



University of  
Ljubljana



*Biotechnical  
Faculty*

# Estimation of breeding values and genetic changes of **Posavje horse in Slovenia**

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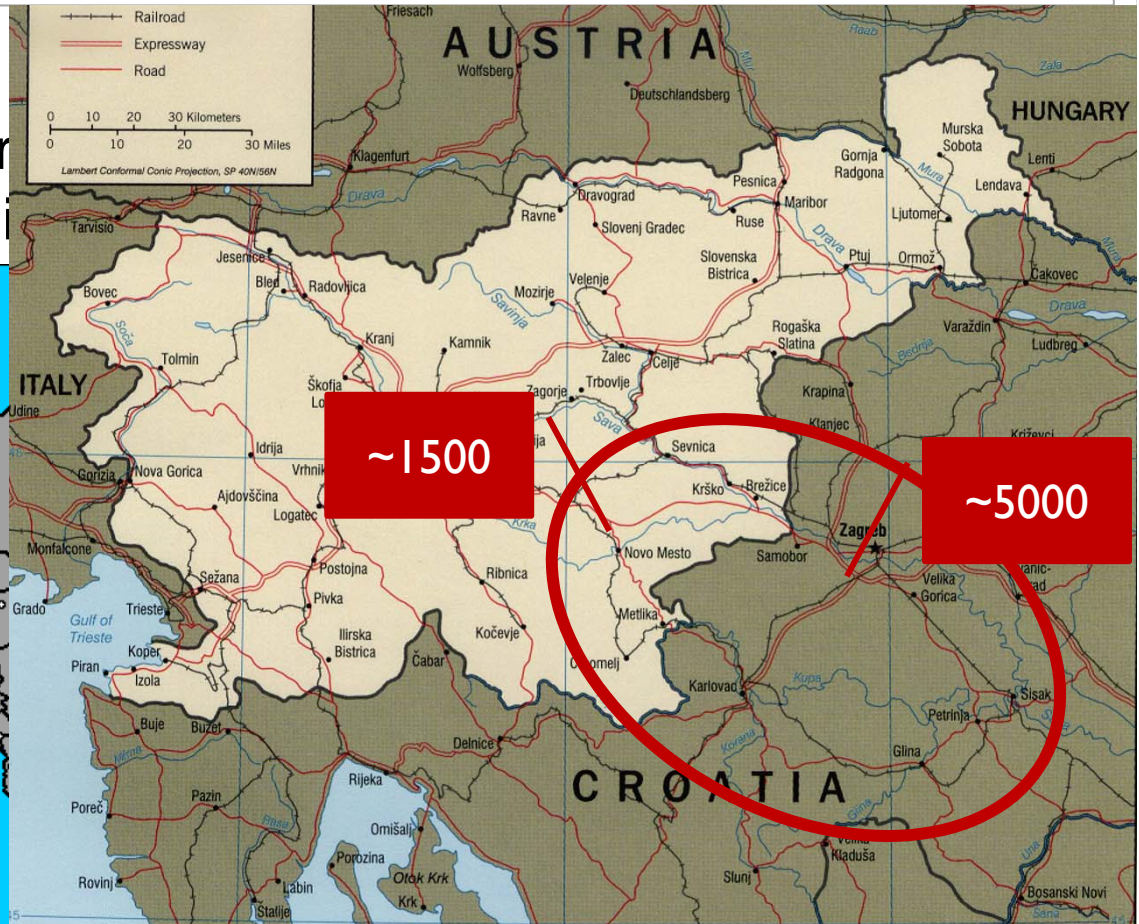
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# Introduction

## Posavje horse:

- An native horse breed
- Traditionally bred



## Breeding program

- Type traits scoring
- Use of the scores as the main selection criteria
- Breeding values - 2013



