

**V. DANKIV, O. DYACHENKO, M. KOHUT**  
Institute of Agriculture of Carpathian Region of NAAS

**PRODUCTIVITY OF THE FIRST-CALF COWS  
SIMMENTAL COMBINED (MILK-MEAT) BREED  
DEPENDING FROM ORIGIN FOR PARENT**

Based on the results of previous studies, a number of authors found that the increase in the productivity of dairy cows significantly depends on the qualitative selection, evaluation and intensive use of pedigree bulls by breeding value both for milk yield and exterior type. The correct selection of bull for reproduction of the herd is an important and responsible measure, since the heredity of the breeders in the genetic improvement of breeds is extremely high, especially at the present stage of breeding. It was established that the relative influence of pedigree bulls on the economically useful signs of cows reaches 90–98 %. Therefore, when creating high-yielding herds, it is advisable to use bulls whose daughters are characterized by high milk productivity, early-maturing and conform to the parameters of body structure.

The research was carried out in the conditions of the breeding farm „Litynske” in Drohobych district Lviv region. The object of research was the first-calf cows of Simmental breed of the milk and meat production (n = 45), which originated from two bulls, in particular: Imago 9727 (Redad’s line 711620016,77) German breeding and Obriy 938 (Straff’s line 120081,78) Austrian breeding.

In the breeding farm „Litynske” of Drohobych district Lviv region, pure breeding of cattle Simmental breed is carried out with the estimation of pedigree bulls in quality of descendants for their effective use in the breeding process. In order to improve the genealogical structure of the herd of selected cows and heifers of the pairing age, they were inseminated with pure-breeding elite bulls of the Germanic breeding Imago 9727 and the Obriy 938 of Austrian breeding.

According to the estimation of milk productivity 80 % the first-calf cows of the farm had hopes of more than 4000 kg of milk. In the herd there are 6 first-calf cows with productivity of over 5000 kg of milk. In the genealogical structure of the herd, the largest proportion of the total number of first-calf cows is (78 %) are the daughter of bull Imago 9727, the daughters of bull Obriy 938 – 22 %.

The conducted researches found that the formation and manifestation of the signs of milk productivity of cows had a significant impact on their parents and their affiliation to the line. The analysis of the data shows that the higher milk productivity is characterized daughters of the bull Imago 9727. Thus, the hope of the first-calf cows was 4392 kg of milk. In the first-calf cows of the comparative group, the marked indicator was lower by 206 kg, or 4,7 % (daughters Obriy 938), with  $P < 0,05$ . The level of fat content in milk in the studied groups ranged in limits 3,9–4,0 %.

The intergroup difference was established for the live weight of the first-calf cows of different origins. The highest proof have the daughters of bull Imago 9727 (464 kg). The live weight of all studied the first-calf cows meets the breed standard.

In breeding and herd work with cattle, the assessment and selection of animals by external forms and proportions of the body structure take the prominent place. This is due to the established in practical breeding and many investigations the link between the characteristics of animals exteriors and their economic characteristics, strength, technological capacity and the duration of productive use.

Most scientists point out that high-yield cows are usually massive, voluminous, well-developed animals, have a pronounced type, developed mammary gland and 10–15 % higher than the average live weight of herds.

The structure of the body of the first-born cows, which originated from different pedigree bulls and belonged to different lines was studied. It was found that for most of the investigated dimensions the daughters of the bull Imago 937169727 were highly prevailing the analogues that derived from the bull Obriy 938. Thus, the difference in height at the withers was 7,1 cm at ( $P < 0,001$ ), for the depth of breast – 3,0 cm ( $P < 0,001$ ), by circumference of chest 8,5 cm ( $P < 0,001$ ).

In general, according to the body structure, the experimental animals met the target parameters of the exterior signs of desired type. All first-calf cows of the investigated farm have solid, dense constitution, which indicates their high milk productivity.