

A. Ye. Pochukalin, Yu. M. Reznikova, S. V. Priyma, O. V. Rizun Breeding achievement of beef cattle-breeding of Ukraine: Znamensk intrabreed type of Polessian Beef breed

The aim of our research was to conduct a retrospective analysis and to study the current state of the subjects breeding Znamensk intrabreed type of Polessian Beef breed and to assess main economically useful traits and genealogical structure.

Material and methods. Research of productive and economic activity of breeding farms has been carried out based on the electronic database of State Register of Breeding Subjects in Livestock for 2003-2016. Analysis of the number of breeding animals, distribution of cows by age, animals' live weight, milk (as a calf's live weight at the age of 7 months) and reproductive abilities has been performed based on breeding account (form №7-myas) for 2010, 2012, 2014, 2016.

Results of research. The most breeding farms meet the minimum requirements of the target standard of Znamensk intrabreed type on the main quantitative traits of animal productivity. "Kolos" ALLC, Kirovograd region and «Agrikor Holding" LLC, Chernihiv region were the most numerous. High realization of genetic potential of meat productivity (daily gain of live weight above 1000 g) was observed at animals in «Kolos» ALLC and «Sharivske» PE. There have been sold 222 head of the breeding youngsters for 13 years.

The greatest number of animals was observed according to annual reports in 2012. It can be explained by the number of subjects conducting the selection and breeding work with the intrabreed type. The share of cows did not exceed 43.0% (2012), bull – 1.5% (2010), calves of different gender and age groups – 66.1% (2014). 85.5% of all the available breeding stock (5369 head) was approved and 67.8% corresponded to elite and elite-record classes.

Live weight of the approved cows has increased by 7.5% at the age of 3 years, 9.7% at the age of 4 years and 11.1% at the age of 5 years since 2010. Differential for live weight of cows at the age of 4 and 5 years was 9 and 11 kg on the average.

There was adequate number of animals, live weight of which was in a wide range, that is from 551 kg and above. So, such cows were 111 head in 2010 and 234 head in 2016. These cows realise genetic makings of high productivity sufficiently and they are material for selecting the best representatives of Znamensk intrabreed type.

Gradual increase of milk ability was noted from 2010 till 2016 after the first calving by 13.7%, the second – 12.2, the third – 11.7, and by 11.9% on average. Differential for milk ability of cows was 5 kg (2010, 2012), 11 kg (2014) and 2 kg (2016) on average.

Average calving interval of cows for the period are oscillatory in nature and didn't exceed 420 days during 2010-2014. Gradual increase of age at first calving of heifers by 101 days was observed from 2010 to 2014 with reduction to 824 days for next two years. It should be noted violation of course of cows' and heifers' calvings, it was 29 and 36 cases in 2010 and 2012 respectively, whereas in subsequent periods, these values were significantly lower or non-existent. It may indicate a high level of veterinary services and compliance of technologies of feeding and management.

Efficiency of beef cattle-breeding depends on the growing of calves. Analysis of the results shows that live weight of calves at the age of 210 days has increased in each investigational year. The values are oscillatory in nature between 8 and 15 months. Sexual dimorphism was confirmed and proven – bull-calves had higher growth rate compared to heifers.

Significant reduction in the livestock number of the approved bloodlines and their absence in some cases (Radyst 113 and Darovanyi 400) was observed. This is due to the increased share of Polessian Beef and Charolais bulls used for reproduction. There were 139 cows, 27 heifers and 13 calves in group belonging to Polessian Beef and Charolais bloodlines in 2012, whereas in 2014, 281, 193 and 18 respectively, representing 81% of the total population.

Conclusions. The research revealed that livestock of the type were concentrated in «Agrikor Holding» breeding farm, Pryluky district, Chernihiv region with a total of 922 head, including 348 cows. Productivity of animals by the valuation results at the beginning of 2016 (live weight, milk ability, reproduction) significantly increased. Current genealogical structure of Znamensk intrabreed type was represented by bulls belonging to Polessian Beef and Charolais bloodlines, share of which was 81%.

Keywords: Znamensk intrabreed type, live weight, milk ability, bloodlines, families, maternal effect