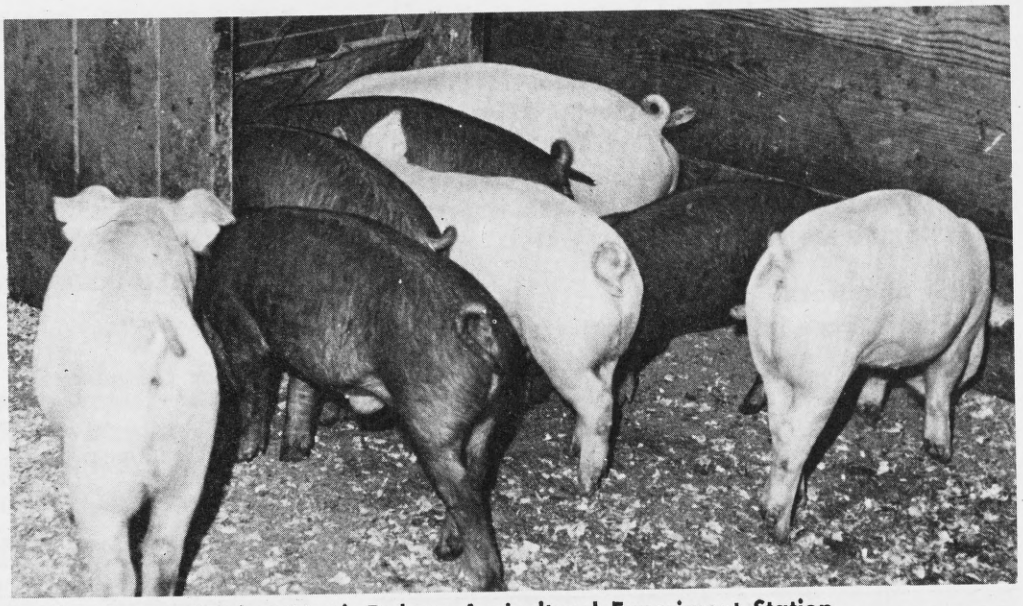

Feeder Pigs on Trial at North Dakota Agricultural Experiment Station

Feeder Pig Producers and Finishers in North Dakota

PRODUCTION PRACTICES, COSTS AND RETURNS

F. Larry Leistritz and Bernhard Huber

Production of butcher hogs has undergone many changes in the past decade. An important development has been the trend toward separating farrowing operations from hog feeding (finishing units). Many hog operations now contain only farrowing and feeder pig starter units, with the feeder pigs sold to another individual who feeds the animal to slaughter weight. In addition, the number of pork producers in North Dakota has declined, while at the same time the average number of hogs per farm has increased.

These changes have made previous information about production practices, costs, and labor and capital requirements outdated. At the same time, rapid and substantial changes in the economic environment make it imperative that producers have information which is both accurate and current.

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A survey of hog producers was conducted to obtain information concerning production practices, costs, returns and resource requirements. This report summarizes the information obtained from 16 feeder pig producers and 14 specialized hog finishers for their 1971 production.

FEEDER PIG PRODUCERS

Feeder pig producers interviewed typically planned at least three farrowings per year. All producers used permanent farrowing houses, and on all but four farms the farrowing house was less than 10 years old. The number of pigs raised per litter averaged 8.4, which was well above the North Dakota average of 7.4 for 1971. Producers interviewed produced an average of 644 pigs annually.

Self-feeding systems were used by 15 of the 16 producers interviewed. Eleven of the producers also used automatic watering systems, and 15 had heating systems for their farrowing houses. All produc-

ers used purchased feeds to suplement their homegrown grain and five of the 16 used purchased feed exclusively. Pig starter and protein supplements were the feeds most commonly purchased, while oats was the home grown feed most often used. Considering all producers, 57 per cent of the total feed requirements by weight were homegrown and 43 per cent were purchased.

