



Swine Innovation Porc

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## Feeding Sows More Efficiently

When someone mentions feed costs, thoughts typically gravitate towards what is happening in the finishing barn, simply due to the influence it has on the cost of production. If we take a look at feeding the breeding herd for a moment, what are some of those things producers can implement to reduce feed costs, while maintain or increasing sow productivity?

One of the projects (lead by Dr. R. Ball and Dr. S. Moehn) funded through the Canadian Swine Research and Development Cluster focuses on "Sow Nutrition During Gestation", specifically refining the requirements for lysine, threonine, isoleucine and tryptophan. Results of this research indicate that amino acid and energy requirements are greater in late than in early gestation. This is in agreement with the new recommendations by NRC (2012) that derived increased requirements in late pregnancy from the changes in growth rates of body tissues. After weaning, sows focus their metabolic effort on recovering body tissue lost in the preceding lactation. However, this changes as fetal and mammary growth accelerate exponentially in the last 45 days of gestation.

This shows that applying a single phase feeding program will lead to overfeeding during early gestation and underfeeding during late gestation. Overfeeding in early gestation results in a waste of feed and money, while underfeeding in late gestation leads to sows entering lactation in a severe catabolic state. Therefore, feed and nutrient intake must be increased during late gestation to maintain performance and sow longevity, as practical experience has shown. However, simply increasing the allowance of the same feed in late pregnancy is insufficient to cover the huge increases in amino acid requirement during the last 4 weeks of pregnancy. To meet both energy and amino acid requirements for sows of all ages, a parity-segregated phase feeding with two diets is necessary.

### Phase Feeding Pregnant Sows

<http://www.prairieswine.com/phase-feeding-for-pregnant-sows/>

### Net Energy and Amino Acid Requirements for Gestating Sows

<http://www.prairieswine.com/new-energy-and-amino-acid-requirements-for-gestating-sows/>

### Save \$ with New Feeding Standards for Sows

<http://www.prairieswine.com/save-with-new-feeding-standards-for-sows/>

### Implementation of Segregated Parity Feeding

1. The phase feeding program should consist of two diets that satisfy the highest and lowest amino acid requirements and can be mixed in appropriate ratios to cover the intermediate amino acid needs
2. Feed amounts should be increased for the last four weeks of gestation. The increase in feed allowance of a corn-soybean meal diet should be 0.6 kg/d for gilts, 0.5 kg/d for 2nd parity sows and approximately 0.4 kg/d for older sows.
3. Such a feeding program requires slightly less feed during gestation compared to single phase feeding but supplies amino acids and energy to the sows in the right amounts at the right time.

### Benefit to the Producer

Parity-segregated phase feeding of pregnant sows supplies the amino acids and energy necessary to match the sows' requirements. This can result in reduced feed cost, better sow condition at farrowing, better rebreeding success and prolonged productive life of sows. The feed cost savings alone may exceed \$10 per sow and year. Generally the savings are greater for older sows and for times with a large price differential between corn and soybean meal.



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[www.swineinnovationporc.ca](http://www.swineinnovationporc.ca)