INFLUENCE OF CERTAIN FACTORS ON GENETIC AND MORPHOLOGICAL INDICATORS AND LEVEL OF UDDER ABATEMENT OF COWS

G. D. Ilyashenko

Kirovograd State Agricultural Experiment Station of NAAS
2, Central Str., Sozonivka, Kirovohrad region, 27602, Ukraine

The study was conducted on first calving cows of Ukrainian-red (n=23) and Ukrainian black and white (n=17) dairy breeds. Studied intergroup differentiation on soundings and indices of udder between half-sisters of the origin of its father and the impact of certain genetic factors (belonging to the breed, by conventional inheritance of Holstein breed, the origin of its father) on the morphological level of indicators and udder abatement of cow. The impact of these genetic factors were assessed by comparison of group averages and single-factor analysis of variance.

Discovered intergroup differentiation on soundings and indices udder between half-sister the origin of its father. So, Briko-bull’s 10830234 daughters observed higher soundings before milking on length and height from the floor to the bottom of the udder in comparison with Travel 67765 and Monro-bull’s 5690477 daughters. The difference was 1,4±1,02 cm (td=1,37) and 6,6±2,73 cm (td=2,42, P<0,05) and 0,8±0,90 cm (td=0,89) and 4,4±1,63 cm (td=2,70, P<0,05) respectively. Meanwhile, Monroe bull’s 5690477 daughters were significantly superior then Travel-bull’s 67765 daughters in udder circumference 10,1±3,50 (td=2,89, P<0,05), also, the advantage of indices relative and conditional value were significant (P<0,05) to.

In groups of half-sisters we also found different levels of udder abatement. Thus of the Travel-bull’s 67765 abatement daughters by soundings of udder width in comparison with Briko-bull’s 10830234 daughters were higher in 7,1±1,40 % (td=5,07, P<0,001), depth – 1,6±3,03 % (td=0,52). However, Briko-bull’s 10830234 daughters had significantly higher of abatement in length soundings, Monroe bull’s 5690477 daughters – udder circumference.

The impact of conditional inheritance on variability measurements before milking ranged from 2 to 11 %, after milking from 3 to 14 %, udder indices respectively from 2 to 12 % and from 4 to 11 %, on the udder abatement by soundings on the impact these factors was also negligible too and ranged from 4 to 10 %. The origin of its father makes 34 % of the total phenotypic variability for measurements of height from the floor to the bottom of the udder, 18 % – for cove rage of, 11 % – for the length, 18 % – the size of the index, 14 % – the index of relative value. The influence of
undermentioned genetic factors in udder abatement was uneven and ranged from 3% by measurements of length and up to 15% by width measurements.

The presence of variability between groups half-sister. Found that phenotypic variability of morphological features of first-calf cows udder is conditioned by arbitrary inheritance with Holstein breed and the origin of its father.

**Keywords:** UDDER MEASUREMENTS, DAIRY CATTLE, HALF-SISTER, GENETIC FACTORS, INTERGROUP DIFFERENTIATION, PHENOTYPIC VARIABILITY, FEATURE.