

Focus on Feed Efficiency in Pork Production

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Services



Feed represents the largest proportion of cost of production, contributing up to 70% of the variable cost of production. This is nothing new. However in the past couple of years we have seen feed costs rise to historically high levels, while costs may retreat somewhat, it is highly unlikely in the short term that we will see feed costs dip to levels experienced in 2004 and 2005.

There has always been emphasis on feed efficiency in production systems, however the discussion comes to the forefront when feed costs rise and show no real signs of a significant retreat. Since feed costs represent the largest portion of cost of production, it also represents the greatest opportunity for reducing costs in particular the grower-finisher barn. Feed efficiency can have the single biggest impact on feed cost per pig. With the higher feed costs there has been a greater push towards managing feed efficiency within operations. At current feed costs an improvement in feed efficiency of 0.1 kg of feed per kg of gain will result in a greater than \$2.00 net income per pig marketed.

There are a number of considerations that need to be taken into account when examining feed efficiency in pork production: These are environmental (temperature, humidity, air circulation), social (space allocation, group size,

re-grouping), immunological (disease, pathogen concentration), and management (particle size, feeder adjustment).

Factors Impacting Feed Efficiency:


- **Genetics:** Are you feeding according to the maximum lean yield potential of your herd?
- **Feed processing:** Understanding the impact of pelleting and size of grind. Industry standard for particle size is 600-800 microns. Kansas State University demonstrated a 1.2% improvement in feed efficiency for every 100 micron reduction in particle size relative to the optimal range. Pigs fed pelleted diets vs. mash have 3-6% better feed efficiency.
- **Management:** Ensure feeders are checked daily and feeders are adjusted for 40% pan coverage to maximize feed efficiency, by maximizing performance and minimizing feed wastage. In addition, a 3% reduction in pen space translates to a 1% reduction in feed intake and growth rate.
- **Dietary energy level:** Use of alternative feed ingredients typically provides a lower energy density within the diet, thereby increasing the amount of feed required per pig. Pigs will typically compensate for the lower energy diets by increasing their consumption, subsequently having a significant impact on feed efficiency. Poorer feed efficiency may be offset by cheaper diet cost. It is very important to monitor this relationship.
- **Environmental temperature:** Ensure pigs are kept within their thermal comfort zone. Cold temperatures increase feed intake while hot temperatures reduce feed intake
- **Disease challenge:** Healthy pigs grow faster. Pigs are able to utilize nutrients for growth rather than fight disease. Disease challenges can also increase mortality, when occurring in

the finishing herd can have significant impact on whole herd efficiency.

- **Breeding herd productivity:** On average a sow will consume approximately one tonne of feed per year. The greater number of pigs produced per sow will improve whole herd feed efficiency.
- **Market weight:** Feed efficiency worsens as pigs get heavier. Ensure pigs are marketed at their optimal weight to minimize feed cost per kg gain, maximizing profit potential.

"Focus on Feed Efficiency" webinar series starts
March 5, 2012

While this is not an inclusive list of factors that influence feed efficiency, it gives us the perspective of the multi-disciplinary approach that is required to achieve its full potential. One of the ways in which Prairie Swine Centre is delivering this message is through a series of webinars specifically dedicated to a **"Focus on Feed Efficiency"**.

This series of eight Feed Efficiency webinars are being delivered in partnership with the Farm Leadership Council starting March 5 and concluding June 19. Webinars will run on two week intervals by well-known experts in the area of feed efficiency discussing a wide range of topics including: feeding and barn management, whole herd factors, feed processing, new technologies and health impact on feed efficiency. 

"Focus on Feed Efficiency" Webinar Series

March 5, 2012 (1:30 p.m.)	The Future of Precision Livestock Farming	Dr. Candido Pomar, Agriculture and Agri-Food Canada
March 27, 2012 (1:30 p.m.)	Feeding and Barn Management Practices that Maximize Feed Efficiency	Dr. Bob Goodband, Kansas State University
April 10, 2012 (1:30 p.m.)	Herd Management Factors that Influence Whole Herd Feed Efficiency	Dr. Aaron Gaines, The Machoffs
April 24, 2012 (1:30 p.m.)	New Processing Technologies that may Influence Feed Efficiency	Dr. Tom Scott, University of Saskatchewan
May 8, 2012 (10:30 a.m.)	Health Effect on Feed Efficiency	Dr. Steve Dritz, Kansas State University
May 22, 2012 (10:30 a.m.)	Fueling the Immune response: What is the Cost?	Dr. Rod Johnson, University of Illinois
June 5, 2012 (10:30 a.m.)	Emerging Technologies with Potential to Influence Feed Efficiency	Dr. Denise Beaulieu, Prairie Swine Centre
June 19, 2012 (10:30 a.m.)	Dietary Energy Concentration and Feed Efficiency Targets: What are the right questions, and do we have the answers	Dr. John Patience, Iowa State University