# Introduction

**The aim of the study:  
consider the use of the estimated BV in selection.**





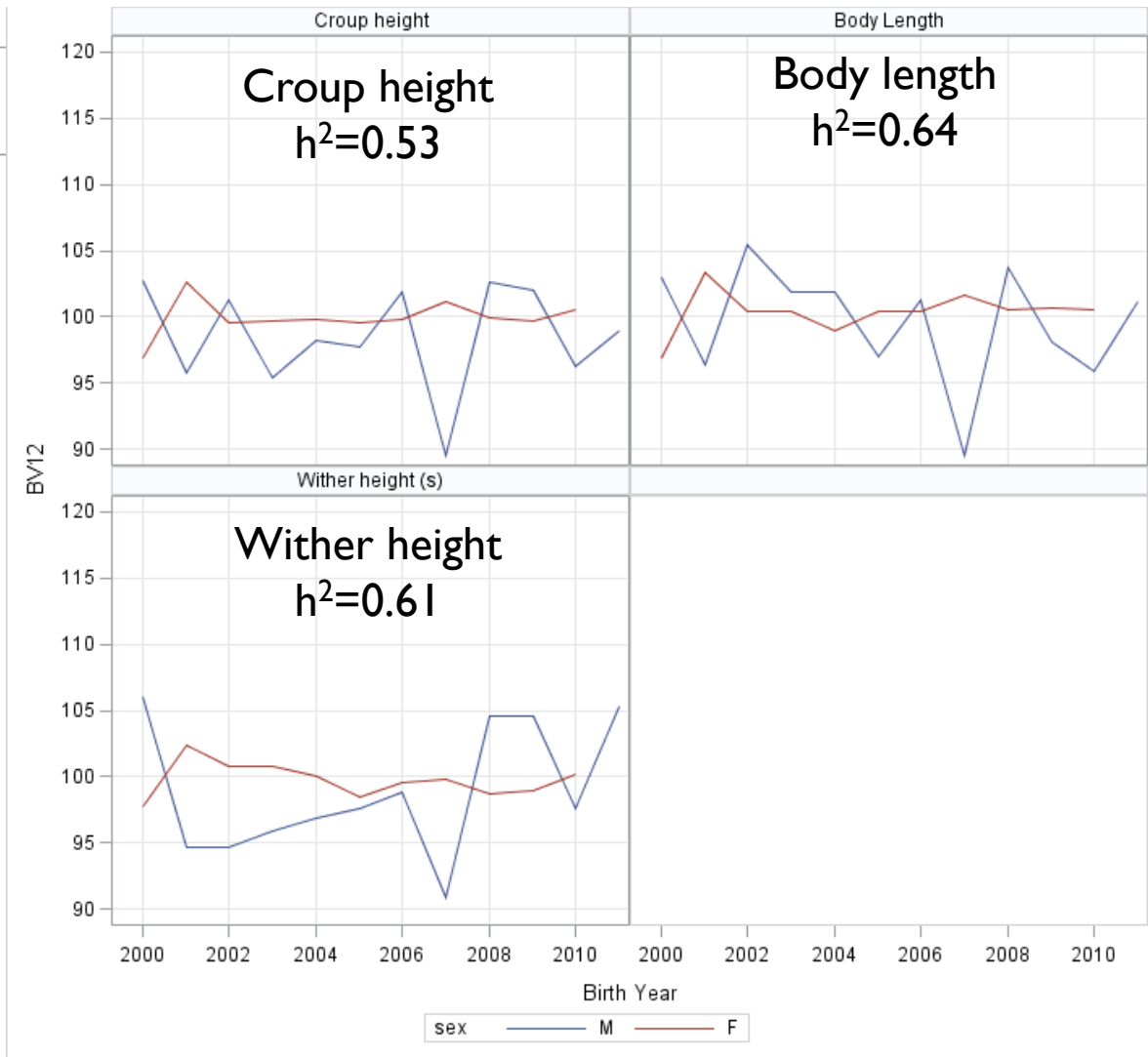
