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## Introduction

The Old Kladruber horse is unique Czech autochthonous breed with 400 years old history.



## Results and conclusion

The overall means of the single traits were in the interval from 6.73 (walk) to 8.48 (marathon) scores. The lowest coefficients of variation are in the traits fundament (6.59%). The stallions were higher, heavier and they have larger pastern perimeter than mares. The mares had larger thorax perimeter than stallion. The significant differences were found for height, pastern perimeter and thorax perimeter. The significant differences of performance traits scores were found for all traits scores beyond type and sex expression, general harmony and marathon. But in all traits stallions got higher score means than mares, hence stallions have more strictly pre-selection. The reason of better scores of stallions there is sex dimorphism, stallions are more temperament, more robust and they have better motion mechanic.



## Material and methods

The horses were measured within the period 1980-2004; all the 603 (66 stallion, 537 mares) measured horses were 3-10 years old. The data for performance test analysis were collected within the period of 1995-2004 of 372 (79 stallions, 293 mares) Old Kladruber horses. These fixed factors were analysed: color variety ( $VAR_i$ ), sire lines ( $LINE_n$ ), stud ( $STUD_j$ ), sex ( $SEX_k$ ), and year of birth ( $YEAR_l$ ), age of horses ( $AGE_m$ ). The basic parameters (overall means, standard and variation coefficient deviations) were estimated for all population. The following model was used for analyse:

$$Y_{ijklmn} = \mu + VAR_i + STUD_j + SEX_k + YEAR_l + AGE_m + LINE_n + e_{ijklmn}$$



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