Study of the Main Body Dimensions that are Used in the Selection Process, in the Reproductive Nucleus of the Gidran Horse from Tulucesti Studfarm

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Abstract
Study of average performances in a population have a huge importance because, regarding to a population, the average of phenotypic value is equal with average of genotypic value. So, the studies of the average value of characters offer us an idea about the population genetic level. This study have the principal purpose to analyse main body dimensions who are used in selection process: withers height, thoracic perimeter and cannon bone perimeter, through the integration of individvs in an evaluation class, in accordance with selection methodology.

The biological material is represented by 29 Gidran horses, 4 males and 25 females, at different ages, owned by Tulucesti stood farm, representing the entire reproductive nucleus. The average performances of characters are presented in the paper. We can observe a small grade of variability with some differences between sexes.

The average performances of the characters are between characteristic limits of the breed.

Keywords: analysis, Gidran, horse, Tulucesti studfarm

1. Introduction
Study of average performances in a population have a huge importance because, regarding to a population, the average of phenotypic value is equal with average of genotypic value. So, the studies of the average value of characters offer us an idea about the population genetic level [1]. This study have the principal purpose to analyse main body dimensions who are used in selection process: withers height, thoracic perimeter and cannon bone perimeter, through the integration of individvs in an evaluation class, in accordance with selection methodology.

2. Materials and methods
The biological material is represented by 29 Gidran horses, 4 males and 25 females, at different ages, owned by Tulucesti stood farm, representing the entire reproductive nucleus. The individuals were analyzed through individual performances, through stallions average performance, through mares average performance, and, most important, through population average performance of body dimensions, related to selection criteria [2]. We analyzed the withers height, the thoracic perimeter and the cannon bone perimeter using somatometrie. All measurements was made by us in Tulucesti stud farm in 2011 using ANIMETER measuring belt and a height measuring stick.

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3. Results and discussion

Analyzing recorded data, we can observe significant differences, for all characters, between individuals (Figure 1), between sexes and at population level (Table 1, Figure 2).

In stallion case we find significant differences between individual performances: the bigger value of withers height is 167 cm (Gidran XLVII) and the smallest was 161 cm (Gidran XLIII). The average performance of stallions was 164.75 cm, corresponding to best class (note 10 – record class). The thoracic perimeter value was maximum 199 cm (Gidran XLVII), and minimum 184 cm (Gidran XLIII). Average performance for thoracic perimeter was 190.25 cm, corresponding for note 10, respectively record class. Canon bones perimeter have maximal value at 21.5 cm (Gidran XLIV), minimal value at 20 cm (Gidran XLIII), and an average of 20.875 cm.

<table>
<thead>
<tr>
<th>No.crt.</th>
<th>Specification</th>
<th>N</th>
<th>Withers height cm</th>
<th>Thoracic perimether cm</th>
<th>Cannon bone perimether cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Males</td>
<td>4</td>
<td>164.75</td>
<td>190.25</td>
<td>20.875</td>
</tr>
<tr>
<td>2</td>
<td>Females</td>
<td>25</td>
<td>160.98</td>
<td>189.08</td>
<td>20.66</td>
</tr>
<tr>
<td>3</td>
<td>Population</td>
<td>29</td>
<td>161.5</td>
<td>189.241</td>
<td>20.6897</td>
</tr>
</tbody>
</table>

Average value corresponding for note 9 but also for record class. Overall, regarding corporal dimensions, the stallions meet criteria’s to be sires. In the mares effective, we can say that we
can say that we have a similar situation. For withers height, we record a maximal value at 165 cm (Gruia 15), and a minimal value at 155 cm (Mersuch Gidran 90). From our point of view, Mersuch Gidran 90 does not meet criteria’s for brood mare, but we are very shore that selection of this individual was dictated because of the small mares effective. The average performance was 160.98 cm, corresponding for note 9, respectively record class. The thoracic perimeter had values between 217 cm (Mersuch Gidran 24) and 174 cm. (Gidran XLII 10), with an average of 189.08 cm. Huge differences can be attributed to the moment of recording. However, the average performance includes mares stock in record class. The canon bone perimeter had his higher value, at 21.5 cm. (Gidran XLII 18), and smallest value at 19 cm (Gidran XXXIX 60). The average performance was 20.66 cm, corresponding for note 9 – record class.

4. Conclusions

Analyzing the reproductive nucleus of Gidran horse from Tulucesti stud (news: all reproductive nucleus was moved from Tulucesti to Cislau studfarm at he end of 2011), by corporal dimensions, it’s obvious that the individuals deserve to be the ancestors of a new generation. We strongly recommend increasing of reproductive nucleus, for this breed, associated with a very strong control of selection.

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References