



HIGHER ENERGY DIETS TO IMPROVE REPRODUCTIVE PERFORMANCE OF FIRST LITTER SOWS

INCREASING THE DIETARY ENERGY OF DIETS FED TO FIRST
LITTER SOWS ON LACTATION PERFORMANCE AND
SUBSEQUENT REPRODUCTION

Project Participants

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Problem

First-litter sows are regarded as being the most at risk of not having their nutrient requirements met during lactation due to their low appetites and high maternal requirements. Piglets from these sows are also compromised as they are born light and have a lower milk intake than piglets from older parities. Energy requirements for first litter sows have been investigated in the past. However, a revision of dietary energy requirements needs to be conducted due to the rapid changes in genetics.

Project

Five dietary energy levels were offered during the study: 13.0, 13.6, 14.2, 14.7 or 15.3 MJ DE/kg.

This study explored the effect that the level of dietary energy in first litter sow diets would have on lactation and reproductive performance during summer.

Value for Producers

Feeding higher energy diets to first litter sows during lactation optimises their reproductive performance and ensures they are retained in the breeding herd, thus reducing sow turnover rate.



Recommendations

Lactation performance and weaning weight was unaffected by an increase in dietary energy. The benefits of increasing dietary energy in the first lactation relate to reproductive performance and sow retention in the breeding herd.

Sow appetite was unaffected by dietary energy level fed during lactation. Providing higher energy in the diet significantly reduced sow weight loss and minimised body protein loss. The resumption of oestrus and sow retention was improved when a higher energy diet was fed in the previous lactation. The cumulative litter size was increased by 9.6 per cent when the energy of the lactation diet offered was at 14.2 MJ DE or higher.

It is recommended that dietary energy at a minimum of 14.2 MJ DE/kg will optimise the reproductive performance of first litter sows and reduce the risk of them being culled or removed from the breeding herd prior to their next litter.

An increase of energy in lactation diets is also economically justified. At the time of the study, it was estimated an increase from 14.0 MJ DE/kg in a standard lactation diet to 14.7 MJ DE/kg would cost \$20 per tonne or \$2.80 per sow. An increase of about 10 per cent in litter size on the current cost of lactation diets provides a return of 8:1. If an extra five sows per 100 are retained in the herd by increasing DE at \$380 per gilt replacement value, there would be a return of 6.8:1.

More Information

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