Belgian breeds

Belgian Blue Cattle

Pietrain pig

Belgian Texel Sheep

Ardennaise Poultry breed

Ardennes Horse
Belgian Blue cattle
Belgian Blue cattle
Belgian Blue cattle
Growth and carcass performances of Belgian Blue x Nelore and Braford cattle in Bahia State Brazil

P.L. Leroy, E. Leroy, R. Cassart
Department of Animal Production and Tropical Veterinary Institute
Faculty of Veterinary Medicine, University of Liège, 4000 Liège, Belgium

pascal.leroy@ulg.ac.be

1. Introduction
36 Belgian Blue x Nelore cross (BBB x Nelore) were compared to 54 Braford on the AgriBahia Fazenda Lagoa do Morro (GES), Bahia State, Brazil.

Nelore cows were inseminated with 2 Belgian Blue Bulls belonging to the Company: Belgian Blue Group. Braford animals were already kept on the same farm. Calving was normal without assistance for all cows.

During the last three months of fattening, animals got a complementation base on rice by products (1% of live weight)

2. Results - Growth
The average daily gain was 938.5 g/d (926.0 g/d for the BBB x Nelore, 948.7 g/d for the Braford) before 300 days and lower afterward due to a strong dry period reducing the total daily gain (on average 740.9 g from birth to slaughter).

10 BBB x Nelore steers and 10 Braford steers were slaughtered at an average of 25 months (BBBxNelore 755 days, Braford 750 days)

3. Results - Slaughter and Dissection
Average live weight, carcass weight and killing out % were respectively 553.5 Kg, 286.6 Kg and 51.8% for the Braford. Corresponding values were 539.7 Kg, 292.0 Kg and 54.1% for the BBB x Nelore cross having, on average, lower live weight (-13.8 Kg), heavier carcasses (+5.4 Kg) and a higher value of killing out% (+2.3%).

The 7th right rib from each of the 20 steers, taken one day after slaughter, were dissected. Measured values of fat, meat and bone and also the weight of Longissimus Dorsi, Trapezius and Latissimus Dorsi revealed that BBB x Nelore bulls had 109.7 g less fat (-14.22%), 264 g less bone (-21.94%) and 386 g more meat (+19.15%) in the 7th rib in comparison to Braford bulls.

Corresponding values computed on the total weight of the 7th rib were -2.54%, -6.90% and +9.44%

4. Conclusion
Belgian Blue x Zebu Nelore crosses were born without assistance, can survive in very dry conditions, have higher dressing out percentages than Braford with carcasses characterized by less fat, less bone and more meat. Belgian Blue is thus suggested to increase meat production in Brazil.
Zebu Nelore (Brazil)

Aladin, Belgina Blue x Nelore, 1240 Kg at 39 month
Pietrain Pig
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 (½ Piétrain) and 5 ♀ (Piétrain × Duroc) × ♂ Duroc (¼ 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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Piétrain</th>
<th>½ Piétrain</th>
<th>¼ Piétrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>W at 2 month (kg)</td>
<td>17.78</td>
<td>18.18</td>
<td>15.54</td>
</tr>
<tr>
<td>W at 7.5 month (kg)</td>
<td>112.95</td>
<td>114.50</td>
<td>116.20</td>
</tr>
<tr>
<td>ADG (g)</td>
<td>571.53</td>
<td>673.80</td>
<td>615.80</td>
</tr>
<tr>
<td>Backfat (mm)</td>
<td>8.92</td>
<td>9.24</td>
<td>10.70</td>
</tr>
<tr>
<td>Longissimus depth (mm)</td>
<td>60.94</td>
<td>55.10</td>
<td>52.94</td>
</tr>
<tr>
<td>Lean content (%)</td>
<td>64.42</td>
<td>62.74</td>
<td>60.69</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Piétrain</th>
<th>½ Piétrain</th>
<th>¼ Piétrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>V (ml)</td>
<td>83 264.94*</td>
<td>40 256.50*</td>
<td>25 214.40b</td>
</tr>
<tr>
<td>A (%)</td>
<td>83 79.88a</td>
<td>40 75.50b</td>
<td>25 75.40b</td>
</tr>
<tr>
<td>C (×10⁸ spz/ml)</td>
<td>83 423.02a</td>
<td>40 562.85a</td>
<td>25 650.60c</td>
</tr>
<tr>
<td>VC (10⁹)</td>
<td>83 110.68a</td>
<td>40 146.33a</td>
<td>25 133.29b</td>
</tr>
<tr>
<td>R (%)</td>
<td>75 5.58</td>
<td>38 6.13</td>
<td>24 5.11</td>
</tr>
<tr>
<td>pH</td>
<td>74 7.31a</td>
<td>39 7.35ab</td>
<td>23 7.44b</td>
</tr>
</tbody>
</table>

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.
Texel Double Muscled

Ardenne Poultry
Reproductive, survival and growth traits of the crossbreeding Belgian Texel x Moroccan local breeds of sheep

M. El Fadili1 & P.L. Leroy2

1 Department of Animal Production, National Institute of Agronomic Research, Morocco
2 Department of Genetics, Faculty of Veterinary Medicine, University of Liege, Belgium

Introduction

Local Moroccan breeds are characterized by their low growth rate, poor conformation and had a tendency to deposit more fat under intensive management conditions. In terminal crossing the utilization of improved meat sires which promotes rapid lamb growth, delayed fat development and improved carcass conformation can enhance quantitative and qualitative meat sheep production and meet the preference of consumers. The Belgian Texel breed which is known for its ability to produce higher meat quality can be considered in crossbreeding to improve sheep meat quality in Morocco.

