NF97-341 A Profit Sharing Approach to Pricing 50 Pound Feeder Pigs

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Nebraska Cooperative Extension NF97-341

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Published by Cooperative Extension, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln

A Profit Sharing Approach to Pricing 50 Pound Feeder Pigs

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When a feeder pig producer and a finisher want to develop a long-term contract which would reimburse each of them for their costs and share the profits or losses equally, often they are at a loss as to how to price the feeder pigs. The feeder pig producer and finisher may not want to use current auction prices, as these prices are typically quite volatile, and may result in abnormally large profits for one party, at the expense of the other. While the price swings and profits may balance out over a period of years, the individuals would prefer to use a feeder pig pricing scheme which will allow profits or losses to be shared on each group of pigs. In addition, auction market prices may not adequately reflect the value of large lots of single-source pigs with high health and genetic merit.

Table I. Price of a 50 Pound Feeder Pig which Splits Profit/Loss Equally between Producer and Finisher.

Mkt Hog Price $/cwt	*Corn Price Per Bushel*											
	1.75	*2.00*	*2.25*	*2.50*	*2.75*	*3.00*	*3.25*	*3.50*	*3.75*	*4.00*	*4.25*	*4.50*
26	18.33	17.38	16.43	15.49	14.54	13.59	12.65	11.70	10.75	9.81	8.86	7.91
28	20.72	19.78	18.83	17.88	16.93	15.99	15.04	14.09	13.15	12.20	11.25	10.31
30	23.12	22.17	21.22	20.28	19.33	18.38	17.44	16.49	15.54	14.60	13.65	12.70
32	25.51	24.57	23.62	22.67	21.72	20.78	19.83	18.88	17.94	16.99	16.04	15.10
34	27.91	26.96	26.01	25.07	24.12	23.17	22.23	21.28	20.33	19.39	18.44	17.49
36	30.30	29.36	28.41	27.46	26.51	25.57	24.62	23.67	22.73	21.78	20.83	19.89
38	32.70	31.75	30.80	29.86	28.91	27.96	27.02	26.07	25.12	24.18	23.23	22.28
40	35.09	34.15	33.20	32.25	31.30	30.36	29.41	28.46	27.52	26.57	25.62	24.68

42	37.49	36.54	35.59	34.65	33.70	32.75	31.81	30.86	29.91	28.97	28.02	27.07
44	39.88	38.94	37.99	37.04	36.09	35.15	34.20	33.25	32.31	31.36	30.41	29.47
46	42.28	41.33	40.38	39.44	38.49	37.54	36.60	35.65	34.70	33.76	32.81	31.86
48	44.67	43.72	42.78	41.83	40.88	39.94	38.99	38.04	37.10	36.15	35.20	34.26
50	47.07	46.12	45.17	44.23	43.28	42.33	41.39	40.44	39.49	38.55	37.60	36.65
52	49.46	48.52	47.57	46.62	45.67	44.73	43.78	42.83	41.89	40.94	39.99	39.05
54	51.86	50.91	49.96	49.02	48.07	47.12	46.18	45.23	44.28	43.34	42.39	41.44
56	54.25	53.31	52.36	51.41	50.46	49.52	48.57	47.62	46.68	45.73	44.78	43.84
58	56.65	55.70	54.75	53.81	52.86	51.91	50.97	50.02	49.07	48.13	47.18	46.23
60	59.04	58.10	57.15	56.20	55.25	54.31	53.36	52.41	51.47	50.52	49.57	48.63
62	61.44	60.49	59.54	58.60	57.65	56.70	55.76	54.81	53.86	52.92	51.97	51.02
64	63.83	62.88	61.94	60.99	60.04	59.10	58.15	57.20	56.26	55.31	54.36	53.42

Soybean Meal Price per ton = $250.00

A suggested procedure for pricing conventional weight feeder pigs in a long-term arrangement between the producer and finisher is presented here. *Table I* shows the prices of 50-pound feeder pigs which would split the profit or loss equally between the producer of the feeder pig and the finisher, at alternative corn and market hog prices. These pig prices are based on averages of costs reported by feeder pig producers and finishers in the Nebraska Swine Enterprise Records and Analysis Program for the years 1993-95. These costs and the quantities of corn and soybean meal required are presented in *Table II*.

Table II. Costs, feed requirements, and efficiency — producing and finishing a 50 pound feeder pig.

Costs per head	*Producing 50 Pound Pig*	*Finishing 50-240 Pounds*
Utilities	$1.46	$1.35
Veterinary & Medicine	1.56	.34
Other operating expense	4.82	4.49
Labor	5.03	4.50
Interest on operating expense	.99	2.02
Interest on capital investment	2.06	2.74
Depr, tax, insurance on bldg & equip	2.85	3.61
Feed ingredients (except corn and soy)	4.68	3.85
Total of the above	$23.45	$22.90
Corn and soybean meal requirements		
Pounds of corn required	138.9	563.1
Pounds of soybean meal required	15.3	118.5

Selected Indicators of efficiency		
Pigs produced/female/year	17.7	—
Pounds of feed per pound of gain	—	365

Source: Nebraska Swine Enterprise Records and Analysis Program, average of 1993, 1994 and 1995 data.

