

Supporting the prolific sow for better lifetime performance

Recent advances in commercial EU dam lines have led to sows producing more piglets born alive and more finished pigs than ever before, with significant improvements seen in piglets weaned per sow per year (PWSY) for many pig producing countries (Fig. 1).

by Heidi Hall,
Anpario plc, UK.
www.anpario.com

Many countries show a stepwise improvement each year and are now approaching 30 PWSY, only Denmark has been above 30 PWSY for three consecutive years.

Genetics are largely the same throughout these regions with Large White x Landrace sows and it is understood that numbers born alive and stayability as a measure of lifetime performance have low heritability traits.

Conversely the continued selection for lean pigs for slaughter has led to leaner dam lines which, in some cases, exhibit sub-optimal feed intakes and lower backfat measurements.

Reduced reproductive performance in parity 2 is a common issue with high prolific breeds. This can usually be attributed to lack of feed intake during the first lactation as the sow is not at her mature body weight throughout the first parity.

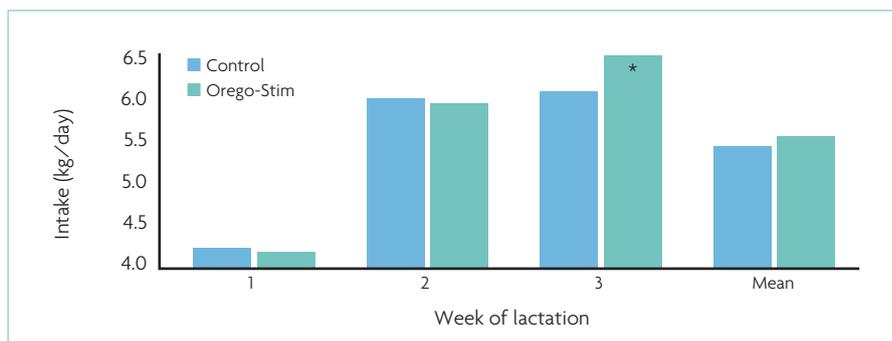


Fig. 2. Effect of Orego-Stim on lactation intakes (*denotes significant difference over the control at $p < 0.1$).

Lactation feed intake

Sow feed intake and management during lactation is therefore of high importance to maintain genetic potential for lifetime performance. With increased numbers born, the requirement for milk has increased and this can lead to increased body condition loss which can then have adverse effects on oocyte quality and subsequent reproductive performance.

Parity 1 sows usually have a prolonged wean to oestrus interval which can be explained by the immature endocrine system in these growing young animals and also by their low feed intake during lactation which decreases gonadotropin secretion (LH) leading to restricted follicle growth in the ovary.

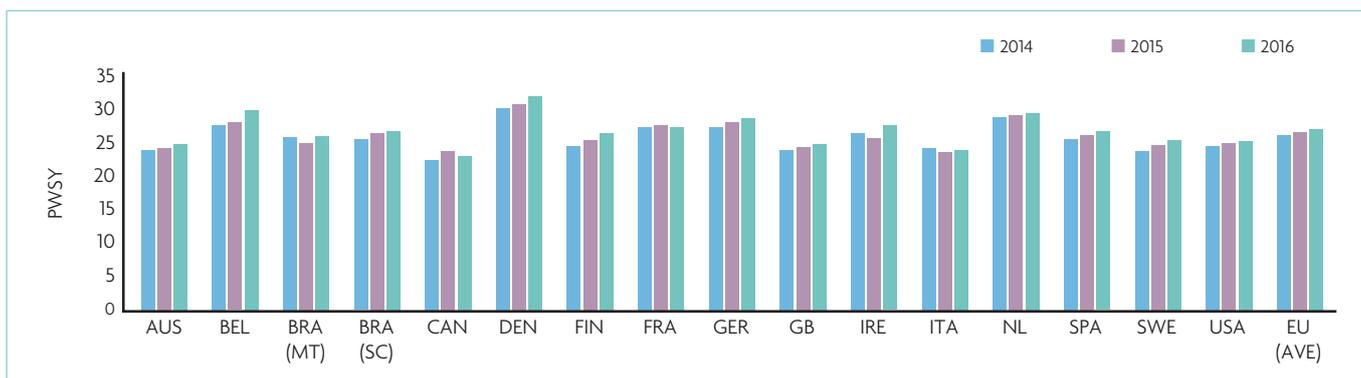
This in turn results in lower numbers born or high returns to oestrus in parity 2. A study by Hoving et al., 2011 also reported that returns to oestrus in second parity were culled on average two parities earlier compared with non-returns, parity 5 compared with parity 7 ($p < 0.05$).

