

Reproductive efficiency and lamb body weight in sheep breeds raised in Poland

Summary

The aim of the study was to characterize reproductive indicators in sheep, i.e. fertility, prolificacy, rearing of lambs and reproductive performance (expressed as the ratio of the number of reared lambs to the number of ewes in the flock), as well as the body weight of their offspring, as indicators of meat performance. The study included breeds and varieties of sheep subject to use value assessment in 2011-2015. The mean values for the reproductive indicators in this period were as follows (%): fertility – 96.19, prolificacy – 133.35, rearing of lambs – 88.25 and reproductive performance – 112.89. The average weight of rams, ewes and litters, respectively, at the age of 56 days was (kg) 19.05, 18.52 and 23.11 for heavy breeds and varieties and 9.52, 9.14 and 11.10 for light breeds. The corresponding figures for light breeds at the age of 30 days were 10.06, 9.85 and 11.98. In most of the breeds and varieties, reproduction efficiency, as measured by reproductive performance, was low. This was mainly due to reduced prolificacy and high losses of lambs, as the fertility indicators were good. In terms of reproductive performance, the Romanowska, East Friesian and Olkuska breeds stood out, with values of 168.34%, 155.66% and 143.04%, respectively, while the lowest value for this parameter was observed for the Leine breed – 72.42%. As regards litter weight, as an indicator of the efficiency of livestock production taking into account reproductive performance and the growth rate of lambs, three breeds stood out: East Friesian – 34.92 kg, Romanowska – 27.06 kg and Olkuska – 26.94 kg. It is interesting to note that meat breeds, i.e. Île-de-France, Blackface, Suffolk, Berrichon du Cher, Charollais and Polish White-headed Mutton, achieved below-average results, with a mean litter weight of 21.05 kg. In conclusion, in terms of both breeding traits and meat performance, assessed on the basis of lamb body weight, the potential of many sheep breeds and varieties in Poland is not fully exploited.

KEY WORDS: sheep, reproductive indicators, body weight of lambs