

## COMPARISON OF REPRODUCTIVE QUALITIES OF LIPIZZANER BREEDS MARES ON STUD FARMS AND ON INDIVIDUAL FARMS

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### Summary

The objective of this study was to determine some reproductive traits of Lipizzaner breed mares grown both in studs and popularly in the region of Slavonia.

This research was done on 48 breeding mares of the Breeding Center from Đakovo and 48 breeding mares of popular folks growing.

The first fertilization of fillies from studs was conducted at their age of 3.62 years, and of those from popular breeding at age of 3.90 years. The first foaling of stud fillies occurred at age of 4.56 and of popular breeding at age of 4.82.

Pregnancy of the stud mares lasted 0.71 day shorter compared with that of animals from popular breeding, while the service period lasted less by 9.84 days.

### Introduction

In assessment of breeding heads, a great importance is attached to their breeding abilities.

The objective of this study was to determine some reproductive traits of Lipizzaner breed mares bred both in studs and popularly in the region of Slavonia.

### Material and methods

This research was done on 48 breeding mares of the Breeding Center from Đakovo and 48 breeding mares of individual breeding.

The data were gathered from the stud books of mares: first fertilization, first foaling, male and female foals respectively, duration of service period and pregnancy.

The analysis was done with using of usual statistical methods.

### Results and discussion

The age of the first fertilization and the first foaling of Lipizzaner yearlings is shown in the Table 1.

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Table 1. - AGE (DAYS) OF THE FIRST FERTILIZATION AND THE FIRST FOALING OF LIPIZZANER FEMALE YEARLINGS (N = 48)

	Breeding Center		Individual breeding	
	$\bar{x}$	s	$\bar{x}$	s
First fertilization	1321	226.5	1425	126.8
First foaling	1665	221.7	1760	633.2

The yearlings from the individual breeding, foaled first time 95 days later compared to yearlings from stud farms, what is a result of their later fertilization.

The duration of pregnancy of Lipizzaner mares is shown in the Table 2.

Table 2. - DURATION OF PREGNANCY OF LIPIZZANER BREED MARES (DAYS)

Pregnancy chronologically	Breeding Center			Individual Breeding		
	n	$\bar{x}$	s	n	$\bar{x}$	s
1.	48	333.1	12.9	48	333.8	30.3
2.	38	332.5	12.1	32	331.2	8.1
3.	32	331.4	13.1	20	333.3	6.4
4.	23	335.8	11.7	10	333.5	2.8
5.	17	330.3	9.8			
6.	16	330.9	6.0			
7.	13	333.3	5.5			
8. and more	28	333.6	6.4			

The average pregnancy of stud mares was shorter for 0.71 day compared to mares from the individual breeding.

The duration of service period of Lipizzaner mares is shown in the Table 3.

Table 3. - DURATION OF SERVICE PERIOD OF LIPIZZANER BREED MARES (DAYS)

Service period chronologically	Breeding Center			Individual Breeding		
	n	$\bar{x}$	s	n	$\bar{x}$	s
1.	43	100.8	101.2	27	155.0	153.2
2.	31	83.6	75.4	17	59.6	48.1
3.	27	81.2	77.2	9	65.5	55.6
4.	19	57.6	39.9			
5.	16	63.7	41.4			
6.	16	102.2	80.2			
7. and more	30	95.2	88.0			
Total	182	83.5	71.9			

The obtained values show that the service period was the shortest after the fourth foaling, and the longest after the sixth foaling by stud mares. By mares from the individual breeding the service period was outstanding long after the first foaling, what is a result of insufficient owner's care. In average the service period of stud mares was shorter for 9.84 days compared to the mares from individual breeding. No significant differences were observed between average duration of service period of stud mares from individual breeding.

The duration of service period recorded through these researches was somewhat longer from the values given by Telalbašić et al. (1986).

From the total number of born foals in studs 52.73 % are male foals and 47.27% are female foals whereas by individual growers the percentage was 41.77%.

### *Conclusion*

The first fertilization of young mares occurred at age of 4.56 and of individual breeding at age of 4.82 years.

Pregnancy of the stud mares lasted 0.71 day shorter compared with that of animals from individual breeding, while the service period lasted less by 9.84 days.

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