

***Yu. M. Reznikova. Comparative characteristics of Ukrainian Grey cattle and some specialized beef breeds by economically valuable traits***

For the last years significant reduction of breeding farms has led to decrease in the number of populations and these trends are particularly concerning beef livestock, competitiveness of which is lower compared with dairy cattle-breeding. There is observed to decrease not only number of indigenous populations, which aren't able to compete on productivity, but also native specialized cattle. So, population of Ukrainian Beef breed declined 1,5 times (8 breeding farms, 2733 head, 1135 cows on January 1, 2010 vs. 3, 1824, 665 respectively on January 1, 2016), Polessian Beef breed – 2,2 times (27 breeding farms, 8904 head, 3705 cows on January 1, 2010 vs. 10, 4113, 2157 respectively on January 1, 2016), Ukrainian Grey – 1,2 times (4 breeding farms, 1075 head, 437 cows on January 1, 2010 vs. 2, 903, 341 respectively on January 1, 2016). The reality of the recent years indicates that some native beef cattle breeds can be considered as local and as needing conservation in the nearest future.

Thereby, **the aim of our work** was to study dynamics of growth, productivity and reproductive ability of breeding stock of Ukrainian Grey breed compared with Ukrainian Beef, Polessian Beef having been created with its participation, and Blonde d'Aquitaine – a foreign specialized beef breed being bred under the same conditions.

**Materials and methods.** The investigations were carried out at the herds of SE «Polyvanivka» Research Farm», Magdalynivka district, Dnipropetrovsk region and AF «Klen», Zhovkva district, Lviv region at breeding females of Ukrainian Grey (n = 279), Blonde d'Aquitaine (n = 42), Ukrainian Beef (n = 159) and Polessian Beef (n = 100) breeds. The indicators of growth rate, reproduction, and productivity were analysed based on data of zootechnical primary account registered at breeding farms.

**Results of research.** Comparison of averages by a group found that the Ukrainian Grey animals were characterized by slightly lower figures of live weight at all the investigated ages. Under the same growing conditions, live weight of the Ukrainian Grey animals at the age of weaning was 14 kg ( $P < 0,001$ ) less compared with the Ukrainian specialized beef breed (Ukrainian Beef) and by 19 kg ( $P < 0,001$ ) less compared with the French specialized beef cattle (Blonde d'Aquitaine). The results are quite predictable that the indigenous breed isn't able to compete with specialized beef cattle.

The Ukrainian Grey animals were characterized by lower figures of average daily gain of live weight almost for all the investigated age periods with the greatest difference from birth to weaning – 56 g ( $P < 0,001$ ) compared with Ukrainian Beef and 79 g ( $P < 0,001$ ) compared with Blonde d'Aquitaine. The Ukrainian Grey heifers at the age from 1 to 2 years were characterized by almost the same growth rate as Ukrainian Beef and Polessian Beef contemporaries and predominated slightly over Blonde d'Aquitaine.

The greatest difference was observed between milk ability of the Ukrainian Grey and Polessian Beef cows within 15-21 kg ( $P < 0,001$ ). Predominance of cows

of other studied breeds over Ukrainian Grey was 13 kg ( $P < 0,001$ ) after the 1<sup>st</sup> calving, 14-19 kg ( $P < 0,001$ ) after the 2<sup>nd</sup> calving and 11-15 kg ( $P < 0,001$ ) after the 3<sup>rd</sup> calving. Reliable differences in calving interval weren't revealed between Ukrainian Grey and Ukrainian Beef, Blonde d'Aquitaine (except for calving interval between the 1<sup>st</sup>-2<sup>nd</sup> calving).

Comparative analysis of age repeatability of live weight revealed that gradual reduction of repeatability coefficient with each distance from the age of 210 days or 1 year was characterized for the animals, kept in "Polyvanivka" breeding farm. So, the highest age repeatability was observed at adjacent periods – 210 days-1 year, 2-3 years. Higher levels of age repeatability of live weight were found at the Polessian Beef and Blonde d'Aquitaine animals.

The results of research of Ukrainian Grey cows' productivity should not be assessed pessimistically, because productivity for indigenous and local breeds has never been the main traits in their preservation. It is studied to monitor their state.

**Conclusions.** So, indigenous Ukrainian Grey cattle are inferior to all the investigated beef breeds by productivity that caused by its triple-purpose specialization with working ability at the first place in the past. The significant high and middle levels of age repeatability indicate the possibility of effective selection of Polessian Beef and Blonde d'Aquitaine heifers on live weight at weaning (210 days), whereas for Ukrainian Grey and Ukrainian Beef animals at 1-years' age. No reliable correlation of live weight with milk ability was found at the Ukrainian Grey, Polessian Beef, and Blonde d'Aquitaine cows and inverse correlation of live weight at 4-years' age with milk ability after the 2<sup>nd</sup> calving – at the Ukrainian Beef cows.

**Keywords:** beef cattle-breeding, breed, live weight, milk ability, growth rate, reproductive ability, correlation, age repeatability