The effect of the age on results of the 100-days performance test of young stallions in Poland

Lewczuk Dorota
Institute of Genetics and Animal Breeding Polish Academy of Science Jastrzębiec
05-552 Wólka Kossowska e-mail:D.Lewczuk@ighz.pl POLAND

photo Paulina Peckiel

The aim of the study was to estimate the effect of the age of horses on the performance test results. The data was examine in two different ways by analysis of the age of horses as the fixed effect of the year of birth and as the linear regression on the age in days.

Material i methods

The effect of the horse age was evaluated on the basis of the results of 329 stallions that take part in the 100 day performance tests in the years 2004-2007. Horses were in the age of 1324 days with standard deviation 153 days. The results of individual traits evaluated by trainer, judges and riders were calculated by analysis of variance (procedure GLM of SAS program). The analysis of variance included also fixed effects of year of estimation, training centre, breed, group of show and rider.

Results

Table 1. The results for different classes of ages groups

TRAIT	AGE LSM (SE)		
	< 42 months N=139	42-54 months N=170	> 54 months N=20
Character (T*)	8.9 (.43)	8.5 (.09)	8.6 (.13)
Temperament (T)	8.4 (.34)	8.0 (.07)	8.0 (.10)
Trainability (T)	7.6 (.40)	7.3 (.08)	7.4 (.11)
Walk (T)	6.9 (.40)	7.2 (.08)	7.1 (.12)
Trot (T)	6.7 (.34)	7.2 (.07)	7.0 (.10)
Gallop (T)	7.3 (.34)	7.4 (.07)	7.3 (.10)
Free jumping (T)	7.1 (.38)	7.2 (.08)	7.3 (.12)
Jumping under rider (T)	6.8 (.38)	6.9 (.08)	7.2 (.12)
Walk (J)	7.6 (.28)	7.2 (.06)	7.1 (.08)
Trot (J)	7.4 (.32)	7.2 (.07)	7.0 (.10)
Gallop (J)	7.5 (.29)	7.3 (.06)	7.2 (.08)
Free jumping (J)	6.8 (.38)	7.1 (.38)	7.0 (.12)
Jumping under rider (J)	7.2 (.38)	7.0 (.08)	6.8 (.11)
Rideability (R)	7.5 (.81)	6.6 (.17)	6.6 (.25)
Rideability dressage (R)	7.1 (.97)	6.2 (.20)	5.7 (.30)
Rideability jumping (R)	5.7 (.90)	6.4 (.19)	6.5 (.28)
TOTAL RESULTS	116.6 (4.62)	114.9 (0.98)	114.1 (1.42)

* T- trainer, J - judges, R - rider

Figure1. The linear line of trend for the trait jumping under rider in the trainer opinion.

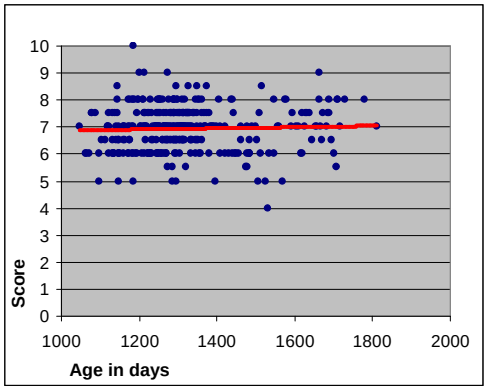
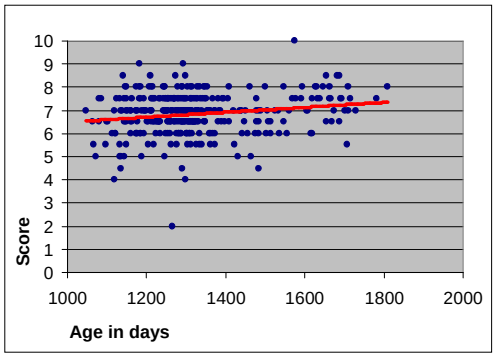


Figure 2. The linear line of trend for the trait trot under rider in the judges opinion



The effect of the age analysed as a fixed effect of the year of birth was not statistically significant. The linear regression on the age of horses in days was statistically significant ($p<0.05$) only for two traits. The phenotypical indexes used in horse breeding should be corrected for the age on the basis of the regression coefficient rather then the class effect used nowadays.