



# IMPROVING SOW REPRODUCTIVE PERFORMANCE WITH DIETARY FATTY ACIDS

ALLEVIATING SEASONAL INFERTILITY AND INCREASING THE FEMALE: MALE RATIO IN LITTERS BY MANIPULATING DIETARY INTAKE OF OMEGA 6 AND OMEGA 3 FATTY ACIDS

## Project Participants

Dr William van Wettere, The University of Adelaide

## Problem

Seasonal infertility continues to negatively affect the productivity and efficiency of pigs both in Australia and globally. Altering dietary intake of linoleic acid and  $\alpha$ -linolenic acid has the potential to affect reproductive processes.

## Project

This study was designed to determine whether feeding sows with diets containing different levels of linoleic acid and  $\alpha$ -linolenic acid would affect subsequent reproductive performance during summer and winter and also affect the percentage of female progeny produced in the subsequent litter.

## Value for Producers

Producers can promote reproductive efficiency in their herd by feeding lactation diets containing medium levels of dietary fatty acids, linoleic and  $\alpha$ -linolenic acid.



## Recommendations

This study showed feeding sows a lactation diet containing low levels of dietary fatty acids reduced subsequent reproductive performance, regardless of season.

Feeding a lactation diet containing medium levels of linoleic acid (approximately 0.27 per cent a-linolenic acid and 1.8 to 2.0 per cent linoleic acid) reduced stillbirth rates and incidences of post-implantation foetal death.

The greatest positive impact on reproductive performance came from feeding sows diets with higher levels of linoleic acid (0.13 per cent a-linolenic and 2.55 to 2.70 per cent linoleic acid) during lactation. It reduced foetal death resulting in more piglets being born per 100 sows weaned. It also increased the proportion of sows returning to oestrus within seven days of weaning during winter.

The proportion of females born in the subsequent litter was unaffected by diet.

## More Information

- For a copy of the report, contact Rachael Bryant at [rachael.bryant@australianpork.com.au](mailto:rachael.bryant@australianpork.com.au)
- For technical information, contact Rebecca Athorn at [rebecca.athorn@australianpork.com.au](mailto:rebecca.athorn@australianpork.com.au)