

## **INVESTIGATION OF HUNGARIAN INDIGENOUS CHICKEN BREEDS WITH MOLECULAR GENETIC MARKERS**

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There are 6 indigenous chicken breeds registered (Hungarian White, Yellow, Speckled and Transylvanian Naked Neck White, Black, Speckled) in Hungary. These breeds have been crowded out of breeding and unfortunately their resistance and excellent quality of their products are unknown for most of the customers and raisers. Nowadays there are 3 institutes (KÁTKI-Gödöllő, University of Debrecen College of Agriculture-Hódmezővásárhely, University of West Hungary-Mosonmagyaróvár) which are providing for their genetic substance.

Samples from the above mentioned Hungarian populations are under genetically analysis with DNA markers to obtain information about the relationship between the different breeds, to estimate genetic distance. We can also estimate the genetic variability within the populations and their level of inbreeding, which serve important information for our gene banks.

We use RAPD and microsatellite markers in our study. So far, 16 RAPD markers and 4 microsatellite loci were analyzed in 9 populations.

Our current results confirm the expected conceptions. The variability of populations which are known inbred are lagging behind the average, respectively the different populations of the same breed have similar molecular genotype. There seems to be certain questions solved such as the Transylvanian naked neck varieties relation to the corresponding colored Hungarian breeds, which are kept to be identical by some opinions.