



# Influence of Holstein Friesian and other varieties on Lithuanian native cattle

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- Lithuanian Ash-Grey (LAG) and Lithuanian White-Backed (LWB), cattle were bred in Lithuania from the ancient times and are specific to the country.



- LAG cattle have been known in Lithuania since 16th century.
- In accordance with the sources of references to cattle hair, there were about 6% ash grey cattle.





1952 – 1953 there were:  
4,5% - LAG and  
6% - LWB cattle



In 20 th century these breeds were assimilated of Lithuanian Black-and-White and Lithuanian Red cattle's and where improved by foreign breeds. Holstein were imported in 1972 -1979



# Restoration and separate registration of the LWB and LAG cattle have started in 1994.

- ✓ Conservation started by finding the most typical animals on private farms of Lithuania
- ✓ Until 1994 these native cattle were bred without systematic breeding, were intensively improved by different black-and-white or even red cattle breeds.
- ✓ Since 1994, local cattle are being identified and registered; there are also milk recorded cows.

# The aim

- identify and to evaluate influence of Holstein Friesian and other varieties on productivity and population diversity of Lithuanian Ash Grey (LAG) and Lithuanian White Backed (LWB) cows.



# Material and Methods

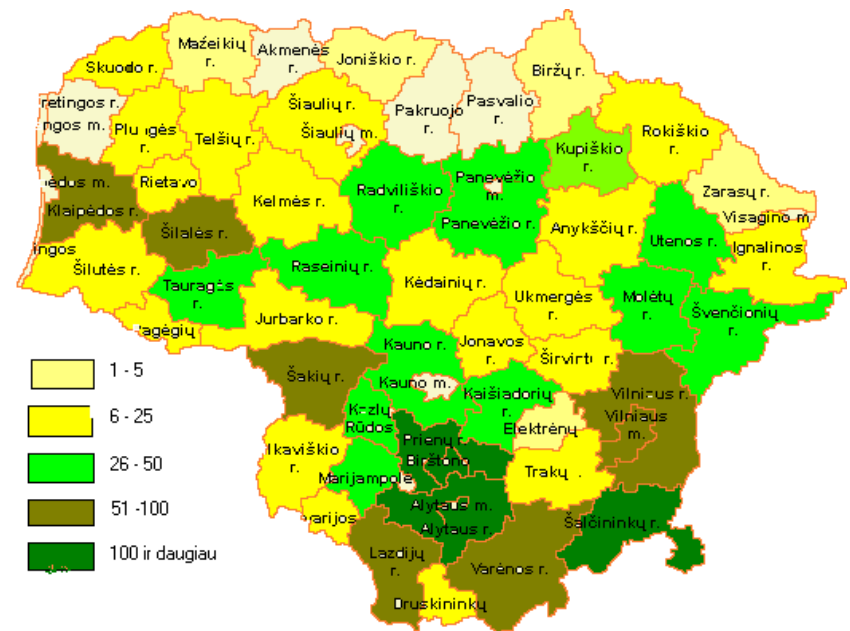
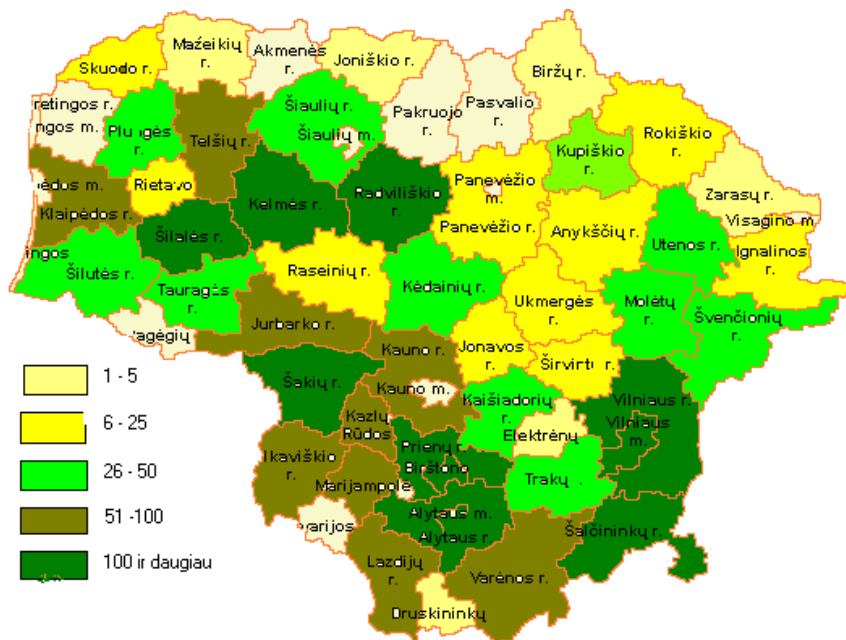
- The genetic structure was studied from pedigree records (LAG n=485 and LWB n=408).
- The influence of the Holstein and other breeds on the whole cattle populations was assessed using the contribution of the founders, the contribution of the ancestors.
- Data was performed using descriptive statistics in Statistica.



