

**To the problem of selection on intrabreed heterosis**

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The use of inbreeding in mating of inbred parents resulted in consolidation and differentiation of animals according to their hereditary qualities, which promoted the manifestation of intrabreed heterosis in milk-yield and fat content in  $F_1$  and heterosis consolidation and development in  $F_2$ .

The heterosis manifestation is influenced by the quality and position of the common ancestor in pedigree, by selection of parents and other factors. Due to these factors inbreeding has become a method of control and increase of selection efficiency.

**Efficiency of heterogenous selection in the improvement of cattle breed**

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The paper presents the data on the results of heterogenous selection in improving the cattle breeds. The milk yield as a result of matings between *Red Gorbatovskaya* and *Red Danish* animals was as follows : for the first lactation – 3.348 kg, for the second one – 3.934 kg, and for the third one – 4.035 kg, the fat content being from 4 p. 100 to 4.04 p. 100 which exceeds the yield of the contemporaries by 839 kg, 1.041 kg and 1.272 kg respectively, the fat content being the same. As a result of the matings between the animals of the *Kostromskaya* breed and the *Swiss* one (of the American origin) the milk yield of  $F_1$  cows for the first lactation amounted to 4.127 kg and was 522 higher than that of the contemporaries.

**Results of alternate crossing of Polish black and white cattle with Holstein, Friesian and Finnish Ayrshire bulls**

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Crossing of local *Black and White* cattle with *Holstein-Friesian (hf)* and *Ayrshire (ay)* bulls proved the usefulness of both breeds to create a type of cattle that is characterized by high productive parameters. Up to the present it was obtained  $F_1$ . Fattening bulls  $F_1ay$  had worse daily weight gain than  $F_1hf$  by 11 p. 100, worse carcass dressing by 4.2 p. 100, but better feed utilization. During 305 days of lactation heifers  $F_1ay$  produced 3.776 kg of milk containing 3.96 p. 100 of fat, 3.19 p. 100 of protein and 12.5 p. 100 of dry matter, while  $F_1hf$  4.002 ; 3.67 ; 3.05 and 11.72 respectively.