

THE ANALYSIS OF CORPORAL INDICES OF STALLIONS FROM RĂDĂUȚI TROOP

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Abstract

Based on the corporal measures made on the stallions we determined the main corporal indices of Romanian Sports Horse, Shagya and Romanian Semigreu breed in the conditions offered by Rădăuți troop. In this work we analyzed the conformation indices as compactness index, bone index, index of massiveness, index of height difference and index of the lateral body format. Romanian Sport Horses are robust animals with fine bones. The stallions from Shagya Arab are characterized through preeminent bones. The stallions from Romanian Semigreu stallions are robust animals. The values of corporal indices registered at horse population taken into study meet the current criteria of evaluation, falling within the breed standard.

Key words: stallions, corporal indices, breed

INTRODUCTION

Breeders are interested in selection and improvement of the breed, principally in its body conformation [3]. Although conformation is related to performance, selection should be directed to ensure the breed doesn't lose its traits attained through natural selection [2, 4].

The performance of horses is influenced by morphological, physiological, and psychic factors as well as the environment. Therefore, the form is only an indication of the production value of the animal [1].

Conformation of the horse has been studied by various authors, based principally on body measures [3]. Body indices are used to determine aptitude for certain services such as velocity, resistance and traction. This study aims to determine body indices for public mount stallions from Rădăuți troop.

MATERIAL AND METHOD

The biological material was represented by a number of 9 male horses from Romanian Sport Horse, Shagya and Romanian Semigreu breeds from Rădăuți troop. These are races with the largest share in the herd. From the many types of measures

made in this direction, in this work we analyzed the dimensions that are more important especially in horse selection activities.

These included withers height, croup height, body length, thorax perimeter and tibia perimeter. The measurements were taken in accordance with descriptions in Ujică V. (1988). For the measurements we used zoometer and metric tape.

From these measurements conformation indices (compactness index, bone index, index of massiveness, index of height difference, and index of the lateral body format) were calculated according to Ujică V. (1988).

The obtained data after the body measurements were processed, the corporal indices being obtained and statically interpreted using the classical methods (arithmetic mean, standard deviation of mean, analysis of variance).

RESULTS AND DISCUSSIONS

The main corporal indices of Romanian Sports Horse from Rădăuți troop are presented in table 1. These animals are robust (average compactness index of 111,10 %), with fine bone (bone index of 10,05 %). The variety coefficients of the studied indices have been under the limit of 10 %, the population being characterized through a

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The manuscript was received: 16.02.2013
Accepted for publication: 11.04.2013

high homogeneity with one exception in the case of bone index (11,78 %).

Table 1 Corporal indices estimators for Romanian Sports Horse stallions (%)

Specification	n	$\bar{X} \pm s_{\bar{x}}$	s	V%	Minimum	Maximum
Compactness index	3	112,10±2,206	14,61	3,40	107,86	115,29
Bone index	3	10,05±0,684	1,40	11,78	8,85	11,22
Height difference index	3	99,59±1,388	5,78	2,41	97,00	101,76
Massiveness index	3	116,04±0,914	2,50	1,36	114,28	117,36
Lateral body format index	3	103,56±1,239	4,60	2,07	101,79	105,95

In table 2 there are presented the corporal indices estimators for Shagya Arab stallions from Rădăuți herd. The stallions are characterized through preeminent bones, having an average bone index of 10,51 %. Compactness index varied between the

minimum of 108,53 % and the maximum of 115,89%. Height difference index presented an average value of 114,52 %, with variation limits ranging between 114,37 % and 114,64%.

Table 2 Corporal indices estimators for Shagya Arab stallions (%)

Specification	n	$\bar{X} \pm s_{\bar{x}}$	s	V%	Minimum	Maximum
Compactness index	3	111,96±2,138	3,70	3,30	108,53	115,89
Bone index	3	10,51±0,116	0,20	1,91	10,28	10,67
Height difference index	3	114,52±0,080	0,13	0,12	114,37	114,64
Massiveness index	3	111,15±0,208	0,36	0,32	110,75	111,46
Lateral body format index	3	99,35±2,026	12,31	3,53	95,56	102,50

The stallions from Romanian Semigreu stallions are robust animals, presenting an average compactness index of 109,53 %, bone index of 11,46 % (table 3). Variability coefficient of the studied parameters has been below 10 %, the population being characterized through a high homogeneity. It

is a breed with a rectangular body format, the average lateral body index being 104,98 %. The average value of massiveness index was 114,94 %, with a variation domain ranging between the minimum of 112,50 % and the maximum of 118,75 %.

Table 3 Corporal indices estimators for Romanian Semigreu stallions (%)

Specification	n	$\bar{X} \pm s_{\bar{x}}$	s	V%	Minimum	Maximum
Compactness index	3	109,53±2,674	21,45	4,22	105,26	114,45
Bone index	3	11,46±0,05	0,01	0,90	11,38	11,57
Height difference index	3	96,68±0,889	2,37	1,59	95,06	98,12
Massiveness index	3	114,94±1,928	11,15	2,90	112,50	118,75
Lateral body format index	3	104,98±0,960	2,76	1,58	103,75	106,87

CONCLUSIONS

The values of corporal indices registered at horse population taken into study meet the current criteria of evaluation, falling within the breed standard.

Majority of the studied characters the results, except one, enlightened that the

studied stallions are presenting as a homogenous batch, aspect very important for selection and breeding works, respectively for consolidation of breed characters.

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