There are several items to consider when using this table to value feeder pigs:

1. *Timing of the market hog price quote* — Ideally, the market hog price to use in the table would be the price at the time the pigs go to slaughter. Some producers have worked out an arrangement whereby the finisher pays the producer a "down payment," which approximates the out-of-pocket costs of production at the time the feeder pigs move to the finisher's facility. When the market hogs are sold, and the sale price is known, the feeder pig price is then determined. The finisher then pays the feeder pig producer the difference between the price in Table I and the down payment. In instances where losses occur, the feeder pig producer may need to pay back some of the down payment to the finisher. This arrangement requires a great deal of trust between the two parties and details of the arrangement should be specified in a written contract.

   Another method of dealing with the market hog price is to use the Chicago Mercantile Exchange futures price for the next futures contract following the month that the pigs are expected to go to slaughter, less the expected local basis. (The expected basis could be based on historic averages by contract month or a constant amount negotiated between the parties). While this method is expedient, and the transaction can be completed when the pigs move to the finisher, the futures price may or may not be a good predictor of the price received by the finisher when the pigs go to slaughter. In addition, if there are quality premiums when the hogs are marketed, the feeder pig producer would not get a share of them. If futures prices are used, producers will need to be aware of the change in the hog futures contracts from live hogs to lean weight, starting with the February 1997 contract. Prices for con-tracts after that date need to be adjusted to an equivalent live weight basis, based on a 74 percent yield at slaughter. (Multiply the lean price by 0.74.)

2. *Source and timing of the corn price quote* — The actual cost of corn realized by the producer and finisher depends on whether each is feeding their farm raised corn or buying corn. Also, they may be feeding grains other than corn. The individuals need to agree on the source and timing of the corn price information, and conversion factors which may be used to convert other grains to corn equivalents. The corn price which is used could be the weekly average of a local elevator's buying price for the week in which the pigs move to the finisher. Or, since most of the corn is consumed in the later stage of finishing, a time later in the finishing period may be more appropriate.

3. *Feeder pig price adjustment for changes in soybean meal prices* — The feeder pig prices in the table are based on a soybean meal price (44 percent) of $250 per ton. To adjust for different soybean meal prices, increase the pig price 50 cents per head for each $20 per ton decrease in the price of soybean meal. For example, if the market hog price is $50/cwt and the corn price is $3.00/bu, the feeder pig price in the table is $42.33 per head. If the price of soybean meal decreases to $230 per ton, the pig price would increase to $42.83. Thus, the pig price is adjusted in the opposite direction of the soybean meal price change.

4. *Feeder pig price adjustment for weights other than 50#* — Typically a "slide" is used to adjust for different pig weights. A suggested slide is 25 cents per pound. For example, if the pigs weigh 40 pounds, you would reduce the price shown in the table by $2.50 per head. This is based on a charge of 10 cents per head per day for facility fixed costs, utilities, labor, and manure disposal,

plus an estimate of feed cost. The feed cost estimate is based on an average daily gain of 1.25 pounds, a feed conversion rate of 2.25, and a diet cost of $150 per ton. If your costs are significantly different from these estimates, you may want to calculate your own slide.

5. *Feeder pig price adjustment for pig quality* — If pigs gain more efficiently and/or earn quality premiums at market, the finisher can afford to pay more for the feeder pig. The delayed settlement approach suggested in item 1 allows benefits of quality premiums to be shared between the producer and the finisher, but does not address the efficient gain issue. If the sale is final when the pigs move to the finisher, an adjustment in the feeder pig price should be negotiated if the pigs are of superior quality and efficiency.

6. *Feeder pig price adjustment for type of facilities* — The costs used in developing the feeder pig prices in this table are based on those experienced by producers and finishers in the Nebraska Swine Enterprise Records and Analysis Program in the years 1993-95. Generally, these producers have quite a few facilities that are depreciated out, along with some that are fairly new. This results in significantly lower facility costs than would occur under a new investment. Producers with new facilities may want to use costs which reflect their depreciation, interest, taxes, and insurance rather those implied in *Table II*. For comparison, the contract rates that are common in Nebraska for Segregated Early Weaned (SEW) pigs are: Gestation-farrowing $12 per 10 pound pig produced, Nursery (10-50 pound) $5 per head, Finishing (50 pounds to market) $12 per head. These rates typically cover the use of the facility, utilities, labor, and manure disposal.

   Since the producers in the records program are producing "conventional weight" feeder pigs, an exact comparison cannot be made with SEW pigs, but the expenses for utilities, labor, and depreciation, interest, taxes, and insurance on facilities averaged $11.40 per pig for the producer of the 50 pound pig, and $12.20 per head for the finisher. From this comparison, it appears that the finisher's cost ($12.20) is fairly close to the contract rate of $12, but the producer's cost of $11.40 is considerably less than the combined gestation-farrowing and nursery contract rates, even at the minimum ($12 + $5 = $17 per head). Producers need to be aware of their costs and make sure that the pig pricing schedule that they agree to will allow them to cover their costs and make a profit, on the average.

File NF341 under: SWINE
E-5, Marketing
Issued September 1997

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.