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# EFFECTIVENESS OF CROSSING OF THE ABERDEEN ANGUS AND CHAROLAIS BREEDS

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*Studied the productivity Angus-Charolais crossbreeds heifers and cows . It was found that crossbreeds animals have an advantage over purebred peers on body weight and body measurements, they have more time productive use and worse reproductive traits.*

***Beef cattle breeding, crossbreeding, Aberdeen Angus, Charolais, heifers, cows.***

Aberdeen Angus breed is leading by number among imported beef strains in Ukraine as far as it is unequalled in beef quality, reproducibility and calving ease. But under intensive beef production Aberdeen Angus animals are non-competitive as they slow the growth and are intensively accumulating fat. So commercial crossbreeding permits to enhance the efficiency of use of beef strains at commercial farms. Aberdeen Angus breed is regarded as female parent whose rams are crossed with bulls of male parents and cross-bred heifers are left for further use. The leader among male parents by frequency of use in Ukraine is the Charolais breed. Crossing of these breeds contributes to the enhancement of beef production of young stock. The goal of study is to examine the practicability of the further use of the cross-bred heifers.

The study was carried out based on breeding records for the herd of Aberdeen Angus cattle, presented by a separated subdivision of NULES of Ukraine “Education and Research Farm “Vorzel”.

We have studied the productivity of purebred Aberdeen Angus animals (15 animals) and cross-bred ones resulted from conception of Aberdeen Angus females by Charolais bull (4 animals). We have studied the live weight, linear growth, reproducibility, milking capacity and results of lifetime use of heifers and cows.

It has been found that crossing contributes to acceleration of growth of the offspring already in fetal life. Newborn cross-bred heifers were heavier than purebred ones by 54%. Then they were superior to their peers in all age periods (except for the age of 15 months). Cross-bred at the age of 6 years were almost 100 kg heavier than purebred Aberdeen Angus cows. Cross-bred animals were superior to purebred cows in withers height by `3% (P>0,999), in oblique back length 10% (P>0,999) and chest girth by 7% (P>0,99).

Fist-born animals in both groups had good characteristics of female parent and survival of calves before weaning was 100%. There was no significant difference in main productivity indicators of purebred and cross-bred first-born animals. There as a significant difference in the live weight of new-born calves. Thus the weight of new-born bulls born from cross-bred cows was by 11 kg higher than that of purebred ones that is an evidence of their potential advantage under the further growth speed. Besides, the age of the first calving in cross-bred animals was by 1.3 months later.

The analysis of the lifetime cow performance showed that crossing of the Aberdeen Angus and Charolais breeds contributes to increase of the milking capacity by 12% (P>0,99) and leads to extension of the interval between calving by 45 days (P>0,95). There was no significant difference in other characteristics of the lifetime productivity, but some specific trends were found. Thus, cross-bred cows had the life duration by 1.3 years and the period of effective use by 415 days longer. Due to the longer period of use they gave by 0.4 calves more. The survival of animal yield from cross-bred cows was by 9.5% lower. For this reason, they had by 0.3 calves weaned less for the period of effective use. In general the intensity of effective use of purebred Aberdeen Angus cows was higher than that of cross-bred animals that is confirmed by 5% higher lifetime milking capacity per one day of

living. Thus, despite the increase of beef production level of young stock, there were no reliable advantages of using cross-bred cows found during the commercial crossing of Aberdeen Angus dams with Charolais bulls. According to the findings, it is the most practicable to use these breeds for two-way commercial crossing and sale of cross-bred young animals for meat. The further use of cross-bred cows is possible, but it gives no significant advantage to commercial farms growing and selling animals after weaning.

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