Capital Investment

The average investment in the hog operation by feeder pig producers was $24,539 (Table 1). Buildings were the largest investment item, followed closely by the hog inventory. Some buildings and machinery were used partly for the hog enterprise and partly for other enterprises. The calculated value of the investment for these items represents only the part used in the hog enterprise.

Table 1. Average Capital Investment of Feeder Pig Producers, North Dakota, 1971.

Item	Per Farm	Per Pig Produced
Present Value of:		
Buildings	$11,323	$13.81
Machinery & Equipment	3,085	3.76
Hog Inventory	10,131	12.35
TOTAL INVESTMENT	$24,539	$29.92

Labor Requirements

Feeder pig production requires a substantial labor input. The average number of hours used annually per producer was 1,665 (Table 2). Daily care of hogs was the most time consuming activity, followed by cleaning and sanitation and by farrowing, in that order.

Table 2. Labor Used by Feeder Pig Producers, North Dakota, 1971.

Item	Per Farm	Per Pig Produced
	(Hours)	(Hours)
Labor Used for:		
Daily Care of Hogs	691	0.85
Farrowing	330	0.41
Feed Grinding	47	0.06
Repairs	35	0.04
Cleaning & sanitation	474	0.58
Marketing	88	0.11
TOTAL LABOR USED	1,665	2.03

Production Costs

The average total cost per feeder pig produced was $16.10 (Table 3). Fixed costs, those which are not influenced by the intensity of production, include interest on buildings and machinery, depreciation, insurance, and land charge. Fixed costs accounted for $4.09 of the $16.10 total cost.

Table 3. Production Costs of Feeder Pig Producers, North Dakota, 1971.

Item	Per Farm	Per Pig Sold	Per Cent
Fixed Costs:			
Interest	$1,718	$2.10	13.0
Depreciation	1,560	1.90	11.8
Insurance	74	0.09	0.1
Land Charge[1]	2	[2]	—
TOTAL FIXED COSTS	$3,354	$4.09	25.4
Variable Costs:			
Feed	5,234	6.39	39.7
Building & Equipment Repairs	269	0.33	2.0
Labor[3]	2,776	3.39	21.1
Interest on Operating Capital	516	0.62	3.9
Miscellaneous Costs[4]	1,046	1.28	8.0
Total Variable Costs	$9,841	$12.01	74.6
Total Costs	$13,195	$16.10	100.0

[1]Land charge was calculated for pasture used at a rate of $3.80 per acre (1971 average cash rental charge).
[2]Less than $0.01.
[3]Labor cost based on a charge of $2 per hour for all labor
[4]Includes veterinary expense, spray, marketing charges, etc.

Variable costs are those which depend on the level of production and include feed, labor, repairs, marketing costs and other miscellaneous costs. Variable costs made up $12.02 of the $16.10 total cost, 74.6 per cent. The largest variable cost items were feed and labor, accounting for 39.7 per cent and 21.2 per cent of total cost respectively.

HOG FINISHING OPERATIONS

Operators of specialized hog finishing operations typically used self-feeding and automatic watering systems. These operators differed from other hog producers in their very limtied use of home-grown feed. Ten of the 14 finishers used purchased feed exclusively, and the group of finishers purchased 93 per cent of their total feed requirements. The operators interviewed sold an average of 2447 hundredweight of pork annually.

Capital Investment

The average investment in the hog finishing enterprise was $36,821, or $15.05 per hundredweight of pork sold (Table 4). The hog inventory was the largest investment item, followed by buildings.

Labor Requirements

The labor input of finishers averaged 1,439 hours per farm or 0.59 hours per hundredweight of

Table 4. Average Capital Investment of Finishers, North Dakota, 1971.

Item	Per Farm	Per Hundredweight of Pork Sold
Present Value of:		
Buildings	$12,443	$ 5.09
Machinery & equipment	4,517	1.85
Hog Inventory	19,861	8.12
Total Investment	$36,821	$15.05

pork sold (Table 5). The labor input per hundredweight of pork sold was much lower for finishers than for farrow-finish producers because the large labor requirements associated with farrowing have been assumed by a feeder pig producer.