# Number of registered cattles in the different regions

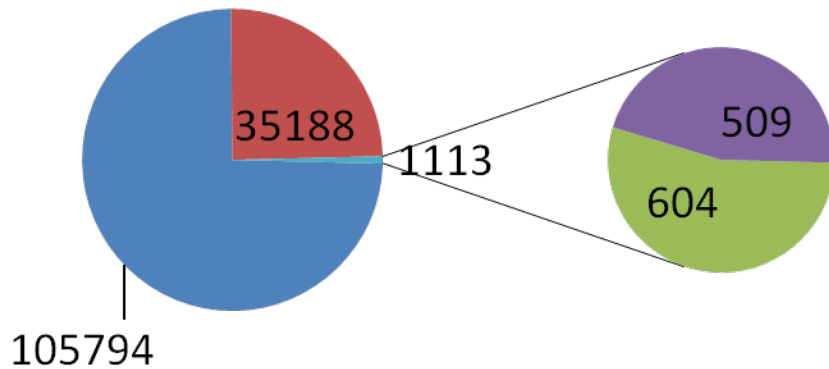
- Ash Grey cattle
- ( $n=2563$ )

- White backed cattle
- ( $n=1023$ )



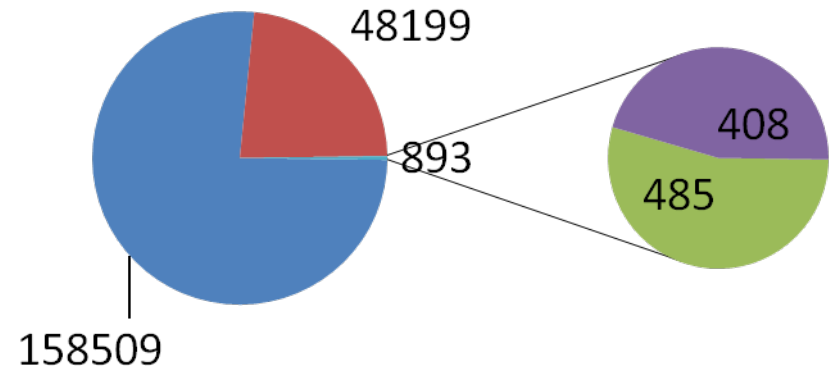
Restoration and separate registration of the LWB and LAG cattle have started in 1994.

