

Refinement of the Polish Merino for fat lamb production from the subsidiaries of Polish Agricultural Property Agency Summary

In line with the sheep breeding programme in the subsidiaries of Polish Agricultural Property Agency (PAPA) dated 18th March 2004, twenty German Mutton Merino (GMM) rams were imported from Germany to Poland in order to introduce the aforementioned programme's ideas. The Polish Merino is kept in five subsidiaries of PAPA, i.e. Dobrzyniewo, Garzyn, Lubiana, Żołędnica and Żydowo. Each one introduced four GMM rams and commenced the process of mating with Polish Merino ewes. The supervisory team of PAPA had obtained the relevant authorisation from the Ministry of Agriculture and Rural Development in order to record in the pedigree book that the acquired offspring were 50% of the Polish Merino. The aim of the project was to dilute the relatedness of the offspring. The research examined the effectiveness of mating in terms of livestock traits and slaughter value as well as the quality of meat of the Polish Merino and their offspring resulting from the mating with the GMM. In all the flocks the level of the prolificacy index was compliant with the breed pattern of the Polish Merino. The remaining livestock traits show that the living conditions of the sheep should be improved. The livestock traits of two-year-old ewes who mated with the GMM proved to be the same as the livestock traits of the ones who mated with the Polish Merino with exception of the Garzyn flock. The mating of the Polish Merino with the GMM had no impact on the speed of size and mass increase of lambs. The slaughter analysis and the assessment of carcass quality showed no impact of genotype on the meat production traits. Each flock scored differently in terms of market category, slaughter value and the quality of meat due to a significant impact of the environmental factors. The Genotype-environment interaction analysis showed that the environment where the rams were kept had an impact on their production traits. This information enables further research into the refinement of the Polish Merino flocks in the subsidiaries of PAPA.

KEY WORDS: sheep, Polish Merino, German Mutton Merino, crossbreds, livestock traits