

## Introduction

Stress negative Piétrain pig (Piétrain) was developed by the University of Liège (ULg), Belgium. Since 2007, they have been raised under tropical conditions in North Vietnam; the project is supported by the "Commission Universitaire pour le Développement" (CUD), FVM-ULg and Hanoi University of Agriculture (HUA). The Piétrain boar is used not only as a terminal boar but also as a genetic resource for the production of hybrid boars with Duroc. The objective of this study is to evaluate the growth performance and semen quality of stress negative Piétrain boars and their hybrids in the North of Vietnam.

## Material and Method

A total of 15 boars from 3 genetic groups were used for this study, including 5 Piétrain boars (purebred *Piétrain*), 5 ♂Duroc × ♂Piétrain ( $\frac{1}{2}$  *Piétrain*) and 5 ♀(Piétrain × Duroc) × ♂Duroc ( $\frac{1}{4}$  *Piétrain*). Testing period started at an average age of 60 days and ended at an average age of 225 days. The **growth performance** was weights at starting (*W at 2 months*) and finishing (*W at 7.5 month*) periods, average daily gain (ADG), backfat thickness, longissimus depth and lean content. The **semen quality** was assessed using ejaculate volume (V), spermatozoon motility (A), sperm concentration (C), total number of spermatozoon in the ejaculate (VC), rate of abnormal spermatozoon (R) and pH of semen (pH). All these measurements were used to compare the genetic groups.

## Results and Discussion

Variable	Piétrain		$\frac{1}{2}$ Piétrain		$\frac{1}{4}$ Piétrain	
	Mean	SD	Mean	SD	Mean	SD
W at 2 month (kg)	17.78	1.54	18.18	3.10	15.54	3.11
W at 7.5 month (kg)	112.95	7.11	114.50	10.00	116.20	10.53
ADG (g)	571.53	33.86	673.80	49.14	615.80	68.11
Backfat (mm)	8.92	1.01	9.24	1.26	10.70	2.89
Longissimus depth (mm)	60.94 <sup>a</sup>	4.92	55.10 <sup>ab</sup>	4.78	52.94 <sup>b</sup>	3.17
Lean content (%)	64.42 <sup>a</sup>	0.80	62.74 <sup>ab</sup>	1.26	60.69 <sup>b</sup>	2.97

Means followed by different letters within the rows are significantly different ( $P < 0.05$ )



Variable	Piétrain			$\frac{1}{2}$ Piétrain			$\frac{1}{4}$ Piétrain		
	n	Mean	SD	n	Mean	SD	n	Mean	SD
V (ml)	83	264.94 <sup>a</sup>	79.67	40	256.50 <sup>a</sup>	57.77	25	214.40 <sup>b</sup>	67.33
A (%)	83	79.88 <sup>a</sup>	6.72	40	75.50 <sup>b</sup>	6.68	25	75.40 <sup>b</sup>	6.44
C ( $\times 10^6$ spz/ml)	83	423.02 <sup>a</sup>	136.75	40	562.85 <sup>b</sup>	233.10	25	650.60 <sup>c</sup>	212.65
VC ( $10^9$ )	83	110.68 <sup>a</sup>	45.03	40	146.33 <sup>b</sup>	67.49	25	133.29 <sup>ab</sup>	46.50
R (%)	75	5.58	2.37	38	6.13	3.05	24	5.11	3.71
pH	74	7.31 <sup>a</sup>	0.24	39	7.35 <sup>ab</sup>	0.25	23	7.44 <sup>b</sup>	0.23

Means followed by different letters within the rows are significantly different ( $P < 0.05$ )

## Conclusion

- The average daily gain of stress negative Piétrain boar purebred was not significantly different from Piétrain hybrids while the lean content is higher.
- The semen volume and the spermatozoon motility of stress negative Piétrain purebred boars were higher than Piétrain hybrids but the sperm concentration and the total number of spermatozoon in the ejaculate were lower.