## Average number of milking cows 2011-2012



- Black-and-White
- Red, Red-and-White
- Ash-Grey
- White-Backed

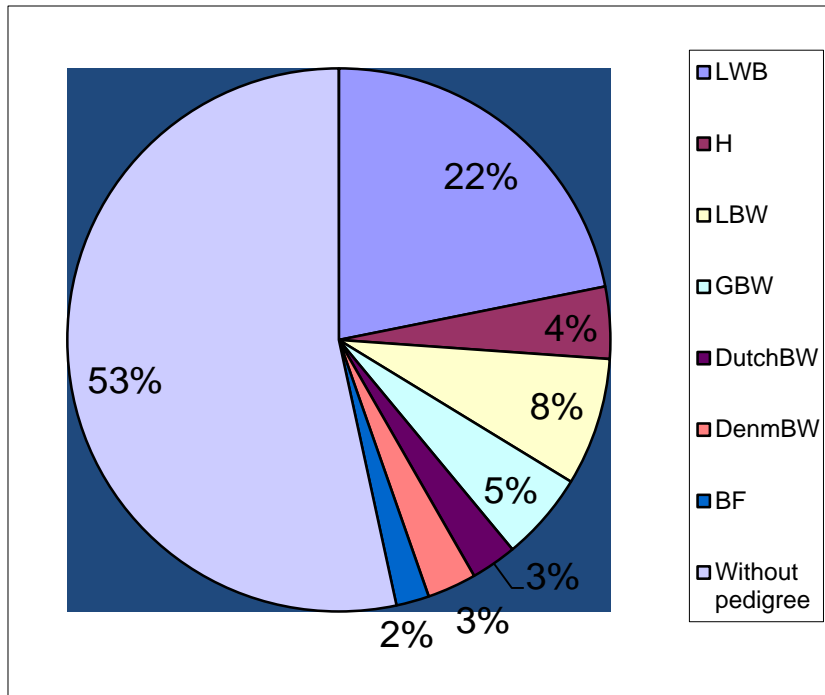
## 2005-2006



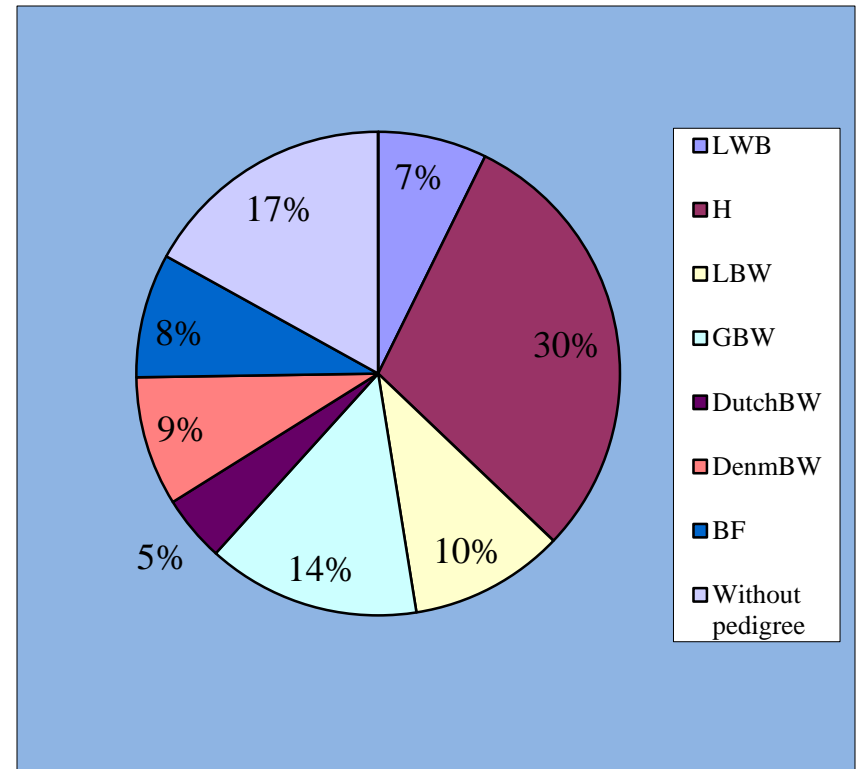
- Black-and-White
- Red, Red-and-White
- Ash-Grey
- White-Backed



