

# PHENOTYPIC OCCURRENCE OF ALLERGIC ECZEMA IN OLD KLADRUBER HORSE

**Barbora Hofmanová, Ivan Majzlík, Václav Jakubec and Luboš Vostrý**

Czech University of Life Sciences Prague,  
165 21 Prague - Suchbát, Czech Republic



## INTRODUCTION

Allergic eczema (AE) is a skin disease - summer seasonal dermatitis as an allergic reaction to insect bites developed in sensitive horses. AE seems to be a very serious problem in grey population of the Old Kladruher horse.

### Allergic eczema:

- **Seriously affecting health status of the horse**
- **Reducing welfare of the horse**
- **Reducing the work exploitation of the horse**
- **Causing economic losses to the owner**



## OBJECTIVE

The aim of this study was to examine the phenotypic occurrence of AE in grey population of Old Kladruher horse and verify the influence of line and family.

## MATERIAL AND METHODS

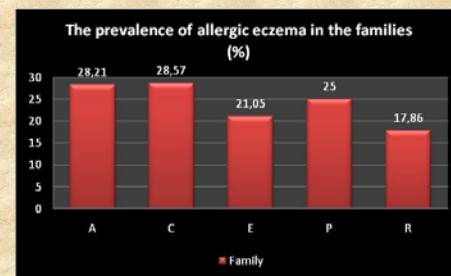
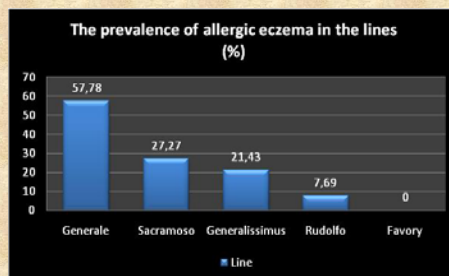
- Last consecutive years were all horses (cca 155 heads) of the grey stud in Kladruhy examined for specific signs of AE.
- Horses were sorted according to the line and family apurtenance.
- AE showed a feature of two characters: occurrence of AE or absence of AE.
- The data was analysed using the test of homogeneity by contingency tables.

## RESULTS

- Out of all horses examined in the stud, **30.97 % were affected with AE**, which is prevalence found in another authors (Lange, 2004, Björnsdóttir et al., 2006).
- The occurrence of AE is significantly influenced by line origin of the horse.
- The prevalence of AE over all families (family A, C, E, P, R) of grey Kladruher horse is 23.62 %.
- The test showed that AE is not influenced by family apurtenance - the differences between expected and observed values are random.
- The extreme susceptibility for AE showed offspring of the grey stallion Generale Proxima XLVIII by overall occurrence 81.58 %.
- The prevalence of AE reached 91.7 % in offspring of Generale Proxima XLVIII with mares showing AE too.



Generale Proxima XLVIII



## CONCLUSION

- The prevalence of AE over 30 % confirms that it is not negligible problem of this breed.
- The analysis revealed strong relation between AE and line origin whereas family apurtenance was not proved as a significant source of eczema susceptibility.
- The case of stallion Generale Proxima XLVIII confirms the genetic influence on prevalence of AE in Old Kladruher horse.
- The selection of susceptible animals to AE could be used very moderately because of endangered breed with number of females under 1000 heads.
- At present the high level of hygiene reached by frequent washing of the whole body of the horse trough the day proved to be the best practical routine to fight AE.