Some commercial units try to combat this issue with delaying service of parity 2 sows for 21 days. This would help LH to reach optimum levels and enable some body condition to be restored.

Many factors play a role in maximising lactation feed intake, not least feed quality and hygiene but also palatability. Oregano essential oil has long been known to improve palatability of animal feed, therefore improving feed intake.

Continued on page 22

Fig. 1. Sow productivity (piglets weaned per sow per year; PWSY) adapted from the Interpig report 2016. Brazil – Embrapa Swine and Poultry Brazil submitted data for two regions: Mato Grosso (MT) and Santa Catarina (SC).



Continued from page 21

Orego-Stim is a high quality, oregano oil phytogenic from Anpario plc, containing carvacrol and thymol. These isoprenoids trigger the olfactory-glossopharyngeal pathway which stimulates appetite and digestive enzyme secretion.

Orego-Stim has been shown to improve lactation feed intakes when fed at 300g/t in lactation (Fig. 2).

In the study by Tan et al., (2015) Orego-Stim increased sow mean feed intake and gave a significant improvement in week three ($P=0.07$). This would then be expected to improve sow metabolic status and help improve conception rate for the next service through improved hormone status.

Piglet performance

Smaller piglets at birth and an increase in litter variability is also known to be related to more prolific sows with an increase in intra-uterine growth restricted (IUGR) piglets produced.

These small birth weight piglets struggle to consume enough colostrum and pre-weaning mortality has risen with numbers born. Many large scale commercial farms are benefitting from taking special care of these small piglets, ensuring they receive enough colostrum by hand feeding where necessary.

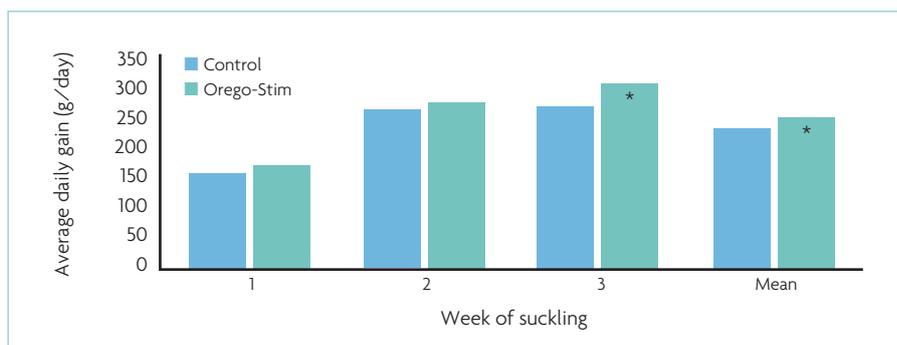


Fig. 3. Effect of Orego-Stim on pre-weaning piglet growth (*denotes significant difference over the control at $p<0.01$).

Pre-weaning mortality and growth is directly related to colostrum and milk intake, therefore maximising sow intakes and driving milk production can be a cost effective way to improve sow and progeny performance.

Feeding Orego-Stim in lactation improved sow intake and subsequently milk yields which corresponded to significantly improved pre-weaning growth rates ($P<0.01$) (Fig. 3) and weaning weights with piglets from sows receiving Orego-Stim at 300g/t being significantly heavier at 21 day weaning ($p<0.01$) with 0.5kg benefit.

Pre-weaning growth rate is associated with post weaning growth rate, Cooper et al., suggested 100g extra at weaning would

equate to one day less to reach slaughter weights. This would reduce the cost of production and free up valuable pig space on the unit.

Summary

Orego-Stim has been shown to be an effective natural support to stimulate sow feed intakes and drive piglet performance, thus helping to maximise returns for the unit. ■

References are available from the author on request