

## Feeding For 30: The Nutritional Link to the Goal of 30 P/S/Y

Maternal nutrition has a major influence on fetal growth<sup>1</sup> and sow herd nutrition is a key influencer of litter size and performance in any size operation. Without keen attention to sow nutrition management, genetic potential, reproductive health and fertility, birth weights, weaning weights all may be significantly impacted.

### Feed Intake to Reach Your Goals

Appropriate feed intake management should be the goal of any feeding system – manual or automatic. Full-feeding in lactation is a key factor in reaching 30+ Pigs/Sow/Year.

- Gestation feed intake needs to be controlled to gain and maintain appropriate sow body condition during the late gestation. This will allow maximum feed intake and milk production once into lactation<sup>2</sup>.
- Sow nutrition and feed intake should not be overlooked even in late lactation (just prior to weaning). Even though the energy demands on a lactating sow are reducing, her reproductive system needs to be supported by proper nutrition to ensure adequate rebreeding within a few days and future gestation needs.
- Feed supplements that stimulate feed intake during higher seasonal temperatures have been shown to increase the number of pigs weaned and the extra pounds pig weaned<sup>3</sup>.
- Sows should be fed *ad libitum* as soon as they farrow to ensure healthy post-partum recovery and optimal milk production for the litter.
- Sows should be full-fed from weaning to breeding. In most cases, the amount will exceed the capacity of the full drop box, and therefore hand feeding may be required.

### A Closer Look at Maternal Nutrition

Maternal nutrition has a major influence on fetal growth. Depressed or less than optimal energy intake during lactation causes the sow to burn body reserves and lose weight. This nutritional body condition loss can negatively impact the wean-to-estrus interval as well the reproductive results of her next litter. It will be a challenge for the industry to get enough calories into the lactating gilt to support a large litter while sustaining her growth and body condition. Reported herd data shows that sows failing to reach 400 pounds of bodyweight at the end of the first parity, while losing lean tissue, are more likely to be culled for reproductive issues. A 2.2 pound increase in daily feed intake cuts a sow's chance of being culled by 30 percent.

### Water Consumption is Key

- A sow can drink up to seven gallons of water daily. Higher volumes of clean fresh water are not only needed to supplement good nutrition, it is required for high feed intake and more adequate absorption of key nutrients in the diet. Water consumption requirements can increase in hot weather.

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<sup>1</sup> Willis, Gawain; Ph.D. and Nutrition Business Leader for Land O'Lakes Purina Feed; Presentation. "Sow Nutrition and Full Value Pig™ Potential"; June 2011.

<sup>2</sup> Weldon, W. C., A. J. Lewis, G. F. Louis, J. L. Kovar, M. A. Giesemann, and P. S. Miller, 1994. Postpartum hypophagia in primiparous sows: I. Effects of gestation feeding level on feed intake, feeding behavior, and plasma metabolite concentrations during lactation. *J. Anim. Sci.* 72:387.

Xue, J., Y. Koketsu, G. D. Dial, J. Pettigrew, and A. Sower. 1997. Glucose tolerance, luteinizing hormone release, and reproductive performance of first litter sows fed two levels of energy during gestation. *J. Anim. Sci.* 75: 1845.

<sup>3</sup> LongView Trials, 2007-2008. Willis, Gawain; Ph.D. and Nutrition Business Leader for Land O'Lakes Purina Feed; Presentation. "Sow Nutrition and Full Value Pig™ Potential"; June 2011.

- Productive sows produce up to three gallons of milk per day, contributing to a daily nutrient requirement that is three times higher during lactation than gestation. This is why lactating sows should have access to fresh water at all times.

### **Amino Acid Intake**

Lysine is often the first limiting amino acid in lactation rations<sup>4</sup>. Ensuring adequate levels of lysine in lactating sow diets is crucial to maintaining performance. As litter size and milk production have increased, feeding recommendations for lysine intake have increased as well. Feeding at least 60-65 grams of lysine per day over the course of the lactation phase is commonly recommended today.

### **The Role of Organic Trace Minerals**

Sows can benefit in the areas of immunity, reproduction and hoof integrity when fed organic trace minerals as part of the diet. Research shows that sows fed organic trace minerals farrowed larger litters, had higher live pig birth rates and optimized feed intake during lactation.

### **Did You Know?**

Adequately balanced organic trace minerals in the diets fed to sows positively impacts the number of piglets born alive<sup>5</sup>.

### **Ties between Nutrition and Lameness**

Lameness is directly correlated to lactation production, reproductive performance, sow longevity in the herd and overall economic return to the operation. With the negative economic impact of sow lameness and its influence on productivity, it is recommended that lesion scoring, locomotion scoring and functional ration management be carefully monitored in the sow breeding herd. Research has shown the numbers of pigs born alive can be directly impacted by foot lesion type and mineral treatments.

Sound nutrition can help address lameness in the sow herd. Sow diets should be rich in organic trace minerals, along with adequate calcium, phosphorus and vitamin D, to manage lameness, augmented with other management practices aimed at addressing sow lameness scores.

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<sup>4</sup> Jordahl, Rick. "Lactation Feed Intake Fuels Sow Performance." Pork Magazine. August 2011.

<sup>5</sup> Wilson, Mark E.; Ph.D. Zinpro; Presentation. "How Do We Solve Lameness Problems"; June 2011.

For further information, please see your local feed sales representative at a Land O'Lakes Feed Co-op or Purina Mills Dealer. Visit us on-line at [www.LOLFeed.com](http://www.LOLFeed.com), [www.PurinaMills.com](http://www.PurinaMills.com)

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