Faculty of Agricultural Sciences

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NON-GENETIC FACTORS FOR AVERAGE LITTER WEIGHT, AVERAGE WEANING WEIGHT AND BACKFAT AT FARROWING AND WEANING IN THE DALLARD PIG BREED OF ZIMBABWE.

BY

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ABSTRACT

Average litter birth weight, average litter birth weight and back-fat thickness of the sow at farrowing and weaning are affected by both genetic and non-genetic factors. The objective of this study was to establish the non-genetic factors that affect average litter birth weight, average litter weaning weight and back-fat thickness of the sow at farrowing and weaning in the Dalland pig breed in Zimbabwe commercial farming. A total of pig birth records were used. The records were collected from a commercial farm in Hai'are called Solar Fanning. An fixed classification model containing the effects of year of birth of sow; month of birth of sow, number of teats, number of piglets born alive, number of piglets weaned, sire effect, year of birth of litter, weaning to oestrus interval, gestation length, age at first service and season were used in identification of the non-genetic factors. MultiCVaidate analysis was carried out using Statistical Analysis System (SAS), correlations and a regression prediction equation established in the study. Average litter birth weight mean was 12.52kg, average litter weaning weight 24.22kgs, back-fat thickness at farrowing 15.62mm and back-fat thickness at weaning was 13.04mm. The effect of month of birth, year of birth, teat number, number born alive, year of litter, yeai* of birth of dam and age at first service had significant effects on the response variables. Sire effect was significant in one variable but was included as a fixed effect in the study. Season, gestation length and weaning to oestrus interval were found having no effect on the response valuables. Correlations were present between average litter birth weight and number born alive and average litter birth weight and number weaned. Correction for environmental effects is necessary to increase accuracy of direct selection for average Utter birth weight, average litter weaning weight and back-fat thickness of the sow at faITowing and weaning.