Characteristics of genetic fund of *Caucasian* breed of sheep

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It has been established that antigens Aa, Ab, Bg, Bd, Bh, Be, F_3, Cb, F_6, F_{32}, Mb, R, O, Da, F_{30}, F_{41}, PLB-17, PLB-25/1 and PLB-25/2 prevail in *Caucasian* sheep (frequency 36.7-91 p. 100) and antigens F_5 and F_{16} are completely absent. Of highest genetic frequency were If^A (0.433), Tf^C (0.437), Hb^B (0.883), Ca^S (0.984), AEs^B (0.543), Ap^B (0.549), Al^D (0.527), and lowest were Tf^D (0.031), Tf^E (0.004), Ap^A (0.004), Al^S (0.045). Animals with Tf AC (39.0 p. 100), Hb BB (78.1 p. 100), Ca SS (97.6 p. 100), Ap BC (43.3 p. 100), Al DD (33.0 p. 100), Al DF (34.8 p. 100), prevailed. Sheep with Tf EE were not found.

Genetic distance for serum protein complex of some particular local cattle breeds of Eastern Europe

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Genetic distance index was used as a measure of polymorphism difference which excluded possible relationship of transferrin, ceruloplasmin and amilase I loci. On the basis of distance values the polymorphism clines of *Suksunsky* cattle have been established which resemble those of *Red cattle* of Western Europe. The isolation of the *Istobenskaya* breed as compared to local cattle populations of the areas adjacent to the Urals has been revealed. An indirect influence of the Asian component on the determination of polymorphism was found to be less than of the European component.

Gene pool of *Black-and-white* cattle breeds for polymorphous systems and milk performance

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The gene pool of five breeds of black-and-white cattle was studied by polymorphous protein systems and their relationship with milk performance was established. Specific aspects of breed genetic structure and associations between complex genotype combinations of polymorphous proteins and milk performance data were revealed.