Effect of goats' age at first kidding on production of milk in the first lactation at Alpina breed

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AIM

According to the Annual Report of the Croatian Agricultural Agency for 2012th year in implementation of breeding and selection measures is included total 94 breeders of Alpina goats that in their herds have a total of 6,377 animals. Despite the fact that most of the Alpina breed goats are bred in the inner area of Northwest Croatian in similar climates stil breeding technology differs significantly between herds. One of the most important technological breeding procedures of goat farming is mating organization because it affects the length of lactation, as well as the total amount of produced milk. Although most of the breeders organized mating of young young goats in the first year of life, with age from 6 months, it is still a significant number of breeders that first mating organized in second year of goats life (14-18 months) with the explanation that then goats are sufficiently developed for start of production, and that it significantly affects the production of milk, fat and protein in first lactation, and also the longevity and overall life-producing of goats. The study aimed to determine the effect of age at first kidding of goats and the beginning of the first lactation on the amount and chemical composition of milk.

MATERIALS AND METHODS

- Analysis is based on data from 10,857 concluded lactation of Alpina breed from 294 herds.
- Data were taken from the central database of the Croatian Agricultural Agency for the period from January 2000. until April 2012. year.
- Milk control is performed by A4, B4 and AT method in accordance with the rules of ICAR (International Committee for Animal Recording).
- Data were statistically analyzed using the GLM procedure of SAS statistical package..

RESULTS

Figure 1. Herd structure

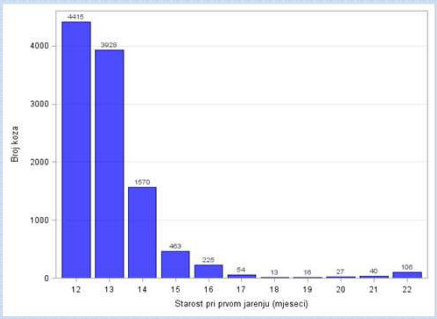


Figure 2. Lactation milk yield (kg)

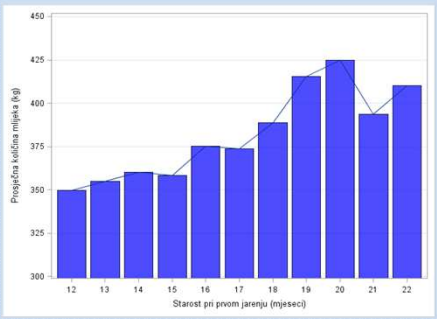


Figure 7. Fat content (%)

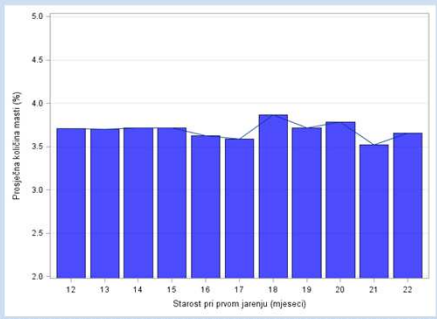


Figure 3. Lactation fat yield (kg)

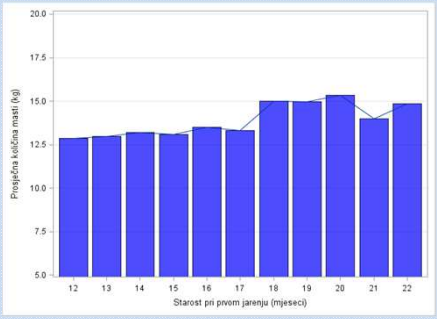


Figure 4. Protein content (%)

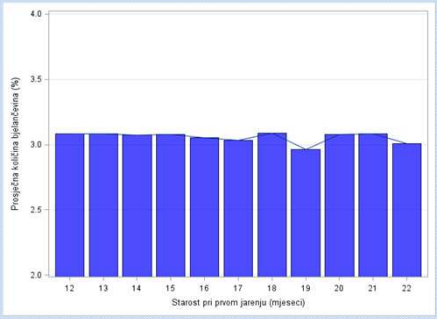
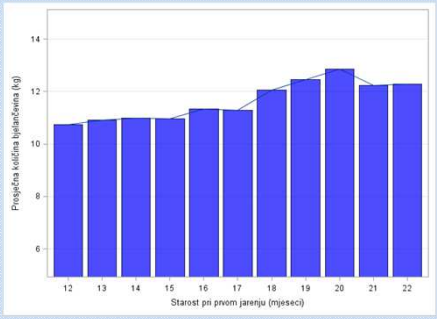


Figure 8. Lactation protein yield (kg)



CONCLUSIONS

The lowest milk production was observed in goats with beginning of first lactation at age 12 months, which amounted to an average of 349.51 kg. With the increasing age of goats at the beginning of the first lactation increased the amount of milk produced, which reaches its maximum at lactation started with 20 months of age goats and then has ranged on average 424.67 kg. The same effect of age of goats has on production of the total amount of fat and protein. The minimum amount of fat produced in lactation was observed for lactation starting at the age of goats of 12 months and had an average of 12.84 kg, and the maximum was in goats with 20 months of age when the average was 15.33 kg. Range of proteins was from 10.73 kg in goats of age 12 months to a maximum of 12.85 kg in goats of age 20 months. Age goats at the beginning of the first lactation had no statistically significant effect on the percentage of fat and protein during the first lactation. Despite the fact that the quantity of milk , fat and protein content was higher in goats mated at 12 months of age, increasing production is not enough to justify the loss of an entire season of kidding , and subsequent lactation.