How to boost sow milk in order to produce profitable piglets

Getting better piglet performance starts with higher quantity and quality milk production. Phytogenic feed additives can support both.

Modern sows with adequate genetics and nutrition can produce approximately 10-12kg of milk per day. Piglets' growth rate during the pre-weaning period relies considerably on the quantity and quality of the milk production.

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Sow nutrition during gestation and lactation will influence the litter size and weight at farrowing and weaning, with a direct impact on animal health and breeder's profitability.

Up to 30% of early piglet mortalities can be attributed to a lack of adequate nutrition that could be due to inadequate sow milk production. In order to maximise milk production in sows, several factors have to be taken into account. Table 1 provides a number of tips to reach this goal.

Phytogenic feed additives (PFAs), or botanicals, are functional feed additives of plant origin derived from herbs, spices, essential oils and extracts.

Since phytogenics enhance palatability and improve nutrient digestibility, they can support the subsequent milk and reproduction performance of sows through enhanced feed intake and improved body condition.

Fig. 1. illustrates how Digestarom – a phytogenic feed additive – has been shown to reduce sow weight loss during lactation.

This improvement in body condition stems in part from better protein digestibility, as indicated by a lower urea content of the milk as shown in Fig. 2.

Coping with greater reproduction demands

In general, sow farms have been increasing total born and weaning large litters with heavier pigs. With litter size continuing to improve and lactation length increasing to around 21-28 days, the demand for milk production must rise to meet this increasing demand.

Studies have often shown that sows' weight loss has a negative effect on future lactation results, litter size and farrowing rate.

In addition, low parity sows are expected to gain weight and grow over the first two parities. It is important to maintain the body condition of the sow at weaning, since it influences wean to oestrus interval, number of services per conception and subsequent litter size.

Furthermore, sow body condition in early gestation has an impact on heterogeneity of piglet birth weight as well.

The success of Digestarom in improving daily milk yield per sow is shown in Fig. 3.

Correct water intake
Maintain appropriate temperature
Maintain body condition
Support feed intake
Reduce pathogen load
Address inflammation (energy loss)
Use Digestarom

Table 1. Tips for sow milk production.

Addressing inflammation

The economic loss through lower feed intake, decreased nutrient digestibility and high energy requirement of inflammatory processes resulting from different diseases can take a toll on sows.

One study noted a productivity loss amounting to 10% of the nutrient use during an acute phase immune response: resources which otherwise would have gone towards

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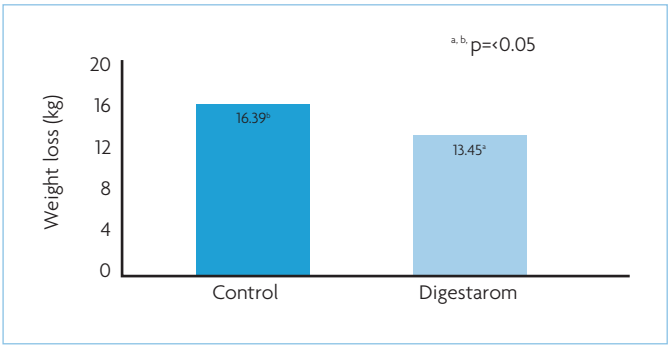

Fig. 1. Digestarom reduces weight loss during lactation. Khon Kaen University, Thailand, 2008 (Trial 286).

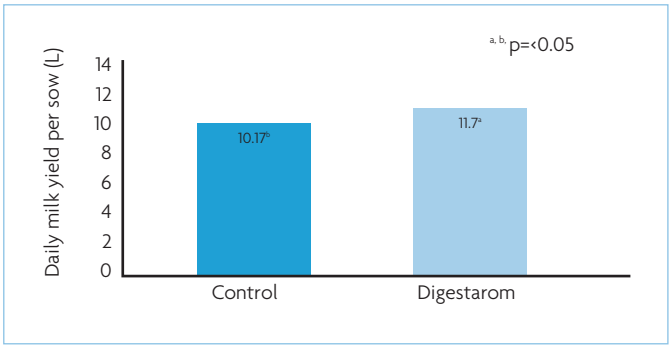

Fig. 3. Digestarom improves milk yield. Calculated from average daily gain of piglets (each gram of gain was assumed to come from the conversion of 4g of milk x the number of piglets in each litter). Khon Kaen University, Thailand, 2008 (Trial 286).

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performance. Other researchers have estimated the nutrient cost of ongoing inflammatory processes to be 1.3 times that of maintenance or a daily cost of 0.27g ideal protein per kg body weight.

The antimicrobial and anti-inflammatory properties of phytogenics may lower the pathogen load of the gastrointestinal tract (GIT) and reduce inflammation.

The somatic cell count can provide an indication of the level of activity of inflammatory processes in the mammary tissues. Fig. 4 shows Digestarom fed sows had a lower somatic cell count – improved milk quality – over the course of two weeks.

Feed and water intake

Lactating sows at high ambient temperatures reduce their feed intake as part of the response to regulate body heat production, thereby losing more weight during lactation.

With a comfort temperature of around 15°C, a room temperature of 25°C (effective critical temperature of lactating sows) will reduce the feed intake of a 200kg lactating sow by 2kg. According to other reports, each 1°C increase in ambient temperature above 20°C decreased daily feed intake of sows by 0.17kg.

Water is an important element in animal feeding because, on the one hand, it is used to excrete metabolism wastage via urine and, on the other, it is needed for growth, digestion and milk production since it is the major component of milk.

Water intake can be very low (10 litres per day) in some sows during the first 24 hours following parturition. After this period of transition, water intake increases gradually to reach 20-35 litres per day during lactation. Increased water intake can reduce relative body weight loss of sows and is positively correlated with the weaning weight of piglets. ■

Fig. 2. Better protein digestibility as demonstrated by lower urea content in sow's milk with Digestarom.

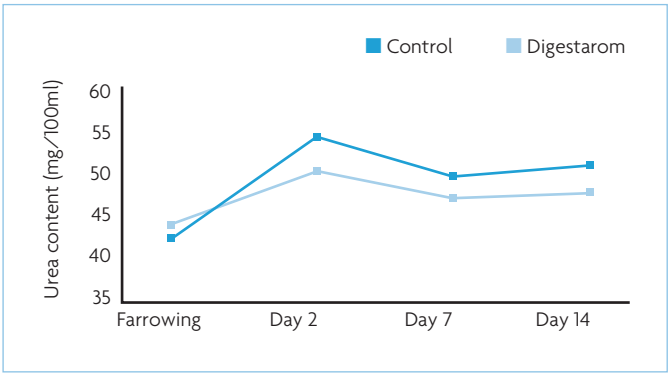

Fig. 4. Improved milk quality with Digestarom fed sows over the course of two weeks.