# **Titre d’article**: Retrospective study of the reproductive performance of Barb and Thoroughbred stallions in Algeria

**Abstract :**

Background and Aim: The Barb horse occupies a prominent place in the history, culture, and equestrian traditions of the Maghreb (Algeria, Morocco, and Tunisia). Although many studies on the breed standard and morphometry have been published, there are no studies on its fertility and reproductive potential. Thus, this work aimed to study the fertility of Barb, Arabian Purebred, and Thoroughbred horses in Algeria. Materials and Methods: A total of 168 stallions and 1202 mares at the Chaouchaoua Stud farm in Tiaret, Algeria, were included in the study. The reproductive performance during 1592 cycles over 10 consecutive mating seasons (2003-2012) was evaluated. Multivariate analysis with logistic regression was used to analyze the reproductive parameters such as the number of cycles operated, number of pregnant mares, pregnancy rate per cycle, seasonal pregnancy rate, and embryonic mortality rate, and to determine the influence of breed, stallion’s age, and year of the study on reproduction. Results: Statistical analysis showed that stallion breed was a significant influencing factor for the number of pregnant barren mares (Odds ratio [OR]=1.72; p=0.03; 95% confidence interval [CI]=1.05, 2.84) seasonal pregnancy rate (OR=1.40; p5 years on the number of pregnant foaling mares and seasonal pregnancy rate, significant interactions were observed between the stallion’s breed and age, and the pregnancy rate per cycle: in the Barb breed, the pregnancy rate per cycle increased with the age of the stallion, while in the Thoroughbred, it decreased with age. Moreover, a significant effect of the year of the study on the pregnancy rate per cycle and number of pregnant foaling mares was observed. In contrast, the number of cycles and embryonic mortality rate were not influenced by the breed and age of the stallion, or the year of the study. Conclusion: The Algerian Barb horse attained a similar level of fertility compared with that of the Arabian Purebred and Thoroughbred stallions depending on its age and reproductive performance.