## Material & Methods

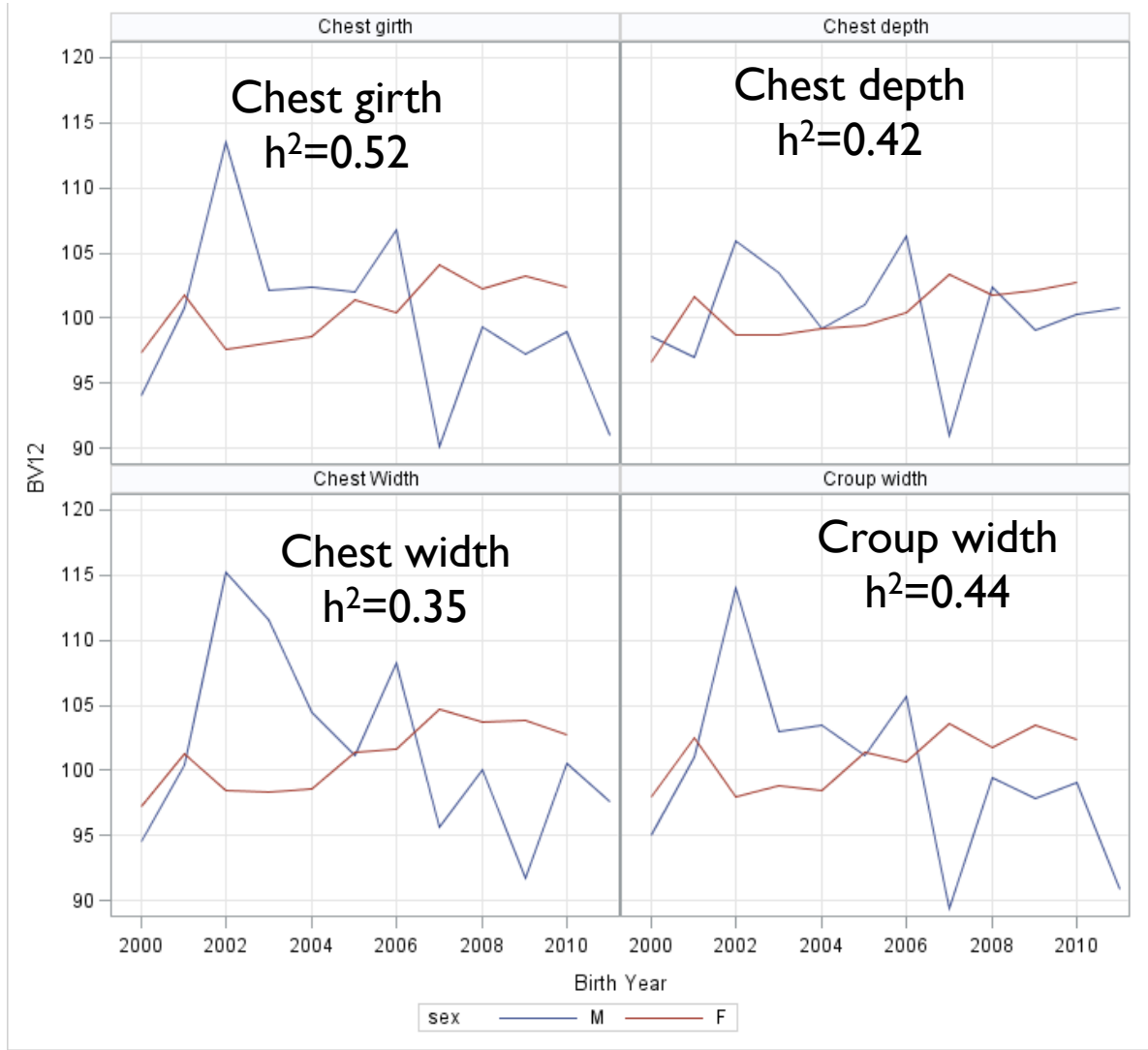
### **Material:**

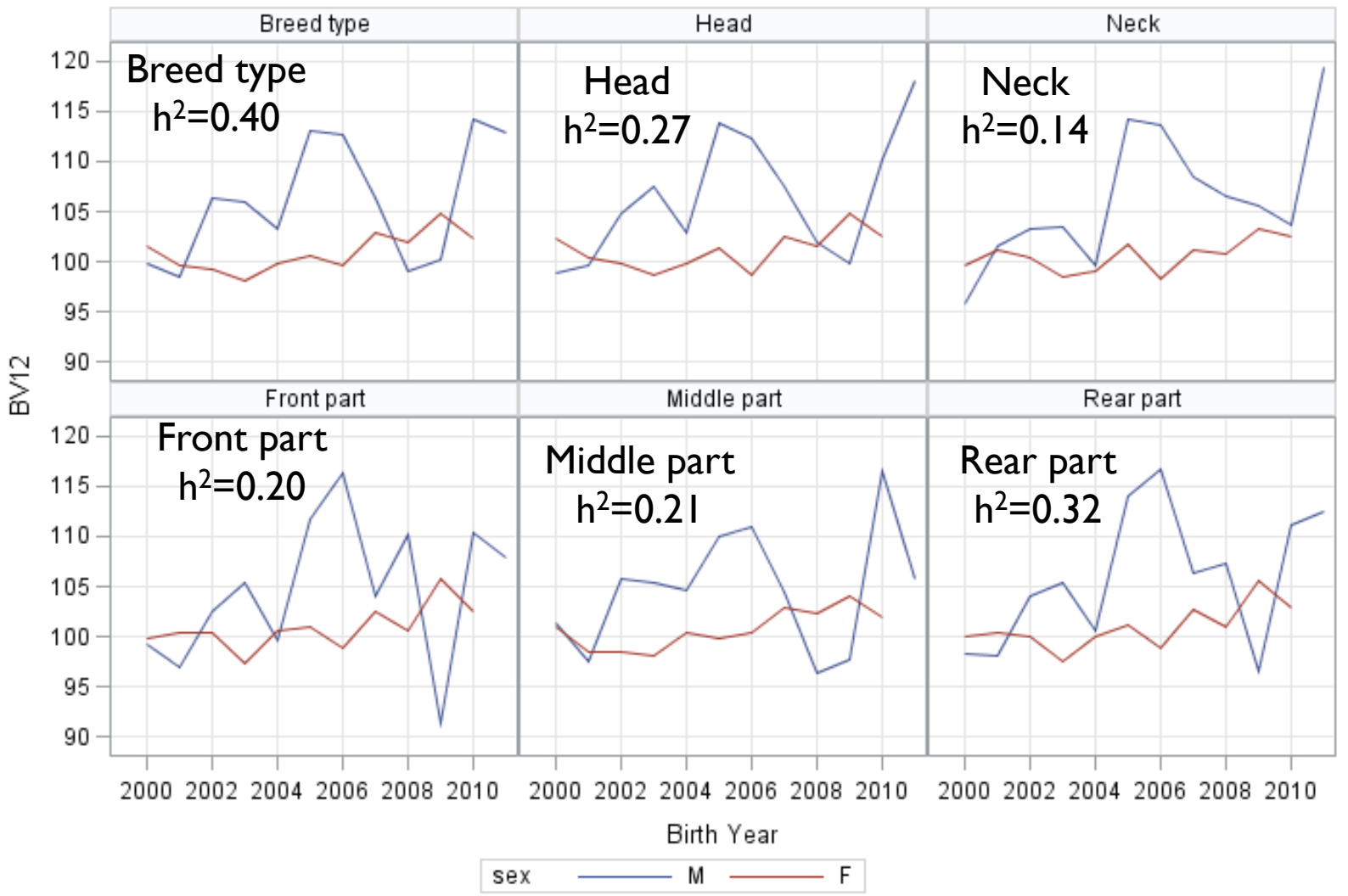
- Scores and measurements of 1550 horses
- Birth year between 1999 and 2010
- Data of 764 horses used for BV (50 stallions, 714 mares)
- Pedigree records counted for 1220 animals

