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DOTTORATO DI RICERCA IN SCIENZE VETERINARIE

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Evaluation of the activity budget of horses in ethological stable.

INTRODUCTION

Equids have an important role in the modern society. The interest in animal welfare and the knowledge of equine physical and ethological needs have led to the development of different types of horses' management and housing.

This study has been conducted in the first Italian ethological stable. The aim of the research was to evaluate the activity budget of horses housed in the structure. The ethological observation can be considered a non-invasive method that helps researchers in the evaluation of the animal welfare in a certain environment.

MATERIALS & METHODS

It was made a **FOCAL ANIMAL SAMPLING**, and all videos were analysed using a continuous method with the software BORIS v 7.4.4.

Subjects

Mares	Geldings	Tot	Mean Age (ys) ± SD
5	3	8	15,25± 2,82

Observations

Band A Big Box © (7.00-8.00)	Band B Paddock (6.00-12.00)	Band C Paddock (12.00-18.00)	Band D Big Box © (20.00-21.00)	TOT.
5 040 min. (84 videos)	3 780 min. (63 videos)	3 660 min. (61 videos)	5 040 min. (84 videos)	17 520 min. (292 videos)

Ethological stable



<http://www.laprosperecentroquestre.it>

Paddock paradise (1.5 ha) + 6 paddocks (2.0 ha/each). The horses stay outside from 8.00 to 18.30.

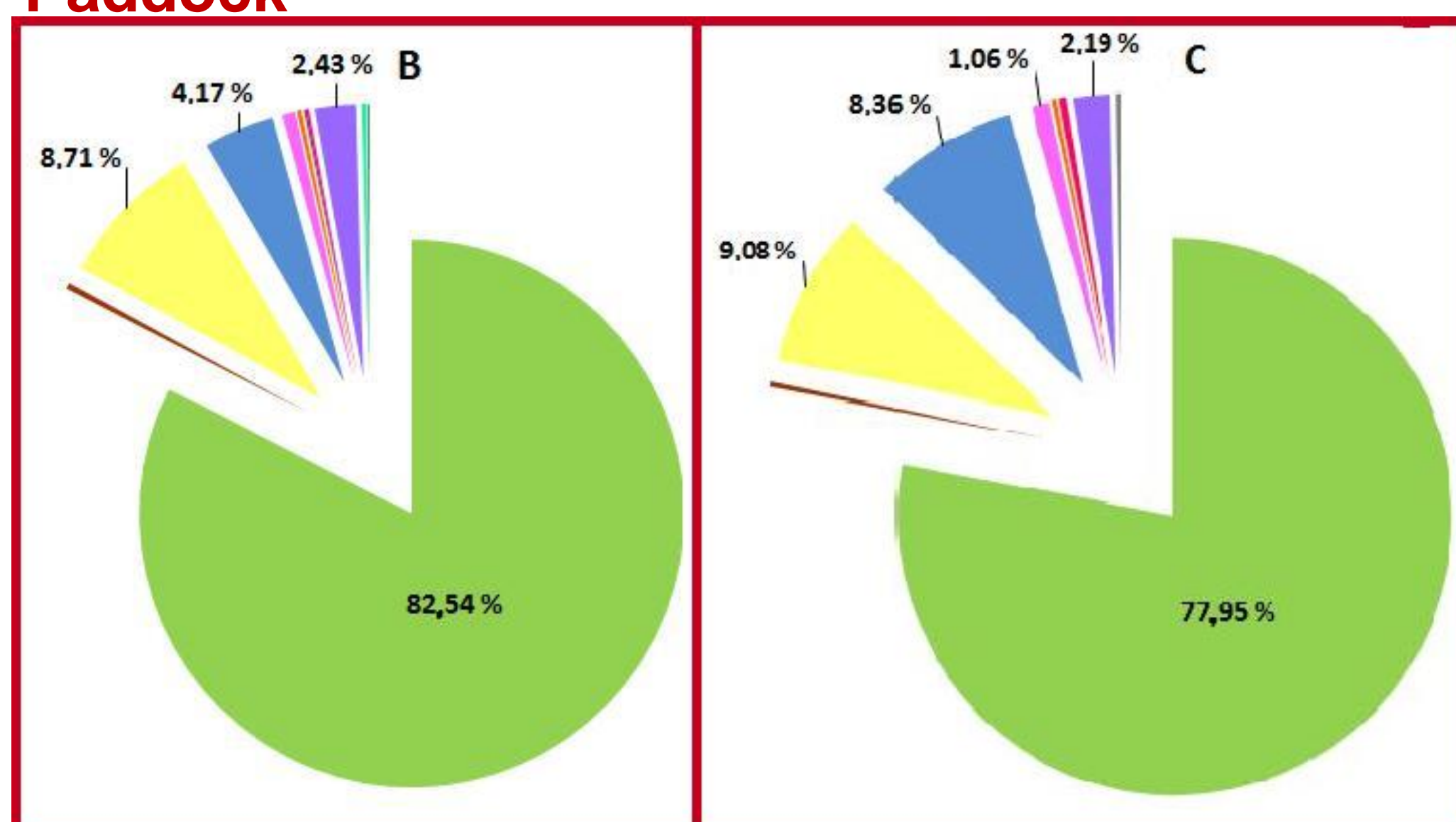
12 Big Box © of 40m² divided through grates, so the subjects can see each other and interact.