Animals

An experiment was carried by INRA Morocco in order to evaluate the performances of Belgian Texel (BT) rams and their progeny when mated to Moroccan local breed ewes. Three BT rams were mated to Timahdite (T=30) and D’man x Timahdite (DT=30) ewes and compared to purebred ewes D’man (D=22) and (T=30) for ewe and lamb pre-weaning and fattening traits.

Results

<table>
<thead>
<tr>
<th>Traits</th>
<th>D’man</th>
<th>Timahdite</th>
<th>Texel x T</th>
<th>Texel x DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertility (%)</td>
<td>77a</td>
<td>94b</td>
<td>92b</td>
<td>91b</td>
</tr>
<tr>
<td>Litter size at weaning (lambs)</td>
<td>2.22a</td>
<td>1.11b</td>
<td>20.78a</td>
<td>1.74c</td>
</tr>
<tr>
<td>Productivity (kg/ewe)</td>
<td>17.12a</td>
<td>20.78a</td>
<td>24.67b</td>
<td>27.41c</td>
</tr>
<tr>
<td>Survival at birth (%)</td>
<td>87a</td>
<td>98b</td>
<td>96b</td>
<td>85b</td>
</tr>
<tr>
<td>Survival to 90 days (%)</td>
<td>65a</td>
<td>89b</td>
<td>88b</td>
<td>65b</td>
</tr>
<tr>
<td>Birth weight (kg)</td>
<td>2.89a</td>
<td>3.14a</td>
<td>3.60b</td>
<td>3.45b</td>
</tr>
<tr>
<td>ADG 10-30 (g/day)</td>
<td>131a</td>
<td>144a</td>
<td>165b</td>
<td>183b</td>
</tr>
<tr>
<td>ADG 30-90 (g/day)</td>
<td>142a</td>
<td>149a</td>
<td>173b</td>
<td>187b</td>
</tr>
<tr>
<td>Weaning weight (kg)</td>
<td>15.21a</td>
<td>16.2a</td>
<td>19.45b</td>
<td>19.27b</td>
</tr>
<tr>
<td>Fattening daily gain (g/day)</td>
<td>207</td>
<td>211</td>
<td>226</td>
<td>225</td>
</tr>
<tr>
<td>Conversion index</td>
<td>6.39a</td>
<td>5.14b</td>
<td>4.91b</td>
<td>5.22b</td>
</tr>
</tbody>
</table>

Conclusion

Ewes mated to Belgian Texel rams showed higher fertility (91%) and productivity at weaning (27.41kg or +7 Kg). Lambs sired by the BT rams had survival rate at birth (93%), and superior weaning weight (+3 kg), ADG10-30 (+42g/d) and ADG30-90 (+25 g/d). Furthermore crossed lambs had higher fattening ADG (225 g/d), less DM intake (1.06 kg) and better conversion feed rate (5.20) when compared to purebred lambs D and T. These results indicate that Belgian Texel rams and their progeny have well performed under Moroccan management conditions.
Research team

Academic staff

Dr ANTOINE-MOUSSIAUX Nicolas
DVM, PhD
Tel: +32 4 366 41 42
Email: nantoine@ulg.ac.be

Prof. Dr DETILLEUX Johann
DVM, PhD
Tel: +32 4 366 42 15
Email: jdetilleux@ulg.ac.be

Prof. Dr Ir FARNIR Frédéric
Ir, PhD
Tel: +32 4 366 41 28
Email: f.farnir@ulg.ac.be

Prof. Dr LEROY Pascal
DVM, PhD
Tel: +32 4 366 41 20
Email: pascal.leroy@ulg.ac.be

Scientific staff

Dr MICHAUX Charles
DVM, PhD
Tel: +32 4 366 41 21
Email: charles.michaux@ulg.ac.be

Dr MOULA Nassim
DVM, PhD
Tel: +32 4 366 41 24
Email: nassim.moula@ulg.ac.be

Dr BAISE Etienne
Dr Sc, PhD
Tel: +32 4 366 41 23
Email: etienne.baise@ulg.ac.be

Address
Faculty of Veterinary Medicine, University of Liege
20 Boulevard de Colonster (B43), 4000 Liège, Belgium

Contact
Tel: +32 4 366 41 21
Fax: +32 4 366 41 22