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CROSSING OF THE SIMMENTAL CATTLE WITH THE CHAROLAIS AND CHIANINA BREEDS. PART II. MILCH COW PRODUCTIVITY

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The lifelong productivity cows of the crossbreeding of Simmental females and Charolais and Chianina bulls are studied. It is set, that crossbreeding of Simmental and Charolais breeds do not brings to the increase of the productivity of cows. Cross animals have a decline of calf weaning weight and safety, and on the products got for period of exploitation, they for certain do not differ from pure Simmental breed. The results of the Simmental and Chianina breeds cross are the substantial decline of the cow's productivity. This cross variant worsens of first calving age on 4 months, reduces calf weaning weight and safety and lifelong of cows, increases a between calving period, amount of abortions and stillborn calf. Lifelong calf weaning weight of Simmental-Chianina cross cows there is less than for Simmental cows in 1.8.

Beef cattle, crossbreeding, Simmental Breed, Charolais Breed, Chianina Breed

Summary

The effect of using of multi-breed commercial crossing is primarily dependent on the cow productivity, so it is necessary to check the reference breeds for compatibility before its implementation, taking into account the productivity of cross-bred dams for a long period. The goal of study was to examine the productivity of cross-bred cows resulted from crossing Simmental dams with Charolais and Chianina breeders.

The study was carried out based on the materials on breeding of the Ukrainian beef strain by Agricultural Limited Liability Company "Volia", located

at Zolotoniskyi area, Cherkasy region. Three groups of animals were selected for studying. The first group (control one) was represented by the purebred Simmental heifers and cows (S), the second one – by the cross-breeds of Simmentals with Charolais (Ch 1/2 S 1/2), the third one – by the cross-breeds with Chianina breed (C 1/2 S 1/2). We studied reproductive qualities, milking capacity and results of the lifetime operation of the cows in selected groups. The studied livestock was held by the beef cattle breeding technology - at the pasture in summer and at the specialized complex in winter. Until the age of 6-8 months the calves were grown by sucking. Calving took place throughout the year with a shift of their main part to spring.

Cross-bred first-borns from the Charolais parents did not differ from the purebred Simmentals for the most part of productivity features. They have a slightly smaller number of abortions and stillborn calves. They also had a smaller percentage of cull calves.

Statistically a significant difference between the cross-breeds of Ch 1/2 S 1/2 and the purebred Simmentals was only in milking capacity. The calves weaned from cross-bred cows were left behind by purebred yield in body weight by 11 kg (P> 0.95).

Cross-bred first-borns C 1/2 S 1/2 were left behind not only by purebred peers for all considered characters, but also by cross-breeds of Ch 1/2 S 1/2. They had the first calving 4 months later (P> 0.999) and there were by 6.9% more abortions and stillborn calves. The live weight of their calves at the weaning time was by 38 kg (P> 0.999) and the survival by 19.6% (P> 0.99;) less than the purebred cows had. The first-borns of the third group had the 78-days longer period of the next calving and the share of the cull calves was higher by 19.9% (P> 0.999). The deterioration of first-born productivity features is probably associated with poor adaptation of cross-breeds of C 1/2 S 1/2 to the operating conditions in Ukraine and with cows growing bigger, that led to increasing of the age they reach maturity.

In general, throughout the period of use, the purebred Simmental cows had the highest productivity. They took precedence over the cross-breeds on the lifetime milking capacity, in particular per one day of life.

Cross-breeds of a second group were significantly inferior to purebred cows in milking capacity and preservation of sucking calves. Although they showed a trend to increase the life expectancy and the number of resulted and weaned yield, crossing of the Simmentals with the Charolais breed does not lead to the improvement of lifetime cow productivity.

Crossing of the Simmentals with Chianinas significantly worsened the productivity of cows. During the operation they gave one calf less (P> 0.99), the yield liveability was worse by 18.6% (P> 0.999) and the difference in the number of weaned yield was 1.5 animals (P> 0.999). Cross-breeds with Chianina breed had lower milking capacity and life, a longer period between calving and more abortions and stillborn calves. As a result, their lifetime milking capacity was 1.8 times lower than the Simmental cows had. These findings confirm the absolute impracticability of the Chianina cows at the interim stages of multi-breed commercial crossing with Simmentals. Therefore, the use of the Charolais breed is not effective as well because it does not lead to increase in productivity of breeding stock.

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