

LITHUANIAN PIG GENETIC RESOURCES AND THEIR CONSERVATION

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Objectives

The objectives for Lithuanian pig genetic resources conservation are:

- a component of future pig biodiversity,
- cultural - historic heritage,
- their ecological value,
- selection needs for insurance against changes in future pig production

Material and Methods

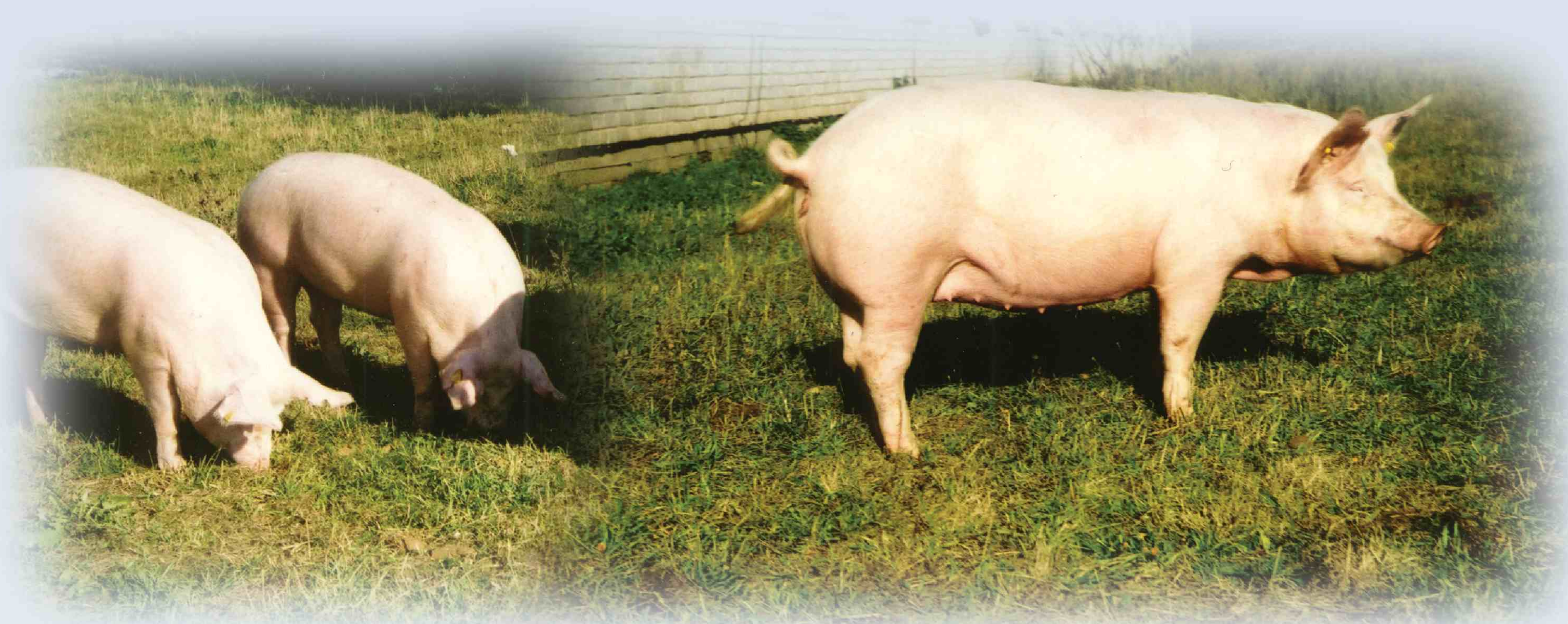
Lithuanian pig genetic resources include Lithuanian indigenous wattle and Lithuanian White pigs. Lithuanian indigenous pigs are quite unique due to their morphological feature – a pair of wattle under the neck. Their colour range is quite wide: white, black, brownish, but in most cases – spotted. Pigs have both long – lop and short – prick ears. Pigs are insensitive to direct sunlight and, thus suitable for pasturing.



The process of improving Lithuanian native pigs with Large White, Middle White, Edelsweine, Berkshire and local Danish pigs after World War I also marked the start of development of the Lithuanian White pig breed, even though the bacon-type breed was recognized only in 1967. The pigs are adapted to local conditions. As far back as 1980, with the aim to improve the quality of carcasses of Lithuanian White pigs, two of the five former populations have been improved with immigration of Swedish Yorkshire and German Landrace. Since 2003, all five populations have been joined and are using Large White boars. This situation encouraged conservation of the old genotype of the Lithuanian White pig breed. Therefore, nowadays, there are two populations of Lithuanian White pigs: improved open population using Large White boars and minimal closed population for the conservation of the original Lithuanian White old genotype.

The sequence of conservation of Lithuanian critical breeds was conducted by:

- search of remaining animals and formation of rescue herds and maintenance of the genealogical structure within these closed herds,
- complete investigation of biological and farming qualities,
- preparation of principles and systems for evaluation of animal from Lithuanian indigenous wattle and Lithuanian White (old genotype) breeds,
- search for possibilities of their introduction into the general breeding system and for their wider use.



Results and Discussion

The activities for conservation of these breeds were launched respectively in 1994 and 1999, and after formation closed herds for long term breeding, complete their extinction has been prevented. Nowadays both these breeds are considered as critical – maintained. Effective population size N_e of Lithuanian indigenous wattle and Lithuanian White pigs is respectively 32.6 and 33.3. Both breeds experienced bottleneck effect. Despite the relatively low number of founders at the beginning of conservation, the use of planned breeding scheme demonstrates quite efficient genetic management but the population sizes of the conserved breeds did not increase because these pigs, after implementation of the carcass grading system in the abattoirs, are not economically compatible. Daily gain and carcass quality of the pigs from the open Lithuanian White population is higher (backfat about 14mm, lean meat content – 56.7%) in comparison with the pigs of the old genotype (backfat about 18 mm, lean meat content – 52.6%) and indigenous wattle pigs (backfat about 21-24 mm, lean meat content – 47-49%). Therefore, these pigs are only in the conservation herds with the specific care. Small farmers show some interest to grow these pigs as slaughter pigs for their own needs but they do not show any interest to form herds for conservation. Small EU subsidies (65€) in comparison with high costs for maintenance and low income promote neither keeping of the sows and, especially, the boars, nor their purebred breeding.