### **Methods:**

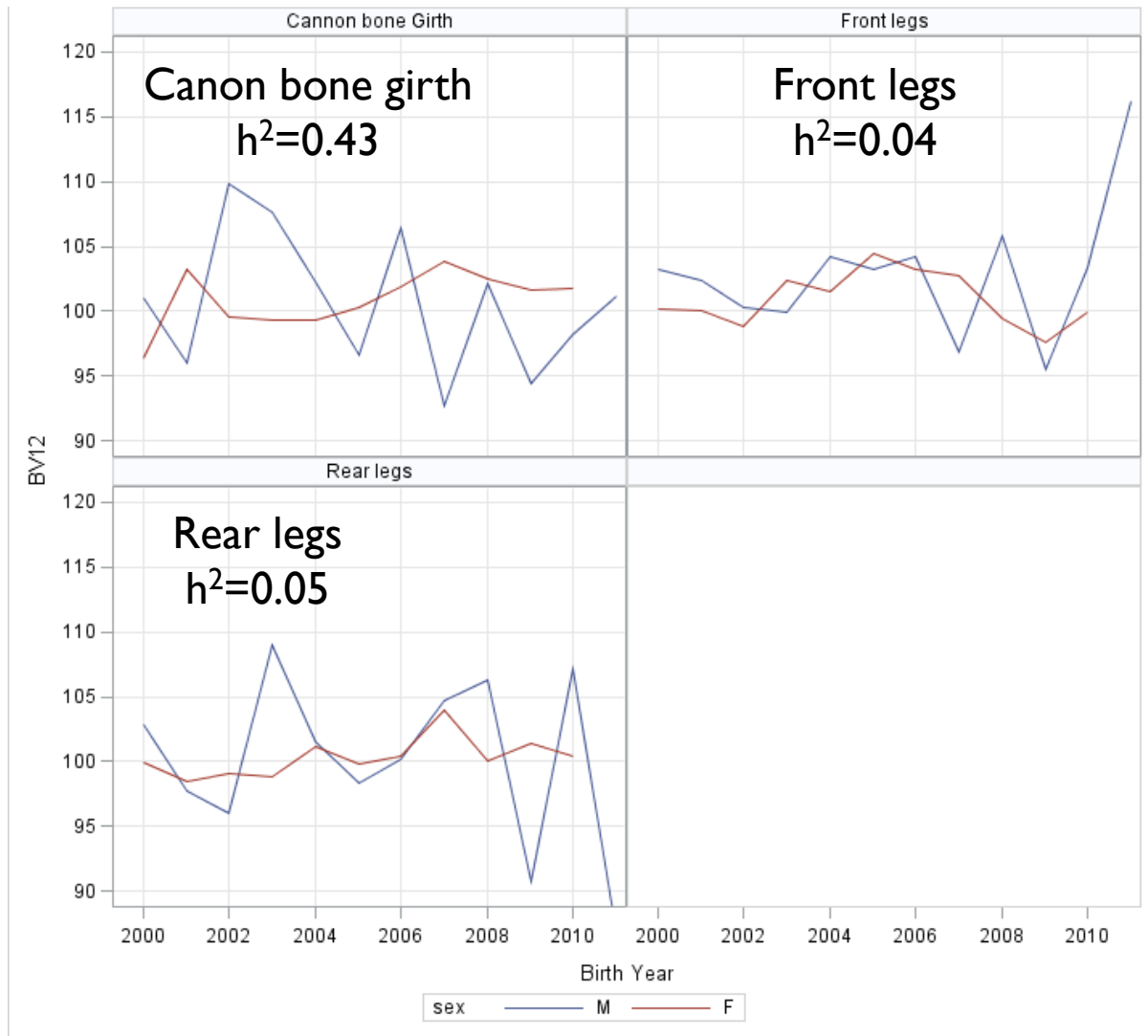
- 23 body traits: 7 measured, 12 scored & 4 indexes
- Multitrait animal model: gender, age and birth year as fixed effects
- Variance components - VCE-5 package

