



Top 10 cost cutters and revenue generators

Lee Whittington, BSc., MBA.

Lowering your cost of production and increasing revenues is more than just good business; for many producers this is the key to surviving the current market situation. Ideally, all farms are using many of the following ideas, but if not, now is the time to revisit this list and see if there are hidden profits waiting to be discovered. The following list focuses on changes, which can be implemented and monitored easily and inexpensively. In most cases, we have estimated the effect in terms of dollars per pig marketed.

1. The ideal feed formulation is dependent on animal weight and performance as well as cost of ingredients. The main driver to determining the frequency of diet reformulation is ingredient prices. When prices are rising and falling diets need to be changed more often. In volatile markets that could mean weekly, but for most producers this exercise is done each month, or whenever a major ingredient changes in price or availability.

An example of the effect of diet reformulation on cost of production is seen in Table 1 comparing a diet formulated on April markets but still in use in December. Those same specifications when reformulated using December prices produced a much different

cost per tonne and reduced the cost per pig by \$2.33 without changing performance.

These example diets reflect only one farm's pricing scenario and are greatly affected by local availability and any forward contracting of ingredients. Major changes in ingredient prices that have affected most producers include the increase of approx. \$100/tonne in soy prices in December, resulting in this farm's diets using more canola meal in grower and finisher diets. Experience suggests that regular reformulation of diets can reduce feed costs by \$2-\$4/pig sold.

2. Optimizing the use of ingredients like peas, lentils, and canola can reduce the cost of production in some commodity markets. Before incorporating any new ingredient, pork producers recognize that real hurdles exist such as available bin space, and local availability of seed cleaning byproducts. Usage rates will determine the value of any ingredient, one producer saved over \$1.00 per pig by allowing grower diets to use up to 7.5% canola and finisher diets up to 10%. Pea usage up to approximately 30% of the diet is feasible. The net value of this tip will vary widely depending on the pricing and availability of alternative ingredients.
3. Selecting ingredients for their nutritional content not their bushel weight has been clearly defined as a significant way to ensure

performance when considering distressed and other 'low quality grains'. Barley and various classes of wheat have been thoroughly examined for their dietary energy content and feed intake effect. Studies have shown that on average, a 1% rise in ADF (acid detergent fibre) results in a 93 kcal (3%) fall in DE (digestible energy) in barley. To make use of this information a pork producer needs to take representative samples of the grains they plan to use for the coming months and send these to the lab for protein, and either acid detergent fibre (ADF) for barley or neutral detergent fibre (NDF) for wheat. The level of savings will be dependent on having access to grains that provide energy in excess of their current market value (such as distressed grains), or improved confidence in a wider variety of ingredients such as the recent work on wheat which demonstrates all of the common wheat varieties provide similar energy values to pigs. (Annual Research Report 2002, pg 22)

4. Using phytase in starter and grower rations allows requirements to be met while reducing dependence on mineral phosphorus sources. The level of phytase usage varies depending on the concentration of the product selected, recent work supports that 250 FTU/kg of phytase added to diets of growing pigs maintained performance compared to diets without phytase. Until recently, most if not all practical grower and finisher diets as well as

sow diets were bringing Phytase into the Least Cost Formulation. Dropping grain prices have challenged last year's economics in this area. More information on phytase can be found in Centred on Swine Vol 10, No 3, Fall 2003.

5. Current marketing grids dictate that 'eyeballing' market weight isn't going to generate the maximum revenues. But what methods are available to balance workload and hitting the core? Knowing growth rates near market by weighing groups of pigs leading up to market allows you to use a system of weighing every two weeks. This method requires you weigh all pigs at the first shipping day. All pigs in the

Canadian grids. In addition, when the pool price rises to say \$1.50/kg the demerit value increases to \$0.52 - \$1.84/c/kg in lost value. Trim demerits include arthritis, bruising, skin conditions (such as frost bite) and abscesses. If these demerits are taking place in the handling and transport of the hogs there are steps to reduce these losses by reviewing handling facilities and practices in the barn, on the truck and at the plant.

