

**RESEARCH ACTIVITIES AT THE DEPARTMENT OF ANIMAL SCIENCE,
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Abstract

The university is located on the most important agricultural, namely animal breeding area of Hungary. The number of the traditional animal breeds evolved or further developed in this region is significant. The research areas of the institute are mainly focused on the scientific revealing of the genetic and economic value of the old domestic breeds. Remarkable in situ gene bank of several old Hungarian domestic breeds presents at our research settlement. Besides the classic selection methods, molecular genetic methods are also applied in gene preservation researches. In case of indigenous populations, these methods are of high importance in the delay of inbreeding, while in case of modern breeds the rate of inbreeding can be decelerated simultaneously with the maximization of selection response. In the preservation of genetic diversity within breeds, QTL mapping and the examination of microsatellite markers are highly considered. The different point mutations and the identification of major genes are also applied in our breeding value estimation research program both in case of indigenous breeds and breeds selected for high performance, high yields. For the improvement of efficiency of the animal breeding programs, a research consortium has been established. These projects assist to appoint the new breeding goals stemming from market changes. Our researches in animal keeping technology are aimed to determine the role of indigenous breeds in the utilization of protected areas. In our fish biology centre examinations are carried out to determine the economic value of indigenous fish species.