

***A. Ye. Pochukalin, O. V. Rizun, S. V. Priyma. «Constitutio» of genealogical structure of Ukrainian Red-and-White Dairy cattle***

The genealogical structure of Ukrainian Red-and-White Dairy cattle has been represented by 12 tested and approved farm bloodlines, ancestors of which are Holstein bulls of red colour (Improver 333471, Hanover 1629391, Regal 352882, Nahit 300502, Inhancer 343514, Cavalier 1620273), Montbeliarde (Supreme 33470, Mayerdel 1599075, Dynamic 359742, Dairymen 1672325, Shevrey 6241) and Ayrshire (Don Juan 79601) breeds.

Selection process ensures constant movement of lines and inheritance of some lines moves to historical and statistical work and is used for analysing the successful selection and the best combination, whereas, the other ones improve genetic value of economically useful traits of productivity in the next generations and, therefore, they are progressing and developing. Qualitative features of related groups by the breeding traits are a basis on which we should concentrate all the range of selection and breeding work at each stage of breed improvement because a line and a breed, in the classical sense, are inseparable concepts of a large conglomerate of a population, which has been created by many scientists and practitioners.

The aim of this work was to analyse the current state of genealogical structure of Ukrainian Red-and-White Dairy breed for the breeding stock and their belonging to breeds and lines.

The materials of research for characteristics and analysis of genealogical structure of Ukrainian Red-and-White Dairy cattle were breeding accounting data on the form №7-mol. In total the data for 74 breeding farms of 15 regions of Ukraine were used. Belonging to breeds, lines and data for assess by origin and progeny were determined on the basis of SUMS "Orsek", Institute of Animal Breeding and Genetics nd. a. M.V. Zubets of National Academy of Agrarian Science of Ukraine. The availability of frozen semen of the Ukrainian Red-and-White Dairy bulls admitted to reproduce breeding stock was determined according to the annual catalogues for 2015 and 2016.2016.

Modern genealogical structure of the breeding stock is formed due, in addition to Ukrainian Red-and-White Dairy breed, Red Holstein, Jersey, Montbeliarde and Simmental breeds. The total number of females is 48,279 animals, including 24,264 cows and 24,015 heifers originating from 375 bulls. The share of Simmental bulls involved in the selection was 11% (42) with the number of 881 animals. The breeding stock from Holstein bulls (207) is 82%, whereas, the share of 101 bulls of Ukrainian Red-and-White Dairy breed is only 15%.

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Genealogical structure of breeding stock of Ukrainian Red-and-White Dairy breed has been represented by 15 bloodlines. The fewest (71 animals) was obtained from three bulls Magnet 1560362, Majority 1599069 and Maximus 297414. The 10%-share (4712 animals from 57 bulls) from the total number was genealogical structure of six approved farm bloodlines of the Ukrainian breed.

For breeding evaluation of origin (pedigree index) 17 Holstein bulls had the average value – +27.6, including seven bulls with negative PI-595 and 10 bulls with positive PI + 463.5. For bulls of Simmental and native breeds, the indices were 6 (-122), 2 (+264), 4 (-315) and 12 (+587.8), 1 (-264) 11 (665) respectively. Discrepancy (2 of 35 investigated bulls) with the minimum requirements (30 first-calf heifers in 4 herds) concerning the evaluation of bulls by progeny makes impossible to obtain objective information about breeding value of bull.

In our opinion, the factors which, can make a difference in the genealogical structure of Ukrainian Red-and-White Dairy cattle are to increase the share of bloodlines of the native breed through catalogue of admitted bulls to reproduce breeding stock, which is compiled by the materials of pedigree enterprise of Ukraine. Based on materials of 2015, during the mating period 59 bulls of 15 bloodlines were involved, including 38 approved bulls which share of sperm was 84%. In 2016, the available frozen semen of bulls of the native breed decreased by 674.5 thousand doses which was 81% compared to presented one in 2015.

**Conclusions.** Current genealogy of Ukrainian Red-and-White Dairy cattle has the ramified system represented 42 Simmental bulls of 15 bloodlines, 207 Holstein bulls of 19 bloodlines, 101 native bulls of 15 bloodlines and two Jersey and Montbeliarde bulls.

In modern realities of selection and breeding work, concern is widely use of Holstein sires in the reproduction of breeding stock of Ukrainian Red-and-White Dairy that each year minimizes the share (now about 10%) in the selection of approved bloodlines and "genetic identity of native breed".

The perspective of involving bulls and with it the widespread use of the method of breeding by bloodlines in Ukrainian Red-and-White Dairy cattle is too illusory, whereas every year the availability of semen of the admitted bulls in sperm banks of Ukraine decreases (only the last year by 81%), and inability (with requirements) for the evaluation by progeny of those bulls which have already had pedigree index.

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