

# PSXII-27 Microsatellite analysis of the historical and modern populations of the Russian local cattle breeds

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**Our aim** was to estimate the genetic diversity of Russian native cattle breeds based on the analysis of historical (museum) and modern samples.

**~100 years ago**



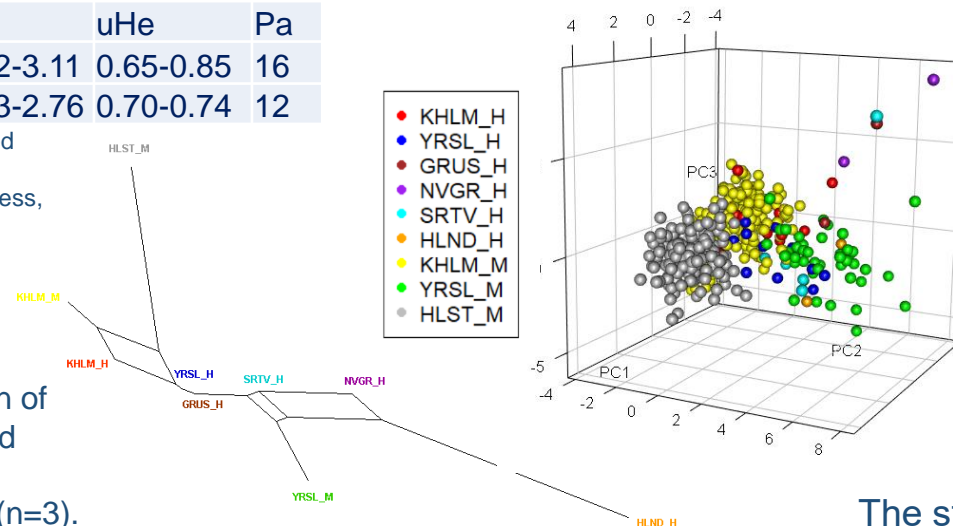
Nine microsatellite loci  
(TGLA227, BM2113, ETH10, SPS115, TGLA122, INRA23, TGLA126, ETH225, BM1824)

**Present time**



Populations	Ar	uHe	Pa
Historical	2.72-3.11	0.65-0.85	16
Modern	2.63-2.76	0.70-0.74	12

uHe – unbiased expected heterozygosity,  
Ar — rarified allele richness,  
Pa — private alleles



The modern samples were presented by Yaroslavl (n=62), Kholmogor (n=177) breeds and Holstein breed (n=158) as outgroup.

**Our results** indicate a decrease in genetic diversity in modern populations and a possible loss of valuable allelic combinations. The research results will be useful for developing of comprehensive strategies for the conservation of the Russian native genetic resources of cattle.

Historical samples were derived from the craniological collection of the Museum of Livestock named after E.F. Liskun (Moscow) and included Kholmogor (n=18), Yaroslavl (n=19), Saratov (n=5), Novgorod (n=2), Great Russian cattle (n=2) and Holland cattle (n=3).

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