

Feed Cost-Control Recommendations Revisited

This newsletter was originally published in fall 1998, when hog markets were at an all time low. The information presented is as applicable today as it was four years ago. Read on for valuable tips and points to consider in helping control feed costs in the down markets of 2002.

Particle size. The particle size of corn fed to pigs should average 600-700 microns in meal feeds. University studies estimate a 100-micron decrease in particle size will improve feed efficiency 1.3%. Thus, reducing corn particle size from 1000 to 700 microns will improve feed efficiency by 4%. This will save more than \$1.50/pig assuming \$2.50/bu corn.

Feed wastage. Reduce feed wastage by ensuring optimal feeder adjustment. Pigs should have free access to feed at all times; however, feeders for nursery pigs should be adjusted so that 50% of the feeder pan is visible. For grow-finish pigs, 70% of the feeder pan should be visible. With an average grow-finish feed cost of \$125/ton (40 to 260 lb pigs), a savings of \$0.38/pig is realized for each 1% reduction in feed wastage. Thus, a 5% reduction in feed wastage saves \$1.90/pig.

Ingredient nutrient levels. Take full advantage of nutrient content of major ingredients, such as soybean meal (SBM) and corn. A 0.5% increase in crude protein (CP) content of SBM (48 vs. 47.5) reduces the inclusion of SBM 5 lb/ton of complete feed. With SBM, corn and fat at \$200/ton, \$2.50/bu and \$0.134/lb respectively, this reduces complete feed cost by \$0.32/ton. Likewise, feeding corn with a 0.5% higher CP content reduces SBM (48%) inclusion 8 lb/ton of complete feed. This lowers complete feed cost an additional \$0.42/ton.

Synthetic amino acids (AA). Crystalline lysine is cost-effective with today's current ingredient prices. It should be used to lower SBM inclusion and reduce diet cost. However, excessive use of L-lysine without supplementation of other AA will actually increase feed cost per pig due to AA imbalances that result in reduced performance. At today's ingredient prices, correct use of L-lysine in grow-finish diets will save more than \$3.00/ton of complete feed. Akey formulations contain correct amounts of synthetic AA to keep diet costs as low as possible.

Dietary lysine level. Reducing dietary CP by lowering SBM inclusion below requirements for lean growth will reduce ADG and increase F/G in pigs. Reducing SBM (48%) 50 lb/ton will reduce dietary lysine 0.064 percentage units. Lowering dietary lysine 0.06% below optimum levels will reduce ADG 6-8% and increase F/G 5-10%. For pigs from 40 to 260 lb, this would increase time to market 8-11 days and increase feed 30-60 lb/pig. Although average feed cost would be reduced \$2.70/ton, feed cost per pig would increase \$1.05-2.90. Reducing dietary lysine below requirements will also increase carcass fatness and reduce lean percentage, resulting in lower premiums at the packer.

Alternative ingredients. Explore the availability of alternative ingredients for swine diets, including wheat midds, barley, bakery by-products, meat and bone meal and distillers dried grains. Alternative ingredient usage requires diets to be reformulated by Akey. Nutrient information needed to accurately prepare diets with alternative ingredients include CP, calcium, phosphorus, fat and, depending on the ingredient, salt or

sodium content. Be aware that some alternative ingredients are variable in nutrient content, which can result in inconsistent animal performance.

Dietary energy. Removing fat from swine feeds lowers cost per ton. With fat at \$0.135/lb, adding 100 lb/ton increases diet cost \$12.50/ton, including adjustments in SBM levels to maintain the same lysine/calorie ratio. However, high dietary energy levels lower F/G, resulting in reduced feed cost per pound of gain when fat is priced competitively with corn. If corn is \$2.50/bu, fat should cost less than \$0.155/lb to be cost-effective. Fat price needs to be less than 3.5 times the price of corn to be a more economical source of energy than corn.

Phase feeding. Feeding more diets from 40 lb to market helps reduce feed costs while maintaining growth performance. Using 3 vs. 2 diets during the finishing period reduces feed cost by \$1.10-1.20/pig, with an additional \$0.80/pig feed cost savings using 4 vs. 3 diets. When deciding how many phases to use in grow-finish, consider logistics of feed manufacturing and delivery as well as age and weight spread within a group of pigs on the same feed line. A tighter spread in age and weight within a group means more dietary phases can be fed to help reduce feed costs.

Split-sex feeding. Split-sex feeding during the grow-finish period normally saves \$0.30-\$0.50/pig in feed costs, due to targeting diets and budgets to more closely match the nutrient needs of gilts and barrows. Gilts have lower ADFI, lower ADG and better F/G compared to barrows, as well as leaner carcasses. Thus, gilts benefit from more nutrient dense diets than barrows, especially in mid to late finishing.

Feed budgeting. Follow feed budgets closely to avoid feeding more of any phase than budgeted. Over-feeding diets will not result in better performance and may actually reduce growth rate. Conversely, underfeeding the proper amount of feed budgeted by 10% will have the same adverse effect on growth performance as lowering dietary lysine levels (see above). Following feed budgets is extremely important in both nursery and grow-finish stages of production.

Feed additives. Make sure all feed additives are cost-justified. If an additive has a claim for improving grow-finish F/G by a certain percent, calculate that percentage based on the average cost of the grow-finish diet. This value represents the maximum amount that could be paid for the additive per ton of complete feed. For example, if average feed cost is \$125/ton and an additive improves F/G by 3% from 40-260 lb (2.95 to 2.86 F/G), that additive should cost less than \$1.25/ton. Always consult your veterinarian for advice on control and treatment of disease challenges.

Diet cost comparisons. Do not be misled by competitive feed programs that make unfair or unrealistic comparisons. Growth performance projections should be realistic based on your production records and goals. Nutrient levels used for major ingredients (SBM, corn, fat, etc.) must be the same between programs for an accurate comparison of nutritional levels and feed costs.

Following the above suggestions will help control feed costs. Focus on being as efficient as possible to control costs in all aspects of production.