Genealogy structure of LWB by female side

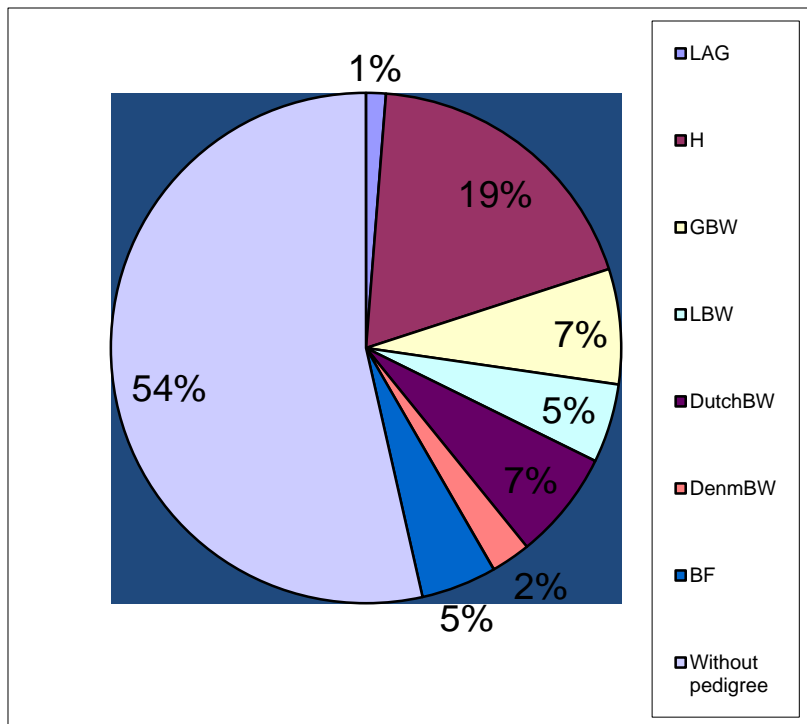


Genealogy structure of LWB by male side

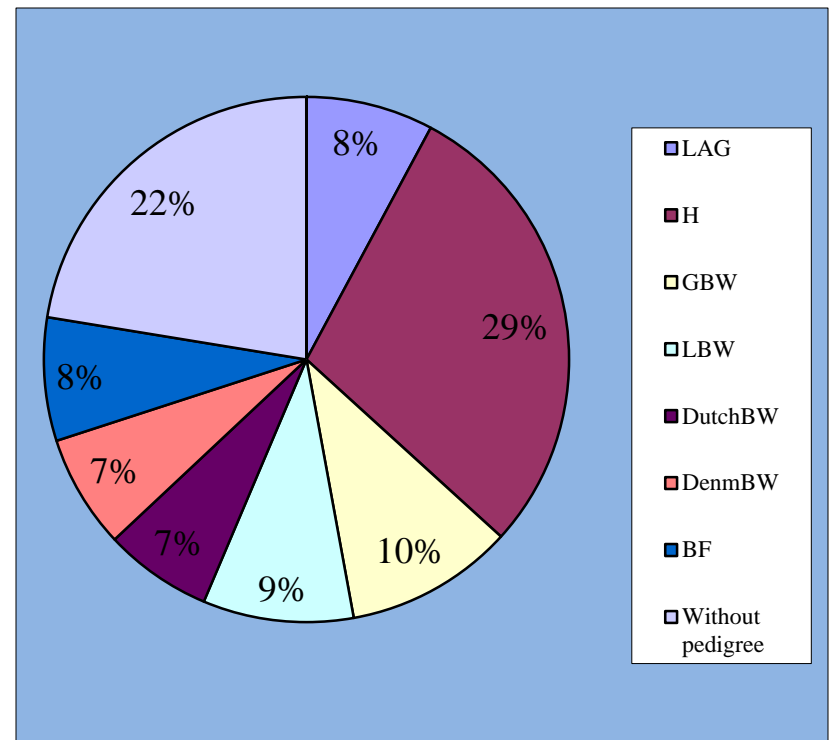




