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Big Things - Little Things

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Summary

This study examined the economic effects of applying controllable management factors for farrow-to-finish operations. Average producers in Kansas market 7 pigs/litter with an average feed conversion of 4.58. Improvement in 9 areas of management increased profits on 240 litters by \$43,680. Each item appears small. However "Big Things" come from the sum of "Little Things".

Introduction

Most producers face more production tasks than their available labor can accomplish. Management must pick and choose from the many little things which sum to big things. Some tasks don't get done! Therefore, management must concentrate on items that have the highest payoff. Facilities and equipment also play an important role in the net payoff.

Procedure and Discussion:

A base budget for the average producer was developed utilizing a TI-59 Programmable Calculator for the calculations. The TI program allows changing one item while holding all other items constant.

The 1983 projection is based on a 240 litter/year operation. Smaller or larger operations average costs will not vary greatly from the 240 litter operation.

Other Inputs Are:

- 7 pigs sold/litter at 230 lbs.
- Replacements raised
- Selling price \$54 market, \$50 cull sales
- Feed: See Table 3
- Grain price \$2.30 per bushel
- Labor 12.5 hours @ \$4 per hour
- Vet., Medicine & Drugs \$10 per litter
- Interest on breeding herd and $\frac{1}{2}$ of the cash costs @ 15%
- Facility current value \$81,800 (\$341 per litter)
- Facility remaining life: 8 years

<u>Budget Results:</u>	<u>Litter</u>	<u>Head</u>	<u>240 Litters</u>
Sales	\$920	\$131	\$220,800
Costs	748	106	179,520
Returns	\$172	\$ 25	\$ 41,280
Feed Costs	\$490	\$ 70	\$117,600

Breakeven Sale Price \$45/cwt.

Table 1 indicates the effects of controlling or improving certain management factors. The table indicates the base or average budget. For each item listed the change from the "base" is indicated with the profit per litter shown along with the total profit for 240 litters.

Pigs Sold: While the average producer markets 7 pigs, the effect of adding 1 pig (230 lbs x \$54) minus feed costs is equal to \$70. No additional cost is assigned for facilities for this sow as the costs do not change because of litter size for the facet of production.

Feed Conversion: Changing from 4.58 to 4.0 represents a 13% improvement. The change can come from: feeder adjustment, feed processing effects on particle composition and genetics of the herd, etc.

Sell (including culled pigs) Price: Indiana and other studies indicate that greater achievements are possible than the \$2 shown in Table 1.

Replacements: Putting into place good health, nutrition and boar management will probably result in better benefits than shown.

Grain Price: Feed costs are 66% of the base budget total costs (\$490 ÷ \$748). Grain costs are 50% of total feed costs. Timely grain and protein purchases provide great potential for improving profit.

Labor: Table 1 shows a 50% increase in labor costs. This increase may be desirable in order to effectively achieve some of the other practices. Note that the \$4/hour charge is for manual ("chin-down") labor only. The 12.5 hours per litter are average for several farm studies.

The following important items were examined. Producers may or may not have control over them.

Vet-Drugs: Average producers are spending \$10/litter. Near full health insurance programs may cost \$25. Feed efficiency improvement of 3% will cover the costs increase of \$15.

Interest: Interest may be less important than other items. Our budgets are calculated: $15\% \times (\text{value of breeding herd and } \frac{1}{2} \text{ of total variable costs})$.

Utilities: Utility rates continue to increase, yet, at a slower rate than in the near-past. We have shown a \$5 decrease to be achieved with better utilization and attention to present systems.

Facilities: Our base budgets use a present facility value of \$81,800 (341/litter). Compare the savings needed when using an investment of \$240,000 (1000/sow). With an 8 year life and 12% interest on a debt of \$120,000 and 0% interest on an equity of \$120,000 results in \$180 fixed cost per litter compared with \$60 on the \$81,800 investment. This amounts to a market price difference (selling 8 pigs) of \$6.52 to pay for the added facilities.

When deciding on new facilities, determine the savings in the items shown in Table 2.

