.

Investment in Equipment

The average investment in buildings and equipment amounted to \$1,058 per 1,000 birds. Investment ranged from \$543 (per 1,000 birds) to \$4,038 per 1,000 birds. These figures represent the producer's estimate of the present value of his buildings and equipment. It would require a much higher investment to purchase these same broiler plants new.

Formulas for Estimating Broiler Production Costs

The following formulas are based on the cost of raising 76,962 broilers on 17 farms in the Willamette Valley during the period of November 1951 through April 1952. The majority of these broilers were produced during the period of December 1951 through March 1952. These formulas provide an estimated cost only. To the extent that a broiler operation differs from the averages used here, the estimated costs may be too high or too low. Broiler producers who know their own feed conversion ratios, labor requirements, etc., can substitute their figures for the averages used.

3.2	(Pounds of feed) times cost of feed in cents per pound	_____
0.027	(Hours of labor) times cost of labor in cents per hour	_____
.35	Times price of baby chicks in cents	_____
2.9	(Constant for the supplies, building and equipment costs)	_____
	Total cost per pound	_____

If, for example, the cost of feed were 5.9 cents per pound, wage rate \$1.00 per hour and the baby chick price 17 cents, the net cost per pound would be 30.5 cents, computed as follows:

$$\begin{aligned}
 3.2 & \times 5.9 = 18.9 \text{ cents} \\
 0.27 & \times 100 = 2.7 \text{ cents} \\
 0.35 & \times 17 = 6.0 \text{ cents} \\
 & \text{Plus constant} = \underline{2.9} \text{ cents} \\
 \text{Total of 4 items} & = 30.5 \text{cents net cost/pound}
 \end{aligned}$$

No credit is allowed for the value of the manure since most of the producers give the manure away to other people for removing it. The factor used with the price of the chicks makes an allowance for a mortality of 5.04 per cent, the average for this study.

The constant (2.9 cents per pound) is the average cost per pound for all other costs, including building and equipment cost, fuel for brooding, litter, grit, and other supplies, and an allowance for interest on working capital.

A formula for estimating the majority of the cash costs (feed, chicks, and supplies) is as follows:

3.2	(Pounds of feed) times cost of feed in cents per pound	_____
0.35	Times price of baby chicks in cents	_____
1.2	Constant for supplies (litter, grit, fuel for brooding, etc.)	_____

Using the same example as above, the cash cost per pound would be:

$$\begin{aligned}
 3.2 & \times 59 = 18.9 \text{ cents} \\
 0.35 & \times 17 = 6.0 \text{ cents} \\
 \text{Plus constant for supplies} & = \underline{1.2} \text{ cents} \\
 \text{Cash cost per pound} & = 26.1 \text{ cents}
 \end{aligned}$$

Table 3. Factors Influencing Returns of 17 Broiler Producers, Willamette Valley, Oregon - 1951-52

Farm number	Birds sold	Weight of birds sold	Feed per pound of gain	Age sold	Mortality	Cash costs per pound <u>/1</u>	Total cost per pound <u>/2</u>	Price received per pound	Net return per broiler <u>/3</u>	Return to labor per 1,000 birds <u>/4</u>	Total labor per 1,000 birds
		Pounds	Pounds	Weeks	Per cent	Cents	Cents	Cents	Cents		Hours
1 . . .	6,000	3.04	3.2	10.3	5.4	25.66	29.72	33.0	9.97	\$178	78
2 . . .	6,400	2.87	3.305	11.4	8.6	25.77	29.96	27.0	-8.52	-1	109
3 . . .	5,300	2.90	3.25	10.0	3.6	23.73	28.68	26.0	-7.79	13	78
4 . . .	955	2.82	3.19	10.0	3.5	25.19	30.98	31.5	1.46	96	82
5 . . .	6,742	2.95	3.271	10.5	3.7	27.64	30.54	27.5	-8.97	-55	34
6 . . .	3,872	3.03	3.30	11.6	3.2	27.82	31.79	28.07	-11.26	-28	85
7 . . .	1,999	2.68	2.855	9.3	2.5	25.88	32.84	33.0	0.4	123	119
8 . . .	2,038	2.95	3.074	11.3	3.0	24.49	27.22	31.0	11.19	156	44
9 . . .	5,673	3.05	3.193	10.6	3.8	25.97	32.20	30.96	-3.77	85	123
10 . . .	3,041	2.92	3.047	9.6	1.9	27.17	34.18	29.0	-15.13	-1	150
11 . . .	4,060	3.34	3.32	11.6	9.8	28.54	34.03	29.95	-13.94	3	143
12 . . .	11,606	2.97	3.142	11.0	5.3	27.02	30.49	33.5	8.94	132	42
13 . . .	2,561	2.63	3.584	9.8	1.5	29.94	35.12	30.0	-13.47	-44	90
14 . . .	7,684	2.78	3.094	10.3	8.7	25.18	28.49	29.26	2.13	90	69
15 . . .	4,000	3.09	3.451	10.8	3.0	26.95	29.54	31.0	4.5	86	40
16 . . .	1,283	2.65	2.75	9.7	3.2	22.50	30.59	30.0	-1.6	80	64
17 . . .	3,148	3.05	3.252	10.1	1.9	23.29	27.43	27.0	-1.3	55	67
Average	4,527	2.95	3.214	10.5	5.04	26.26	30.56	29.96	-1.8	\$ 60	68

/1 Includes all cash costs for feed, chicks, fuel, insurance on chicks, litter, grit, lime. Does not include cash cost of taxes and insurance on buildings and equipment.

/2 Includes all costs for labor, buildings and equipment, estimated taxes, insurance, feed and supplies.

/3 Difference between total costs and total returns.

/4 Return to all labor after all cash costs have been paid and allowances made for all non-cash costs such as depreciation and interest on buildings and equipment.