

### *K. O. Skoryk. Dairy productivity of Saanen goats of Latvian selection*

**The aim of the work** was to study the basic productive traits of Saanen goats of Latvian selection in the order of their selection value: milk yield, fat and protein content in milk. These traits were investigated in the daughters from different goats-fathers.

**Materials and methods of research.** The study was conducted at "Grandmother's Goats" breeding farm, Galaiky village, Tetiiv district, Kyiv region on Saanen goats of Latvian selection. From mid-spring to mid-autumn the goats grazed and were kept in a corral. In winter, the goats were indoors on deep litter. Milking was twice a day into milk pipeline, it took place in the milking room with 12 seats. The farm is provided enough by coarse, succulent and concentrate feeds. It is considered that the winter diet of dairy goats is hay, twigs, concentrate feed, root vegetables, and mineral supplements.

The primary livestock data of milk production in 41 goats for seven lactations were considered. The basic selection traits were studied in the order of their breeding value: milk yield, fat and protein content in milk. The same traits were investigated in terms of fathers of milking goats. The obtained results were processed statistically by N. A. Plohinskiy (1970).

**Results of research.** The research results show that milk yield of Saanen goats of Latvian selection varied depending on lactation. It was found that the milk production during the 1<sup>st</sup> lactation was 565 kg, fat content in milk – 3.2% and protein content – 3.0%. Milk yield per lactation tended to increase – from the 3<sup>rd</sup> to 6<sup>th</sup> lactation inclusively, as compared with the 1<sup>st</sup> and 7<sup>th</sup>.

The maximum level of milk yield was during the 6<sup>th</sup> lactation. The differences in milk yield between the 6<sup>th</sup> and the 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup> and 7<sup>th</sup> lactations are significant with the second degree of reliability. Significant coefficient of variation for milk yield (20-35%) gives reason to consider it possible to conduct the selection by this trait.

Several other data are presented by T. Orlovskaya. She considers that goats produce maximum milk yield on average after the 3<sup>rd</sup> parturition. Milking ability of goats after the 5<sup>th</sup>-6<sup>th</sup> lactation begins to fall gradually. She also thinks that biological value of milk is reduced with increase in milk yield, namely reduced fat content and, in some cases, changing the taste of milk.

Subsequently, the fat content in milk during the 2<sup>nd</sup>-4<sup>th</sup> lactations increased by 0.1%, and during the 5<sup>th</sup> lactation it reached the maximum level – 3.6%. The protein content in the investigated goat milk was small and ranged from 3 to 3.1%. Differences in fat and protein content during all the lactations were unreliable.

Ratio of fat content to protein content in Saanen goats' milk was studied for seven lactations. It was found that the ratio of fat to milk for all the seven lactations did not reach the optimal levels. This is lack of milk quality of the investigated goats.

Milk yield, fat and protein content in milk of daughters of four Saanen billy goats were investigated to determine the influence of fathers on the daughters' productivity.

Analysis of milk productivity data for daughters of goats Amors 046062340091, Wicks 030810040238, Priers 0460623640427 and Friends 038028540074 showed that the highest milk yield was in daughters of Amors 046062340091 – 622 kg. Several less milk yield (590 kg) was in the daughters of Friends 038028540074, and the lowest milk yields were observed in daughters of Wicks 030810040238 and Priers 0460623640427. **Thus**, daughters' milk yields depend essentially on fathers. At the same time the fat and protein content in the milk of daughters from different fathers is almost identical. This should be taken into account at **matching** billy goats for breeding stock of goats. In our research of milk yield of daughters from different billy goats there was a significant difference, but protein and fat content in daughters' milk almost was no different. Thus, the findings don't always coincide with the data given in the literature. This concerns with the milk production of Saanen goats and its quality (fat and protein content). Earlier, we have shown that Saanen goats' milk had a little lower density than in Lamancha, Russian, Nubian, Alpine and Megrelian goats. Protein content was at level of 3.85%, or 1.4% greater than in Russian goats' milk, but 0.15% less than in Lamancha, 1.23% less than in Nubian, 0.4% – in Alpine, and 1.65% – in Megrelian goats' milk.

The fat content in goat milk of the compared breeds was also the lowest (by 1.85% than in Lamancha, by 0.79% than in Russian, by 0.97% than in Nubian, by 0.57% than in Alpine and 1.12% than in Megrelian breeds). Also, content of dry milk residue was low (0.67-1.48% less).

Despite these differences in milk yield of goats, research in this area should be expanded in order to determine the prospects for further goat breeding of certain breeds.

**Conclusions.** Milk yield per lactation tended to increase – from the 3<sup>rd</sup> to 6<sup>th</sup> lactation inclusively, as compared with the 1<sup>st</sup> and 7<sup>th</sup>. The maximum level of milk yield was during the 6<sup>th</sup> lactation. Significant coefficient of variation for milk yield (20-35%) gives reason to consider it possible to conduct the selection by this trait. The differences in the level of milk production of daughters from different goats were revealed that should be taken into account at matching billy goats for breeding stock. In Ukraine goats' milk yield of different breeds requires further study.

*Keywords:* **goat, milk, lactation, fat content, protein content, goats-fathers**