

## FORMATION OF MILK PRODUCTION OF BLACK-AND-WHITE CATTLE IN THE WESTERN REGION OF UKRAINE

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The main aim was to investigate the formation of milk productivity of black-and-white cattle. Studies conducted on black-and-white cattle in the “Milk River” farm in the Sokal and Brody offices breeding reproducers “Breeder” Lviv region and plant breeding “Yamnytsya” Ivano-Frankivsk region. Milk productivity was studied using zootechnical materials accounting. The force of influence on performance metrics was calculated by Single-factor disperse analysis method. The results of research were treated by variation statistics.

Black-and-white cattle in the western region of Ukraine are characterized by high milk productivity throughout all studied lactation. In the firstborn, depending on the farm, milk productivity was from 4592 to 6032 kg, the fat content in milk — from 3.73 to 3.86 %. The milk productivity of the cows increased to the 3<sup>rd</sup>–4<sup>th</sup> lactation, and then gradually decreases. In experimental farms there were 2.3 to 14.7 % of cows with milk productivity during better lactation of 8000 kg and more. The coefficients of the variability were 13.3–27.4; the fat content in milk was 3.1–6.4, milk fat — 13.8–26.9 %, the coefficient of repeatability of milk productivity — 0.404–0.753, the fat content in milk — 0.242–0.781, the relative variability and the content of fat in milk — 0.282–0.254.

The formation of milk productivity of the cows was influenced by the intensity of their weight and linear growth during the period of growth, as well as the live weight after the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> calving and the size of the body of the cows after first calving. The correlative variability of the live weight of animals during the period of growth and feeding was 0.018–0.604, the body measurements during the period of cultivation and fertilization — 0.170–0.458, live weight after the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> palates, and infusion — 0.413–0.551, the body measurements of the foetuses and infusion — 0.297–0.478. The most significant impact on the future dairy productivity of the cows was made by their live weight at the age of 18 months and after the first calving, high-altitude measures, the circumference of the chest on the shoulder blades, and the skid length of the trunk, and the smallest — the live weight at birth and the circumference of the heel.

The influence of the lines on yield of milk, depending of the farm and lactation, was 9.6–39.0, the fat content of milk — 2.9–32.2 and the yield of milk fat — 9.7–38.8 %, the strength father’s influence — 6.9–49.3; 7.4–68.4 and 6.8–51.0 % respectively. The coefficients of inheritance on the path along the “mother-daughter”, depending of the farm and lactation, were within 0.034–0.618, fatty milk — within 0.032–0.762.

A black-and-white cattle in the western region of Ukraine is characterized by high milk productivity. The formation of milk productivity of the cows was influenced by the intensity of their weight and linear growth during the period of growth, as well as the live weight after the first, second and third calving and the size of the body of the cows after first calving. Significant influence on the milk productivity of cows was caused by their linear affiliation and parentage.

**Keywords:** BLACK-WHITE CATTLE, MILK PRODUCTIVITY, CORRELATION COEFFICIENTS, INHERITANCE AND REPEATABILITY, POWER OF INFLUENCE