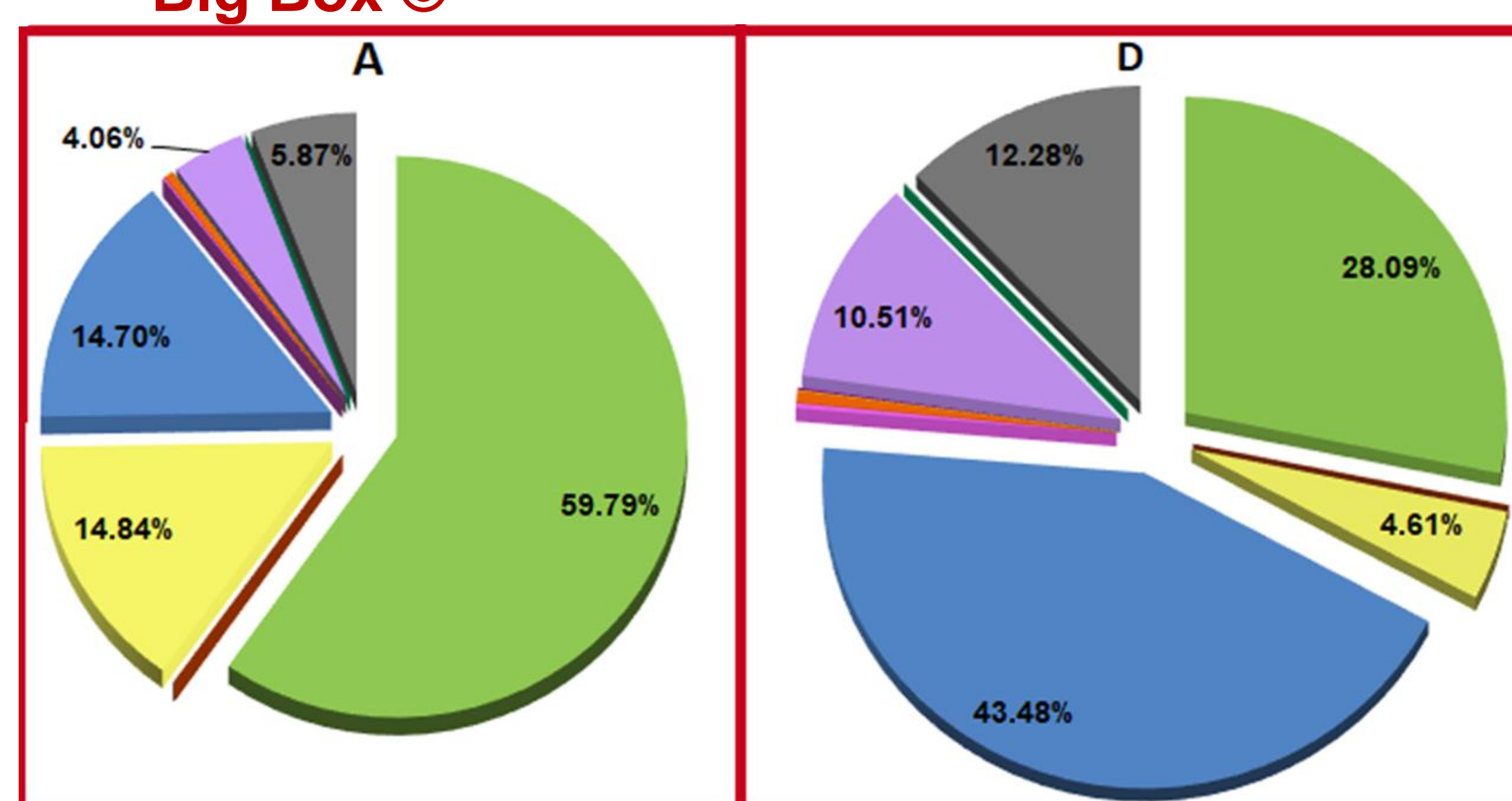
<http://www.laprosperecentroquestre.it>

RESULTS

Paddock



Big Box ©



Legend for behavioral categories:
 ■ INGESTION ■ LOCOMOTION ■ GROOMING AND INSECT CONTROL ■ AFFILIATIVE BEHAVIOR ■ REPRODUCTIVE BEHAVIOR ■ ORAL STEREOTYPY ■ ABERRANT OR ANOMALOUS BEHAVIORS
 ■ ELIMINATION ■ REST ■ INVESTIGATION ■ AGGRESSIVE BEHAVIOR ■ COMFORT BEHAVIOR ■ LOCOMOTOR STEREOTYPY ■ NON VISIBLE

The graphs represent the duration of each behavioural category expressed as a percentage outside and inside the stable in the 4 bands.

DISCUSSION & CONCLUSIONS

Horses are social animals, which spend up to 18 hours per day eating and can travel more than 20 km per day.

Analysing the activity budget of the horses in this structure:

😊 1) The behavioural category most represented is that of **ingestive behaviours**. 2) Satisfaction of their motivation to **movement** (lots amount of hours spent in paddocks and the dimensions of the stalls).

😞 1) Lack of a stable **social group** → the social behaviours are rare. 2) Presence of **stereotypies**, showed especially inside the stalls.

The horses considered came from different stables, where they used to be isolated, and they have already developed the stereotypies before their arrival. When the subjects will acquire the correct social competences, they will have the possibility to create social bounds with other conspecifics, taking advantage also of the framework of the stalls. This kind of structure can be considered a good alternative to a traditional management; indeed, it observes the ethological needs of the horse and the management requests of humans.