

Tactics and Strategies for Maximizing Net Returns from the Sale of Market Hogs



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Outline

- **Feed cost**
 - ✓ Feeding program development
 - ✓ Ingredient selection
 - ✓ DE versus NE
 - ✓ Least costing of diets
 - ✓ Feed budget implementation
 - ✓ Feed additives
- **Marketing**
 - ✓ Optimizing shipping weight
 - ✓ Sorting
- **Barn throughput**
 - ✓ Growth rate
 - ✓ Variation in body weight
- **Sow productivity**



Feeding program development

1. Define the objective of the feeding program
2. Select phasing of individual diets
3. Develop feed budget
4. Formulate individual diets



Objectives of a feeding program

1. Maximize return over feed cost/pig sold
2. Maximize return over feed cost/year
3. Maximize expression of genetic potential
4. Achieve specific carcass characteristics
5. Achieve specific pork characteristics
6. Minimize operational losses



**Feeding program objectives must be clearly defined;
Objectives can and indeed will change over time**

Select phasing of the diets

Diet	Pig Wt., kg	Days	A.D.G., g/d	A.D.F., g/d	Feed, kg/pig
St #1	6	4	115	125	0.5
St #2	7 to 8	6	300	330	2.0
St #3	8 to 14	13	475	620	8
St #4	14 to 22	13	600	870	11
St #5	22 to 35	17	765	1,224	21
Gr #1	35 to 50	16	865	1,900	31
Gr #2	50 to 65	16	920	2,300	38
Fi #1	65 to 80	16	930	2,600	46
Fi #2	80 to 95	16	930	2,850	46
Fi #3	95 to 105	11	880	3,000	38
Fi #4	105 to Mkt	12	830	3,000	32



Diet formulation

1. Select the optimum energy concentration
2. Define lysine:energy ratio
3. Define other amino acids relative to lysine
4. Set mineral and vitamin levels
5. Select ingredients



Selecting the optimum diet energy concentration

DIET DE, Mcal/kg	3.12	3.30	3.43
NE, Mcal/kg	2.21	2.32	2.43
Initial wt., kg	37.4	36.6	36.5
Final wt., kg	118.6	118.0	119.0
Ave. daily gain, kg	0.99	0.98	1.00
Ave. daily feed, kg ¹	2.94	2.85	2.77
Gain:feed ¹	2.94	2.94	2.78
Tail-enders, n	48	45	37



¹ Effect of diet significant, P<0.05
Source: Patience et al., 2005

Selecting the optimum diet energy concentration

DIET DE, Mcal/kg	3.12	3.30	3.43
NE, Mcal/kg	2.21	2.32	2.43

Feed cost/pig sold

October, 2005	30.80	29.76	31.60
October, 2007			
- Without corn	55.88	59.11	68.78
- With corn	53.94	53.55	52.34



**Selecting the incorrect dietary energy concentration
can lower costs by \$1 per pig to \$13 per pig**

Selecting ingredients

	Simple	New Ingredients	Aggressive new Ingredients
Wheat	30.54	29.13	-
Barley	41.24	22.50	39.07
Corn	-	-	34.80
Peas	-	26.50	-
Soymeal	24.10	12.80	16.50
Canola meal	-	5.00	5.00
Canola oil	1.00	1.00	1.00
Other	+	+	+
Price, \$/tonne	\$249.86	\$245.25	\$230.57
Growout cost, \$/pig	\$59.25	\$58.10	\$54.43
Savings, \$/pig	-	\$1.15	\$4.72



Aggressive adoption of a variety of ingredients can reduce feed costs by up to \$5 per pig

DE versus NE system for formulating diets

DIET	DE, Mcal/kg	NE, Mcal/kg	DE, Mcal/kg	NE, Mcal/kg
	3.12	2.21	3.30	2.32
			3.43	2.43

Feed cost/pig sold (October, 2007)

DE system	\$56.07	\$59.17	\$60.93
NE system	\$54.82	\$55.43	\$56.51
<i>Savings</i>	\$1.25	\$3.74	\$4.42



Adoption of the NE system of diet formulation can reduce feed costs by \$1 and \$5 per pig

Effect of diet re-formulation (least costing) on feed costs (\$/tonne)

	Fixed formula	Re-formulated
Starter 5 (21 kg/pig)	\$280.12	\$278.23
Grower #1 (31 kg/pig)	\$253.62	\$252.79
Finisher #4 (32 kg/pig)	\$234.23	\$218.58
Feed cost/pig sold		\$3.12



Regular re-formulation of diets can reduce feed costs by \$3 to \$4 per pig

Feed Budget Versus Actual Usage

Diet	Budget	Actual
Gilt developer	2	3.9
Gestation	34	<u>41.5</u>
Lactation	18	19.5
Starter 1	2	2.2
Starter 2	15	15.6
Starter 3	23	22.5
Grower	60	<u>72.8</u>
Finisher 1	90	94.3
Finisher 2	88	90.7
Cost	\$63.64	\$69.87
Difference		6.23/pig sold