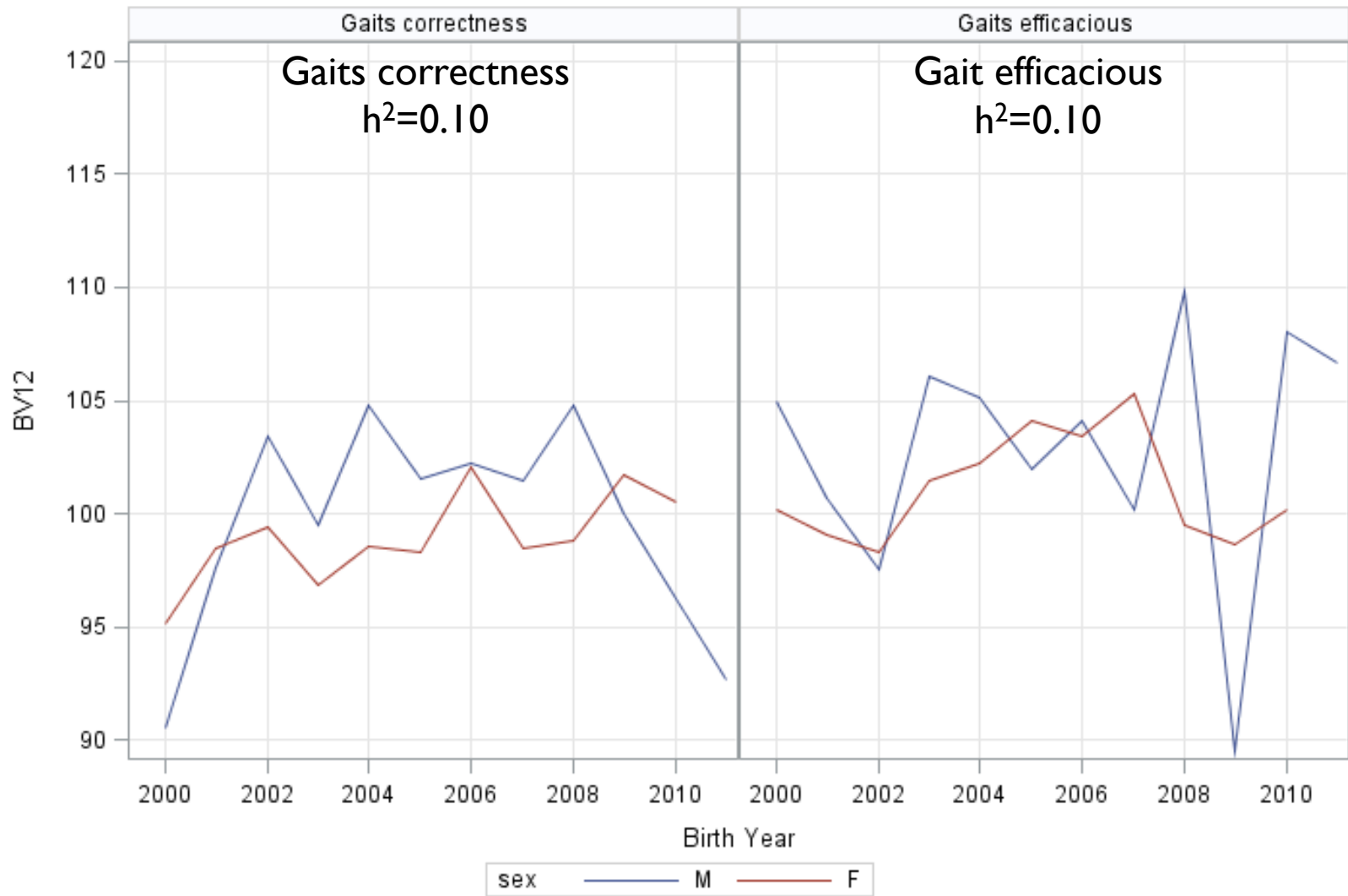
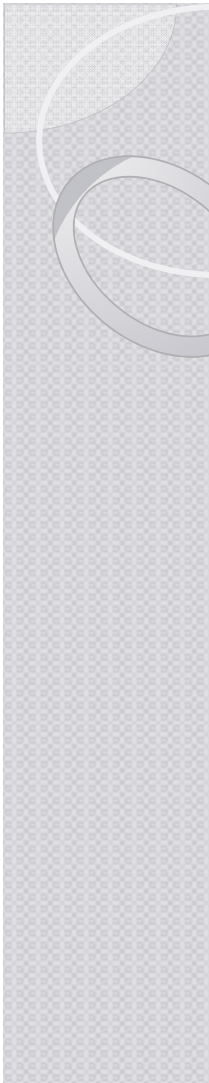