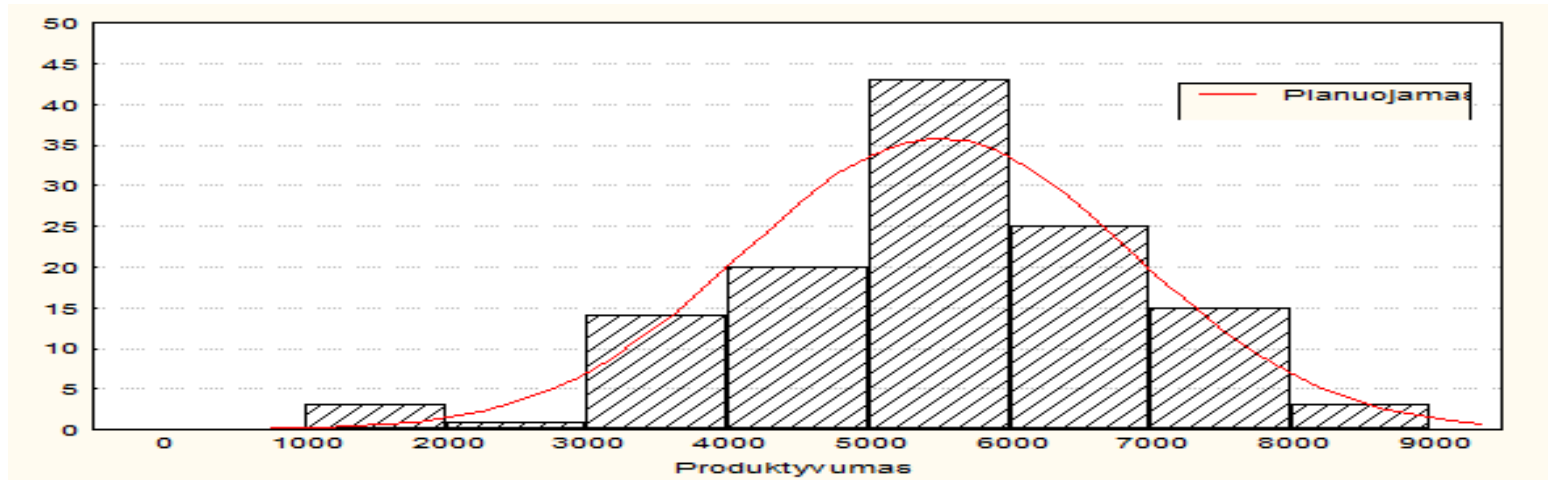
Structure of genealogy of LAG  
by female side



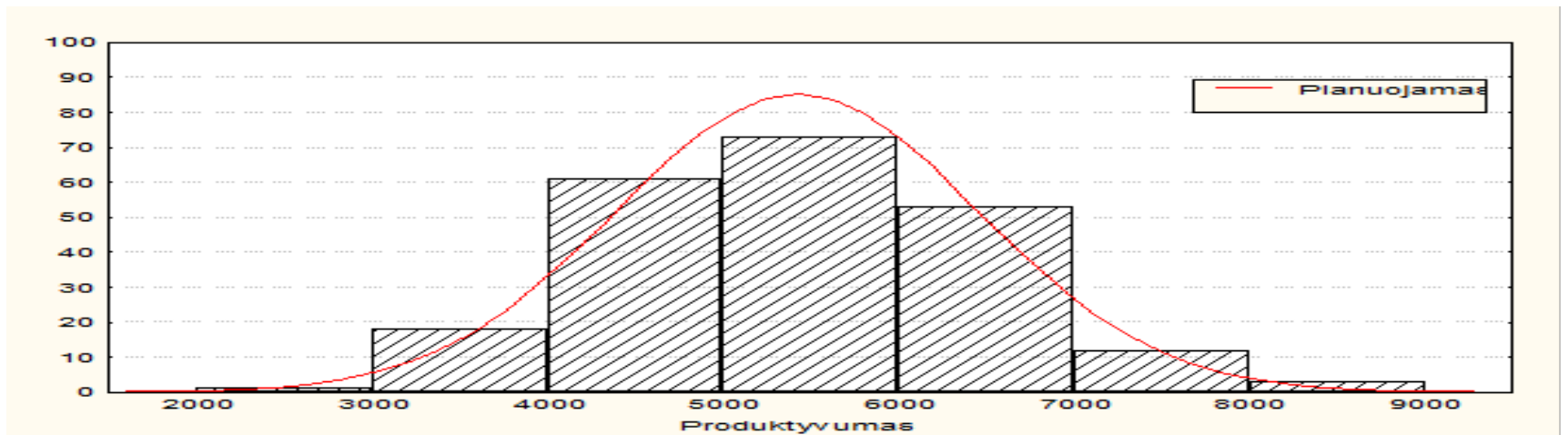
Structure of genealogy of LAG  
by male side