Table 5. Labor Used by Finishers, North Dakota, 1971.

Item	Per Farm	Per Hundredweight
	(Hours)	
Labor used for:		
Daily care of hogs	753	0.31
Feed grinding	28	0.01
Repairs	31	0.01
Cleaning & sanitation	442	0.18
Marketing	185	0.08
Total Labor Used	1,439	0.59

Production Costs

The average total cost per hundredweight of pork sold was $18.97 (Table 6). Fixed costs accounted for $1.92, or 10 per cent of total costs, while variable costs accounted for $17.05, or 90 per cent. The largest fixed cost item was interest, while the largest variable costs were purchased feeder pigs and feed. It may be noted that for finishing operations fixed costs made up a much smaller portion of total costs than for either feeder pig or farrow-finish operations. One reason is that the finishing producer does not need sow barns or farrowing facilities.

Table 6. Production Costs of Finishers, North Dakota, 1971.

Item	Per Farm	Per Hundredweight	Per Cent
Fixed Costs:			
Interest	$ 2,577	$ 1.06	5.6
Depreciation	1,971	0.80	4.2
Insurance	137	0.06	0.3
Total Fixed Costs	$ 4,685	$ 1.92	10.1
Variable costs:			
Purchase of feeder pigs	$16,759	$ 6.85	36.1
Feed	16,605	6.79	35.8
Building & Equipment Repairs	251	0.10	0.5
Labor[1]	2,816	1.15	6.1
Interest on Operating Capital	2,756	1.13	6.0
Miscellaneous costs[2]	2,533	1.03	5.4
Total Variable Costs	$41,720	$17.05	89.9
Total Costs	$46,405	$18.97	100.0

[1]Labor cost based on a charge of $2 per hour for all labor
[2]Includes veterinary expense, spray, marketing charges, etc.

REVENUE AND RESOURCE RETURNS

Total returns from hog production amounted to $12,048 for feeder pig producers and $46,873 for finishers (Table 7). The return to capital, labor, and management was $3,776 for feeder pig producers and $8,795 for finishers. The rate of return on investment was much higher for finishers (16.3 per cent) than for feeder pig producers (4.4 per cent). A possible explanation for the low returns experienced by feeder pig producers was that several feeder pig producers had recently completed new buildings and, in some cases, had not had time to expand production to the capacity of the facilities.

Table 7. Average Return: Return to Capital, Labor and Management, and Rate of Return on Investment, Feeder Pig Producers and Finishers, North Dakota, 1971.

Item	Unit	Feeder Pig Producers	Finishers
Total return[1]	Dollars	12,048	46,873
Return to capital, labor and management[2]	Dollars	3,776	8,795
Return to capital and management[3]	Dollars	1,079	5,620
Rate of return on investment[4]	Per Cent	4.4	15.3

[1]Total return includes receipts from sale of butcher hogs, feeder pigs, sows, and boars, plus any increase in hog inventory.
[2]Total receipts less feed costs, repairs, miscellaneous variable costs, depreciation, insurance, and land charge.
[3]Return to capital, labor and management less labor charge.
[4]Return to capital and management divided by total investment.

In general, it can be noted that feeder pig production requires a large input of labor relative to the level of investment required. Finishing operations, on the other hand, have very low labor requirements. Finishers, however, may be vulnerable to sudden increases in feed prices or to reductions in the local supply of feeder pigs.

Reference

A detailed report of the costs, returns, and investment requirements of 56 farrow-finish hog producers is presented by Huber, Bernhard and Leistritz, **"Pork Production Practices, Costs and Returns in North Dakota,"** North Dakota Farm Research, Vol. 30, No. 6, July-August, 1973, pp. 11-14.