GENETIC CORRELATIONS BETWEEN THE LENGTH OF PRODUCTIVE LIFE AND EXTERIOR IN LITHUANIAN DAIRY CATTLE

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Summary. The objective of this study was to investigate genetic correlations between body size composite (exterior), udder traits and the length of productive life in Lithuanian dairy cattle. The length of productive life was defined as number of days from the first calving to culling when cow leaves the herd. Research was performed by using survival analysis techniques, applying a Weibull model for productive life of cows. The analysis was based on 232,140 Lithuanian Black-and-White, 103,541 Red and Red-and-White breed cows registered in Lithuanian Center of Agri-Information and Rural Business between years 1996 and 2007. Genetic correlations between length of productive life and body size dimensions of 6,120 Black-and-White, 2,756 Red and Red-and-White cows were calculated. The genetic correlations between length of productive life and body evaluations were positive for height, stoutness and dairy type. The genetic correlations between length of productive life and rump angle were negative in all breeds of cows. The genetic correlations between length of productive life and rear leg form, hoof height and hoof tarsus angle were positive. In all cows populations were determined positive genetic relationships between length of productive life and udder cleft, depth and teat length. All the effects analyzed were highly statistically significant (P<0.0001) and had a influence on the productive life of a cow. In Lithuanian dairy cattle populiation selection of cows according to height, stoutness and dairy type, rump angle, leg form, hoof height and hoof tarsus angle, udder cleft and depth are particularly essential.

Key words**:** length of productive life, genetic evalution, correlation, cows.