Feed Budget Versus Actual Usage

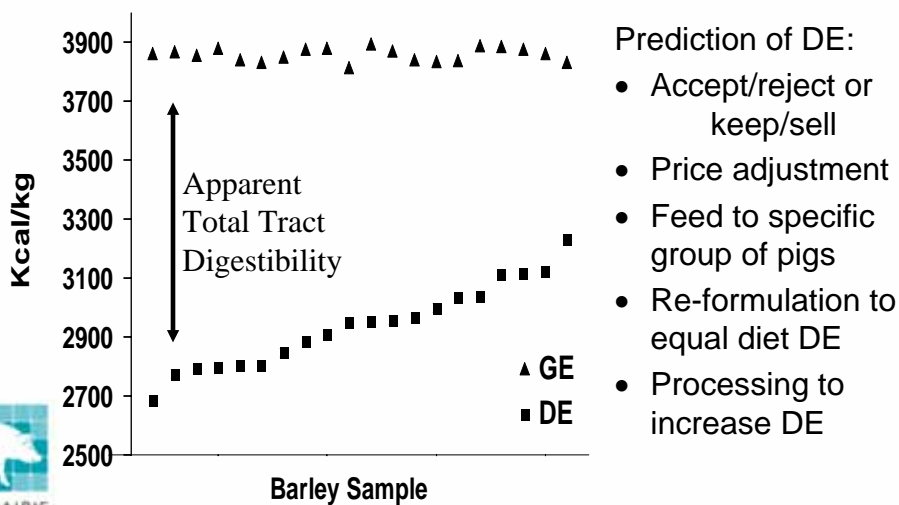
Diet	Budget	Actual
Gilt developer	2	4.6
Gestation	34	39.6
Lactation	18	16.5
Starter 1	2	2.2
Starter 2	15	14.5
Starter 3	23	20.6
Grower	60	69.2
Finisher 1	90	87.7
Finisher 2	88	82.5
Cost	\$63.64	\$64.83

Difference **\$1.19/pig sold**

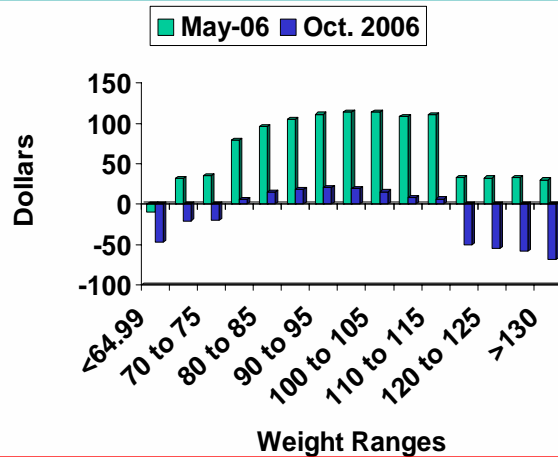
Regular tracking of the feed budget can reduce feed costs by up to \$5 per pig



Variation in DE content of barley



Optimum market weight varies with market conditions



In May, 2006, return over feed cost was maximized in carcasses weighing 100 to 105 kg; in October, 2007, returns were maximized in carcasses weighing 95 to 100 kg

Load summary: October 2007

	Total Load	In Core (90 to 105 kg)	Below Core (<90kg)	Above Core (>105 kg)
Number of pigs this load	200	133	59	8
Carcass weight, kg	93.0	94.3	87.5	112.8
Carcass index	108.6	108.3	106.6	82.5
Backfat, mm	19.3	19.7	18.1	22.4
Loin, mm	62.0	62.8	59.7	65.8
Value, \$/pig	103.42	106.00	97.94	95.99
Return over feed, \$/pig	18.23	19.61	12.93	-11.10
Net income, \$/pig	-31.77	-29.73	-37.09	-52.85



Achieving 85% in core, rather than 66% in core, would increase return over feed cost from \$18.23 to \$20.04, an increase of \$1.81 per pig

Effect of sow productivity on financial outcomes

Pigs weaned/sow/year	22	25	28
Pigs sold/year	20.7	23.5	26.3
Expenses			
Feed	88.35	86.65	85.30
Salaries/benefits	16.50	14.53	12.99
Trucking	9.50	9.50	9.50
Utilities	5.50	4.84	4.33
Breeding	5.50	4.84	4.33
Maintenance	4.00	3.52	3.15
Slurry hauling	2.80	2.47	2.20
Vet. supplies/serv.	2.00	1.76	1.57
Office supplies, etc	1.00	0.88	0.79
Management fees	3.18	2.80	2.50
Taxes/insurance	4.00	3.52	3.15
Interest/bank fees	5.00	4.40	3.94
Total expenses	147.33	139.71	133.75
Break-even price	\$1.39/kg	\$1.31/kg	\$1.26



Summary

1. Feeding program objectives must be clearly defined and communicated
2. Selecting the correct dietary energy level can reduce costs by \$1 to \$13 per pig
3. Adoption of net energy can reduce feed costs by \$1 to \$5 per pig
4. Aggressive use of a variety of ingredients can reduce feed costs by up to \$5 per pig
5. Regular re-formulation of diets can reduce feed costs by \$3 to \$4 per pig
6. Tracking of the feed budget can reduce costs by up to \$5 per pig
7. Optimum market weights change substantially with market conditions
8. Achieving 85% in core, compared to 66%, can increase net income by almost \$3 per pig
9. The use of enzymes becomes increasingly economical as feed costs rise
10. Improving sow productivity can reduce the break-even COP by up to \$13/kg



Thank you