7. Feeder adjustment is often seen as too much trouble because many feeders can be difficult to adjust. The performance of weanling pigs was maximized when the feeder gap allowed

maintained can have a significant impact on water usage and the cost of delivering water and hauling away spilled water as slurry. The most common delivery device is the water nipple. Adjusting the height of the nipple to meet the needs of the pig has been shown to reduce water wastage from 10-20%. Water wastage increased about 7% when flow rates were increased. Assuming all the wasted water is eventually moved as slurry, this could be costing \$0.25-0.60 per pig marketed. Nipples should be adjusted to 2.5 cm above the shoulder of the pig. (PSC Annual Research Report 2000, page 32; PSC Annual Research Report 2001, page 22).

9. Do not keep the pigs too warm. Elevated barn temperatures reduce feed intake and thus growth rate, and this can occur in the winter as well as the summer months. For every 1°C increase above the pig's thermoneutral zone, feed intake drops 1-2%, and growth rate drops about 3%. In the winter this cost is compounded with increased energy costs to heat the barn. The benefit to reducing temperatures will be a minimum of \$0.50/pig for growth and \$1.00+ per pig depending on energy costs. As spring and summer temperatures rise, watch your ventilation systems ability to adjust. Indoor temperature should be within 3°C of outside temperature. If the differential is greater than this the ventilation system is likely operating below an acceptable standard. Temperature recommendations are included in Pork Production Reference Guide 2000, pgs 42-46, or Swine Building Ventilation, pgs 64 & 65.

10. Controllers and sensors need calibrating and monitoring to ensure they are operating properly. Based on typical January conditions in the Saskatoon area, we have modeled the impact of having an improper setting allowing a minimum ventilation rate above that required for moisture removal. For the typical 200 head finisher barn and a natural gas price of \$0.031/kWh, the increased cost of a ventilation rate 10% over requirement is approximately \$1.88 per day, or \$0.01 per pig per day. Depending on the days to market this could mean additional costs of \$0.90 to \$1.00 per pig. Guidelines for winter ventilation rates are provided in Swine Building Ventilation, pg 42.



Table 1. Cost Comparison April vs. December, 2003

	Grower Diet (35-60kg)	Finisher Diet (60-90kg)
April 2003 \$/tonne*	215.41	190.00
December 2003, \$/tonne*	215.58	177.59
December 2003, reformulated \$/tonne*	201.91	160.76
\$ Difference/tonne	(13.67)	(16.83)
Feed Usage Budget (kg/pig)	60	90
\$ Difference/pig	\$0.82	\$1.51

*Unshrunk ingredient cost only

correct weight are shipped that day, but by knowing the typical ADG, you can project forward one week and mark those pigs with a distinct colour that will be ready next week, and different from the colour markings on the pigs to be shipped this week. There are herds that have improved their ability to market only 70% in the core and increase this to 90%+ using this method. The result is approximately \$3.50 per hog at \$1.10/kg market prices and \$160/tonne finisher feed pricing.

6. Marketing losses associated with demerits may be larger than one expects. A recent analysis of 2,562 market hogs found approximately 4.5% had demerits of some type. At \$1.10/kg market price, those demerits account for a \$0.42-\$1.39/c/kg or (\$0.34-\$1.13/hog) discount when analyzed against the current Western

for 40% of the trough to be covered with feed. This improved feed intake resulting in improved growth performance. Previous research at PSC had already shown that for every 1 kg improvement in weight at 11 weeks of age, body weight at 17 weeks of age improved 1.5-1.8 kg. The optimum economics favours monitoring the feeder gap and reduced pig density approaching 3.75 square feet per pig in the nursery. (PSC Annual Research Report 2000, pg 14).

8. Pigs require, by weight, approximately 2.5 times more water than feed each day. Previous tests have confirmed that up to 40% of this water when delivered through a water nipple is wasted. Getting that water to the pig can be done through nipples, bowls or in the feeder. The choice of delivery method and how it is