



**Project Number & Title: 1A-110 - Reducing the confinement of peri-parturient and lactating sows.**

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**Project Participants: Dr Kate Plush and Dr Dave Lines (Sunpork Farms Group South)**

**Aims and Objectives**

The aim of this study was to determine how, under commercial conditions and across summer and winter, different periods of reduced confinement during and after parturition affected sow and piglet performance and sow welfare. This was achieved with by comparing five housing treatments: 1) sows housed in farrowing crates until weaning (n = 145); 2) sows housed in farrowing crates, with sows and litters then housed in a simple pen from day seven of lactation until weaning (n = 121); 3 - 5; sows housed in swing sided crates which were either shut from farrowing shed entry until day seven of lactation (n = 112), shut from the day before farrowing until day seven of lactation (n = 118), or open throughout (n = 112). This study was conducted in summer and winter, with the following measures collected: piglet survival and growth, sow body composition, cortisol and sow subsequent reproduction.

**Key Findings**

Housing sows in an open swing sided pen during parturition and for the first seven days of lactation did not reduce still birth rates, and resulted in significantly higher mortality of live born piglets  
 Removing sow confinement from day seven of lactation, either by opening the swing-sided pen or movement to a simple pen, did not increase piglet mortalities when compared with conventional crate housing during the equivalent time period.  
 Incidences of live born piglet mortality were lowest for sows and litters housed in conventional farrowing crates during parturition and for the first seven days post-partum  
 Cortisol levels were slightly lower in sows, which farrowed in open pens and regardless, of housing treatment, cortisol level reduced as lactation progressed.  
 Season did not affect piglet survival within housing treatment; however, stillbirths and early (24 hour) mortality of live born piglets was higher during summer, with piglet mortality from day 3 of lactation to weaning tending to be higher during summer than winter.

**Application to Industry**

This current study provides strong evidence that confinement of sows during lactation can be reduced to the period immediately before farrowing and the first seven days of lactation without reducing the weaned litter size and weight.

These data also demonstrate that incidences of piglet mortalities are lowest when sows (and their litters) are housed in conventional farrowing crates during, and for the seven days after, parturition. Based on this study, it is suggested that a two stage farrowing / lactation housing system is viable, with sows (and their litters) housed in crates from entry until day 7 of lactation) and then moved to simple, cheap pens until weaning.

Based on these data, three areas of future research are proposed:

- 1) Develop strategies to enrich the farrowing crate, such that sow welfare and capacity to express natural behaviours are enhanced / optimised
- 2) Develop a larger, nationwide data set (encompassing different types of non- or reduced- confinement housing systems) to confirm the current outcomes and provide industry confidence.