BA 10 and BA 11, allotypes alpha- and beta-globulins of blood serum in cattle

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Two new antigenic characters of blood serum proteins in cattle designated tentatively BA 10 and BA 11 have been detected and characterized. The characters mentioned were identified by using precipitins obtained as a result of immunization of cattle. BA 10 is an alpha-globulins marker of a molecular weight about 70 000-160 000 and BA 11 of beta-globulins of a molecular weight about 160 000. Results of investigations indicate that the identified characters are determined by autosomal genes from different pairs of chromosomes.

Alternatives for breeding strategy in Hungary

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Since 1972, the *Hungarian-Fleckvieh* cattle of dual purpose has been gradually replaced by dairy breeds. The stock specialized for milk production was mainly developed by *Holstein-Frisian* cross-breeding and to a less degree by combinative cross-breeding with *Holstein* and *Danish Jersey* breeds. According to the official milkrecording the production of the cross-bred stocks is 25 to 40 p. 100 over that of the *Hungarian-Fleckvieh* breed. As a result of the cross-breeding work, the average production per cow has been increased by 31 p. 100 between 1976 and 1980. Corresponding figures for the state farms are 2 942 and 4 854 kg per year for 1976 and 1980, respectively (n = 100 393). The stagnating values of the progeny tests of the *Hungarian-Fleckvieh* and those of the *Simmental* bulls also indicate the difficulties to surpass the production level of around 3 000 kg obtained for the dual purpose *Hungarian-Fleckvieh* breed.

Heritability of fattening performance traits and selected body measurements in *Czech Pied* bulls

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In the group of young bulls of the *Czech Pied* cattle (n = 1 179) the main statistical characteristics and the heritability values of the fattening performance characters and of the body measurements were estimated. It follows that the heritability coefficients of the average daily gain and of the food consumption per 1 kg gain are of middle values ($h^2 = 0.31 - 0.50$). For body measurements at 300 days of age of the animals heritability coefficients between 0.20-0.72 were found. The heritabilities of daily gain estimated for a longer time period showed higher values ; they are therefore more useful for selection.