## LWB

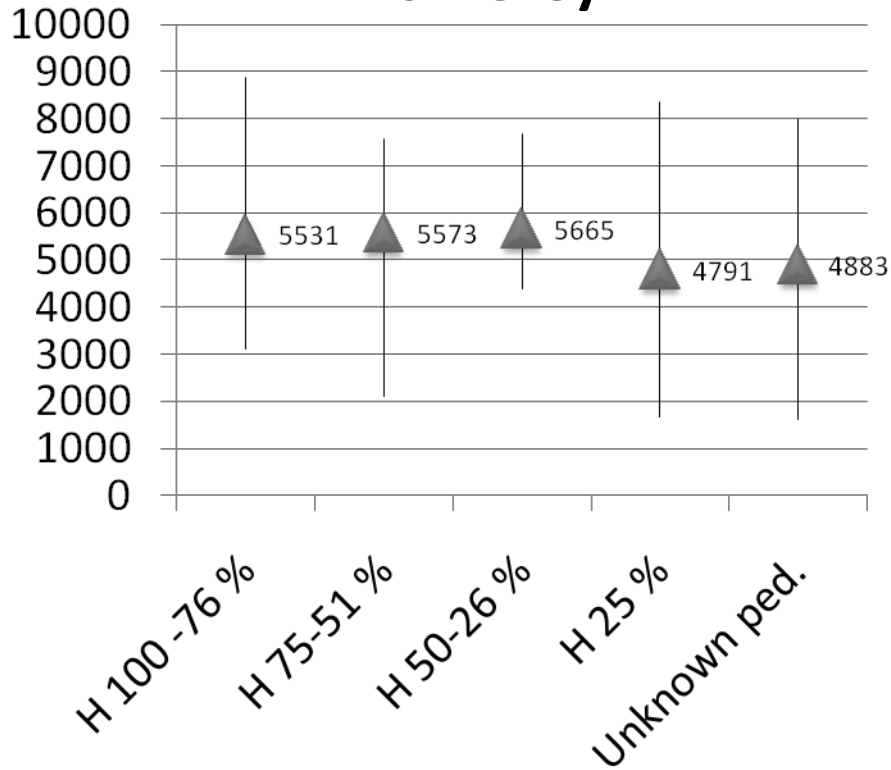


## LAG

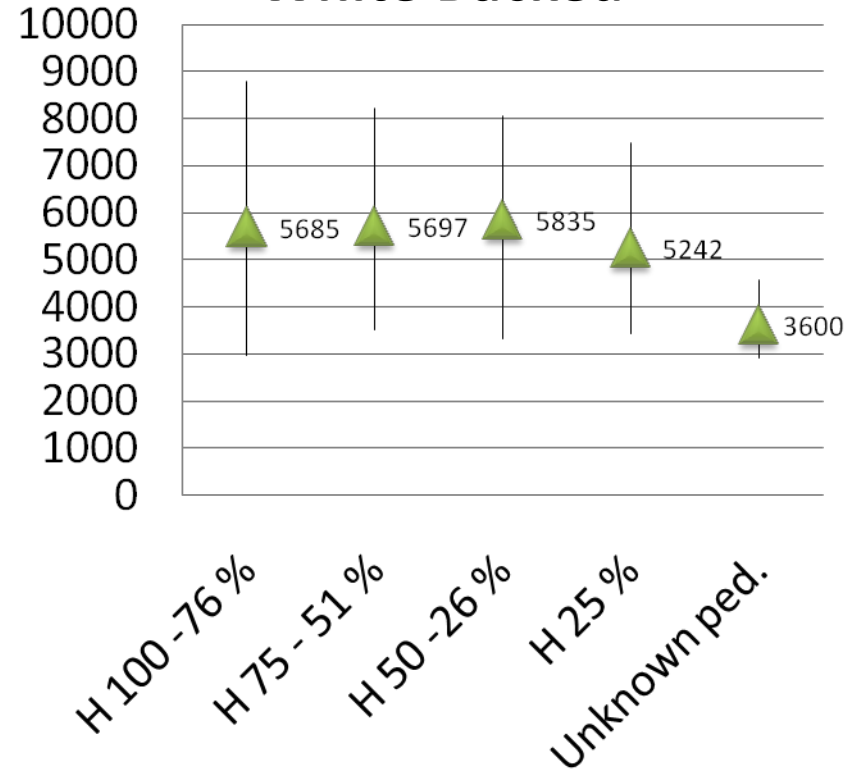




**Ash-Grey**



**White Backed**



The conservation of native cattle is to coordinate conservation approaches with elimination of foreign genes from population what means low productivity.



Some stakeholders are primarily interested in breed conservation, while other focuses to production increase.

Thank you for your attention

