Improving piglet birth weight

In this white paper you will read about how to improve piglet birth weight. We give you practical tips to help increase piglet weight by feeding the sow correctly.
Low birth weight is associated with an increased risk of mortality for live-born piglets until weaning. It is well known that piglets with a birth weight below 1 kg have a lower chance of survival and a lower lifetime performance, independent of their status and litter. Producers should monitor piglet birth weights on a regular basis. The general rule of thumb is that less than 15% of the piglets in a litter should weigh less than 1 kg at birth.

Birth weight is mostly influenced by sow factors rather than piglet genotype. In this respect, uterine capacity and nutrient supplies are important factors. Sow nutrition plays an important role in litter uniformity. This is especially important for highly prolific sows in modern commercial environments.

As the litter size increases, the amount of nutrients available per fetus decreases due to increased fetal competition, which has been related to suboptimal fetal development. Sow reproductive performance, in terms of improved fetal growth and development, can therefore be optimized by feeding the ideal supplementation of amino acids and energy during gestation; even with an increase in litter size.

TIPS TO INCREASE BIRTH WEIGHT IN PIGLETS

- Provide the right feed intake from weaning to insemination. This is essential for ensuring higher piglet birth weights (Topigs Norsvin research has shown a 45 grams higher piglet birth weight for 1 kg extra feed consumed during this period).
- Do not restrict the feed intake of sows that are overweight during the last part of gestation. This could affect piglet birth weights.
- Ensure a good and smooth transition between the lactation and gestation diets.
- Try to avoid farrowing induction, as premature parturition may decrease piglet birth weights by 40 to 50 grams.
- Prevent excessive body condition losses during lactation, as this affect the litter size in the next parity.
- Use the correct amino acid ratio for optimal fetus development, especially during the last trimester of gestation.
- Add additional Omega 3 fatty acids during the last part of gestation (e.g. fish oil, linseed oil).
- Provide arginine in gestation diets from day 70 until day 110 of gestation. This is because as a substrate for nitric oxide, arginine has an important role in regulating placental-fetal blood flow, which is essential in transferring nutrients and oxygen from mother to fetus.
- Feed the correct level of minerals and vitamins during gestation and lactation. Folic acid, vitamin A, iron, zinc and magnesium all play a vital role in fetal development.
Nutrition is one of the key components to ensure that the modern sow achieves her genetic potential for production and reproduction. The nutritional demands of the modern gestating and lactating sow and her litter have changed significantly over time. Today’s genetic advancements have resulted in feed efficient, fast growing, and leaner pigs.

However, this progress has also created new challenges when it comes to feeding the modern sow. Nutrient supply, in the form of amino acids and energy, must be designed to optimize the reproductive performance and to maintain the optimal condition (body reserves) for the sow’s entire productive life.

Diets should also be optimized to ensure nutritional welfare and comfort to the animals and also to minimize the environmental impact through excretions. To achieve this, a precise adjustment of the feeding level and the feed composition according to the performance level of the sows is required.

This series of white papers about sow feeding covers the following issues:
• Controlling condition
• Transitions and feeding during lactation
• Feeding after weaning and in gestation
• Improving piglet weight

You can download these white papers as well as others from the download section on our website [www.topigsnorsvin.com](http://www.topigsnorsvin.com)

We hope you find these white papers useful. We have published these to enable our clients to get the maximum out of our genetics. These papers have been produced by our nutrition team. You can visit our website if you want to get into contact with them or you can reach them via [feed.group@topigsnorsvin.com](mailto:feed.group@topigsnorsvin.com)

The advice in these documents is based on the perfect feeding of Topigs Norsvin TN70 sows. Nevertheless most of the information is usable for other lines. Use the knowledge of your local Topigs Norsvin advisor or other specialists for the perfect feeding advice for your genetics and situation.

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January 2017