

Development of a genetic evaluation for conformation traits for the Austrian Noriker draught horse

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1. INTRODUCTION

- Austrian Noriker presumably oldest autochthonous draught horse breed in Central Europe
- nowadays endangered

2. OBJECTIVES

- estimate genetic parameters for conformation traits
- implement routine breeding value estimation for Noriker in Austria



3. DATA

- scores and measures routinely recorded when entering studbook (app. 3 yrs)
- 11 scores (range 1 to 10)
- 4 measures plus caliber index
- restricted data set for parameter estimation: records of 260 stallions and 10,827 mares

4. MODEL

- multivariate linear AM
- fixed: sex, age class, classification place*day
- random: permanent environment, animal (genetic)
- parameter estimation: VCE6 (Groeneveld et al.)
- genetic evaluation: MiX99 (Lidauer et al.)

5. RESULTS

5.1 GENETIC PARAMETERS

Trait	h^2
Height at withers	0.70
Chest circumference	0.34
Cannon bone circumference	0.48
Caliber index	0.33
Type score	0.47
Other 10 scores	0.15 to 0.26

5.2 ESTIMATED BREEDING VALUES

- relative breeding values with mean 100 and SD 20
- rolling base (2011: stallions 1998-2003)
- estimated once a year
- in a first step only EBVs of stallions are published
- minimum reliability 50%
- positive genetic trends for all traits (except caliber index)



6. SUMMARY

- moderate to high heritabilities for conformation traits
- breeding value estimation based on multitrait AM developed
- routine genetic evaluation started in February 2011
- other Austrian horse breeds might follow