



ABSTRACT

Since ancient times horses played a very important role in the evolution of human society. In our country, the horse, due to the particularities of agriculture exploitations it continues to be used for work in agriculture and forestry holdings.

The breeder wants to improve the fertility of mares to meet the goal of obtaining a product per year, but also for obtaining offspring with optimal skills for his needs.

The theme of the research concerns the breeding performance of public mount stallions, very timely topic now as breeders try to use the tools available to improve the characteristics related to conformation.

This paper aims to analyze the morphological traits of breeding stallions used for mount in the studied area, but also the morphological assessment of their crossbred resulted from their matings with the mares from households. The obtained results may help to improve the existing horse population from the north-east part of the country in order to obtain high genetic value horses, with maximum economic and genetic efficiency.

Structurally, the thesis consists of two distinct parts. The first part written on 72 pages contains in seven chapters the literature synthesis supported by 144 references. The first chapter presents the current status of equine growth globally and nationally; in the second chapter are mentioned the horse breeds used to mount mares from herds and great growth.

Fundamentals of physiological and particularities of reproductive function in horses make the subject of the third chapter, the results of scientific research on growth technologies are described in chapter four. Chapters five and six present the literature study on horses mount and breeding capacity assessment. In the last chapter of literature synthesis, chapter seven, are presented dates from the literature regarding the main body size of breeding stallions.

The second part contains personal research and it is spread over six chapters detailed on 152 pages, the research results are included in 78 figures and 137 tables. In chapter eight the purpose and



objectives of the research are presented and in chapter nine are described the natural within the research took place, the biological material and working methods. The raw data were ordered into a database and subsequently subjected to statistical calculation.

The results regarding the morphological characteristics of public breeding stallions studied are listed in chapter ten; in the next two chapters are presented the horses distribution in the territory and their breeding activity. The last chapter describes the ameliorative effect of breed stallions on the local population in the north-east part of the country.

The research was conducted according to the experimental protocol, using as biological material public breeding stallions from Stallions Depot Dumbrava, Rădăuți and Lucina Stud and their half-breeds from the studied area. The biological material was grouped according to race aiming color-related characteristics, conformation and main body indexes.

Regarding national situation of equines effectives we have observed a general downward trend in the number of horses, the private sector ranked first in terms of horse number.

To determine the reproductive performance of breeding stallions and their ameliorative effect on local populations is necessary to first study their characteristics and qualities that will ultimately lead to the realization of the improvement objectives, namely native equine population growth and increasing of their energy capacity.

Regarding the race structure of stallions from the Stallions Depot Dumbrava we mention that the Romanian Semigreu race is predominant, followed by Lipizzaner breed. In Rădăuți Stud the Shagya Arabian breed is predominant, followed by Romanian Semigreu race. Since the Lucina Stud is designed to rearing Hucul is normal for this race to be situated on the first place regarding the horse number.

Bay color is most commonly encountered in both Dumbrava Stallion Depot and in the two other herds studied, followed by madder color in the Stallion Depot Dumbrava and Lucina Stud and the hunted color at Rădăuți Stud. In a small percentage we meet other colors including black, rind, peaches, deres and deer color. Peculiarities of color on the head and legs are much more common than ones from the body.

To study the physical development of stallions there were taken randomly from each race three individuals and measured, the data were statistically processed.



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Analyzing body development of stallions we found that they fall into the type of race they belong to, having a good body development and conformation harmonious, its origin being from the biological material selected from existing deposits and national studs.

Breeding stallions from the Stallion Depot Dumbrava were distributed during 2010-2013 in seven counties, and Romanian Semigreu and Lipizzaner breeds held the largest share.

Public breeding stallions from Rădăuți Stud during 2010-2011 were divided into three counties having the following structure of race: Arabic, Romanian Semigreu and Gidran.

Lucina Stud horses were distributed in three counties predominantly Hucul and Bucovina horse.

Analyzing the race structure of public breeding stallions distributed in the north-east part of the country it can be observed that Romanian Semigreu race predominates, followed by Lipizzaner and Arabic.

Regarding the color features of the improved equine population it can be mentioned that the most frequent color met is bay, followed by madder color. Colors and color features of stallions were inherited mostly by the products resulted from mating with local mares.

In Neamț county after data analysis on body dimension of stallions and their half-breed some differences were observed. The population improved with Arab and Lipizzaner breed showed the highest differences. The best results were achieved in the improvement activity of local population with Romanian Semigreu race.

In Iași county there was observed that morphological characteristics of the half-breed improved with Romanian Sport horse breed are very close to those of stallions used for mounting.

In Bacău county the best results were obtained by improving local horses with stallions of Romanian Semigreu breed.

Ameliorate equines from Botosani county have presented in general morphological characteristics similar to those of stallions used for breeding.

In terms of stallions ameliorative effect on the population of domestic horses from Suceava county there were obtained the worst performance, the differences between the analyzed parameters being very high.

In Vaslui county best results were obtained by pairing local horse with stallions from Gidran, Lipizzaner and Romanian Semigreu breed.



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The data analysis on body dimensions of stallions half-breed studied we can say that every dimension varies within limits that do not differ greatly from those of stallions, in some cases the variability is less pronounced depending on the breed and the genetic value of the stallions used for reproduction. Variations in some cases may be due to growth and maintenance technologies of horses.