



**Improving Smallholder and Industrial Livestock Production
for Enhancing Food Security, Environment and Human Welfare**

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Genetic Parameters for Individual Weights at Birth, Weaning and 60 Days of Stress Negative Piétrain Pigs in the Tropics: the Case of Vietnam

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Data recorded between 2008 and 2012 from Dong Hiep pig farm, Vietnam, was used to estimate genetic parameters for weights at birth (WB), weaning (WW) and 60 days (W60) of stress negative Piétrain pigs using restricted maximum likelihood methodology. WB, WW and W60 were recorded from 1146, 839 and 610 animals respectively. The data were analyzed according to a mixed model including 4 fixed effects, parity, season, sex, and interaction between halothane genotype and country of origin (Belgium and Vietnam) of sows. Additionally, 3 random effects (maternal common environment for litter, direct and maternal additive genetic) for WB and 2 random effects (maternal common environment for litter and direct additive genetic) for WW and W60 were included in the model. Estimates of direct heritability and proportion of the maternal common environmental variance for WB, WW and W60 were 0.20, 0.13; 0.22, 0.21 and 0.19, 0.30 respectively. In addition, the estimate of maternal heritability for WB was 0.14. These genetic parameters suggest that WB, WW and W60 could be improved by selection using both direct and maternal effects.

Key Words: Genetic parameters, Birth weight, Weaning weight, Weight at 60 days, Stress negative Piétrain, Vietnam