

## A Survey to Determine the Incidence of Piglets' Mortality in Outdoor Farms in New Zealand

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**Abstract :** The aim of this study was to quantify the level of piglet deaths in outdoor farrowing systems in New Zealand. A total of 14 farms were visited, the farmers interviewed, and data collected. A total of 10,154 sows were kept on those farms representing an estimated 33% of the NZ sow herd or 80% of the outdoor sow herd in 2016. Data from 25,911 litters was available for the different analyses. The characteristics and reproductive performance for the years 2015-2016 from the 14 farms surveyed in this study were analysed, and the following results were obtained. The average percentage of stillbirths was 7.1% ranging between 3.5 and 10.7%, and the average pre-weaning live-born mortality was 16.7% ranging between 3.7% and 23.6%. The majority of piglet deaths (89%) occurred during the first week after birth, with 81% of deaths occurring up to day three. The number of piglets born alive was 12.3 (8.0 to 14.0), and average number of piglets weaned per sow per year was 22.4, range 10.5-27.3. The average stocking rate per ha (number of sows and mated gilts) was 15.3 and ranged from 2.8 to 28.6. The sow to boar ratio average was 20.9:1 and the range was 7.1: 1 to 63:1. The sow replacement rate ranged between 37% and 78%. There was a large variation in the piglet live-born mortality both between months within a farm and between farms within a given month. The monthly recorded piglet mortality ranged between 7.7% and 31.5%, and there was no statistically significant difference between months on the number of piglets born, born alive, weaned or on pre-weaning piglet mortality. Twelve different types of hut/farrowing systems were used on the 14 farms. No difference in piglet mortality was observed between A-Frame, A-Frame Modified and for Box-shape huts. There was a positive relationship between the average number of piglets born per litter and the number of piglets born alive ( $r=0.975$ ) or the number weaned per litter ( $r=0.845$ ). Moreover, as the average number of piglets born-alive increases, both pre-weaning live-born mortality rate and the number of piglets weaned increased. An increase of 1 piglet in the number born alive corresponds to an increase of 2.9% in live-born mortality and an increase of 0.56 piglets weaned. Farmers reported that staff are the key to success with the key attributes being: good and reliable with attention to detail and skills with the stock.

**Keywords :** mortality, piglets, outdoor, pig farm

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