Table 1. Economic Effects of Improved Management

	Base	Change	Profit/ Litter	Profit 240 Litters
Base Budget	----	None	\$172	\$41,280
<u>Controllable Items</u>				
Pigs sold	7.0	+ 1.0	\$ 70	\$16,800
Feed Conversion	4.58	- .58	\$ 65	\$15,600
Selling Price	\$54	+ 2	\$ 32	\$ 7,680
Grain Price	\$2.30	- .30	\$ 32	\$ 7,680
Replacements	30%	-50%	\$ 5	\$ 1,200
Labor	\$50	+25	<- 25>	- 6,000
Total Change Controllable			179	42,960
Total Profit			351	84,240
<u>Semi-Controllable</u>				
Vet-Drugs	\$10	\$15	<- 15>	<- 3,600>
Interest	15%	- 3%	\$ 13	\$ 3,120
Utilities	\$25	\$- 5	5	\$ 1,200
Total Change Semi-Controllable			+ 3	\$ 720
Total Profit			\$354	\$84,960
Breakeven 34.76/cwt.				

Table 2. Management Effects

	Base Budget	Better Management	Change
Litter/year	240	240	0
Pigs sold/litter ¹	7.0	8.0	+ 1
Feed conversion	4.58	4.0	-14%
Selling price	54	56	\$+ 2
Replacement %	30%	20%	-10
Grain price	2.30	2.00	\$-30
Vet, drugs/litter ²	10	25	\$+15
Interest	15%	13%	-2%
Labor 12.5 hours	\$50	\$75	\$+25
Utilities	25	20	\$- 5
Facility investment	81,800	81,800	0
Sales/litter	920	1,080	\$160
Feed/litter	490	445	-45
Feed/cwt.	30.43	24.18	- 6.25
Total cost/litter	748	735	+13
Returns/management	172	345	+173
240 Litter Returns	\$41,280	\$82,800	+41,520

¹See Table 3 for feed requirements²Interest at percent shown times value of breeding herd and $\frac{1}{2}$ of cash costs.

Table 3. **FEED REQUIREMENTS FOR SOW AND ONE LITTER (7.3 PIGS)**

	Feed Grain (Corn Equivalent)	Protein Source	Pre-Mix	Pig Starter and Grower
Prebreeding (30 days)	3.2 bu. (179 lbs.)	50 lbs.		xx
Gestation (114 days)	8.2 bu. (459 lbs.)	115 lbs.		xx
Lactation (4 weeks)	5.0 bu. (280 lbs.)	70 lbs.		xx
Pig Starter (2-3 weeks)	xx	xx	xx	74 lbs.
Pig Grower (3-4 weeks)	xx	xx	xx	345 lbs.
Replacement Gilts ¹	4.4 bu. (246 lbs.)	45 lbs.		xx
Boar Feed/Litter ²	8.3 bu. (465 lbs.)	91 lbs.		xx
A. Feed To Produce 40 lb. Feeder	29.5 bu. (1629 lbs.)	371 lbs.	75 lbs.	419 lbs.
B. Feed From 40 lbs. to 230 lbs.	70.0 bu. (3920 lbs.)	779 lbs.	193 lbs.	---
TOTAL FEED/LITTER				
Farrow To Finish (Line A + Line B)	99.5 bu. (5549 lbs.)	1150 lbs.	268 lbs.	419 lbs.

1. Refer to Table 2

2. Refer to Table 3

FEED FOR REPLACEMENT GILTS: FROM 40 LBS. TO BREEDING WEIGHT

	Percent Replacements Including Non-breeders			
	20%	30%	40%	50%
Grain (14.5 bu./gilt)	2.9 bu.	4.4 bu.	5.8 bu.	7.3 bu.
Protein Source (138 lbs./gilt)	28 lbs.	45 lbs.	55 lbs.	69 lbs.

BOAR FEED/LITTER (BASED ON 10 SOWS BRED PER BREEDING PERIOD)

	Number of Farrowing Groups Per Year		
	2	4	6
Grain: 33 bu. per year	16.5 bu.	8.3 bu.	5.5 bu.
Protein Source: 365 lbs./yr.	182 lbs.	91 lbs.	61 lbs.