

INFLUENCE OF HOLSTEIN GENES ON BLACK AND WHITE BULLS BREEDING VALUE

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Summary. In 2001, Lithuania introduced the Animal Model for estimating genetic evaluations for bulls and cows in the Lithuanian Black and White and Lithuanian Red populations.

Single trait-multi-lactation-BLUP-animal model includes following traits: milk (kg), fat (kg), protein (kg), fat (%), protein (%). Records of 1st, 2nd and 3rd lactation are included in the evaluation. For every production trait the first lactation is divided into two parts (1st lactation, 1-90 days and 91-350 days) and treated as genetically different traits.

Environmental effects in the model are: herd – year – season.

The breeding value index exceeding 100 was determined in: 42.3% of bulls according to the total merit index; 32% – according to the breeding values for milk; 40.7% – according to the breeding values for milk fat; 41.9% – according to the breeding values for milk protein.

Coefficients of phenotypical correlations between the breeding values and Holstein genes varied from 0.36 (with milk fat) to 0.48 (with milk).

The most of top bulls had 73.25-90.5% Holstein genes.

Keywords: holstein genes, BLUP method, breeding values.