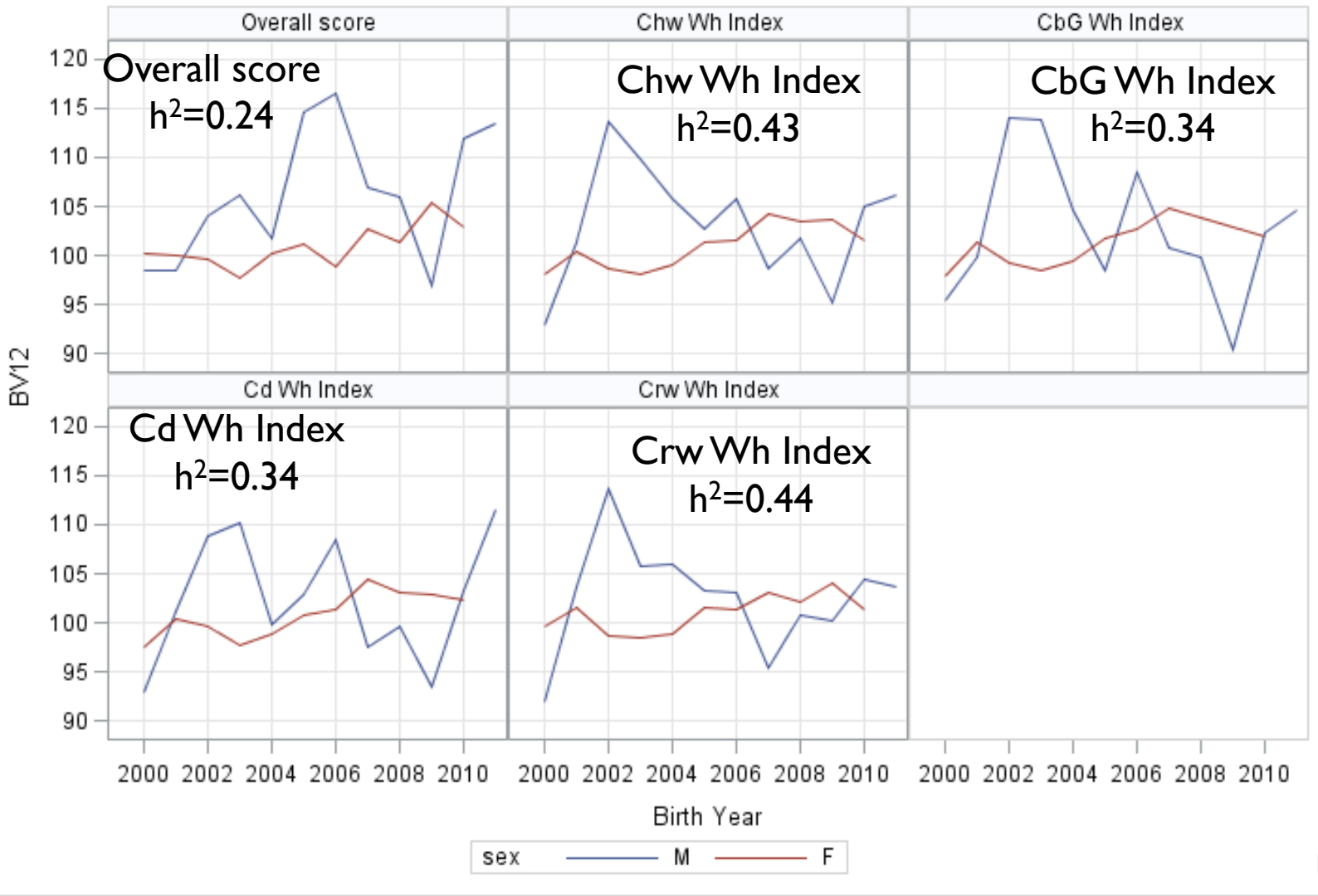














## Conclusions

Despite the:

- non linear scoring system
- small number of horses with scores
- relatively poor relationship data

Estimated heritabilities are comparable with other populations

Genetic changes suggest that selection based on phenotype was not efficient

**For the future, introduction of joint breeding value evaluation for Slovenian and Croatian Posavje horse populations will be implemented.**



**Thank you for your  
attention.**