



**Michael Bertoldo to Present Work at ICAR on Identifying Sows at Risk of Late Pregnancy Loss during Seasonal Infertility**

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The University of Sydney

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Michael Bertoldo of the University of Sydney travelled to Finland to visit the pig production team at the University of Helsinki and learn more about seasonal infertility and the pork industry in Finland. Michael also presented at the 16th International Congress on Animal Reproduction in Hungary.

The Finnish pig industry has approximately 1.4 million pigs, compared to Australia's 2.52 million. Pig husbandry is highly concentrated in south western Finland with almost 60 percent of the pigs in the regions of south western Finland, Southern Ostrobothnia and Ostrobothnia.

Researchers from many countries have reported impaired fertility during the summer and autumn months. Known as seasonal infertility, it manifests itself as delayed onset of puberty in gilts and reduced farrowing rate and increased wean to service interval in sows. This infertility period coincides with the non-breeding season of the wild boar, thus the domestic pig is considered to display a vestige of the distinctly seasonal breeding pattern of its wild ancestors. Observations by Finnish veterinarians indicate that repeat breeding and the number of sows culled for reproductive reasons also increases in the summer and autumn months.

Seasonal breeding is primarily under the control of photoperiod. Therefore it would be expected that its severity would be worse towards the poles with Scandinavian countries experiencing substantial changes in photoperiod compared to equatorial countries or even Australia. Seasonal infertility in the domestic sow is a multifactorial problem. Its severity is mediated by the interaction of secondary factors with photoperiod, including nutrition, stress, genetics, boar exposure, housing and social status.

Gestation stalls are the most common form of dry sow housing in Australia, North America and Europe and have been associated with poor animal welfare. Perceived improved animal welfare has brought about new legislation which alters the way sows are housed. Findings from the University of Helsinki have found that stall housing is associated with signs of stress caused by lack of exercise and a rootable substrate. In addition, behavioural indicators did suggest a poorer degree of welfare in stalled sows compared to grouped sows. Although the reduced degree of welfare affected reproduction considerably less than the social stress experienced by group housed sows.