Utjecaj pasminske strukture krava u mliječnim stadima na svojstva mliječnosti

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SAŽETAK

Cilj rada je bio istražiti utjecaj pasminske strukture stada na svojstva mliječnosti krava holstein i simentalske pasmine u tri tipa farmi: samo holstein krave (HOL), samo simentalske krave (SIM) i farme s mliječnim kravama ove dvije pasmine HOL/SIM). Analizirana su laktacijska svojstva mliječnosti (količina mlijeka, količina i udio mliječne masti i bjelančevina u standardnoj 305 danskoj laktaciji) koristeći podatke 211776 laktacija uzetih iz središnje baze podataka Hrvatske poljoprivredne agencije. Za provjeru značajnosti i uključenje utjecaja u model korištena je metoda najmanjih kvadrata temeljem procedure GLM u SAS statističkom programu. Za svako je svojstvo izračunata korigirana srednja vrijednost. Pasminska struktura imala je značajan utjecaj na svojstva mliječnosti ($P<0.0001$). Holstein krave u HOL farmama imale su veću laktacijsku proizvodnju mlijeka (936,2 kg), mliječne masti (36,7 kg) i bjelančevina (32,6 kg), isti udio bjelančevina (3,28 %), ali manji udio mliječne masti (0,03%), u odnosu na holstein krave u HOL/SIM farmama. Simentalske krave u SIM farmama proizvode manju laktacijsku količinu mlijeka (473,7 kg), mliječne masti (20,2 kg) i bjelančevina (18,2 kg), ali imaju i manji udio mliječne masti (0,03 %) i bjelančevina (0,06 %) u odnosu na simentalske krave na HOL/SIM farmama. Rezultati istraživanja ukazuju da holstein krave imaju bolja, a simentalske lošija svojstva mliječnosti u jednopasminskim farmama. Moguće objašnjenje su različite proizvodne potrebe krava ove dvije pasmine, kao i viši stupanj tehnologije na specijaliziranim većim mliječnim farmama.

Ključne riječi: mliječne farme, pasminska struktura, svojstva mliječnosti

The effect of breed on milk production traits in dairy herds

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SUMMARY

The objective of this paper was to determine the breed effect on milk production traits in three types of farms as follows: Holstein cows only (HOL), Simmental cows only (SIM), and farms rearing cows of both breeds (HOL/SIM). Milk production traits in standard 305-d lactation (milk yield, milk fat and protein yield and content) were analysed using data of 211776 completed lactations taken from the central database of Croatian Agricultural Agency. The GLM procedure in the statistical package SAS based on Least Square Method was used to determine the significant effects which affected the differences in production of analysed traits. Least square means were computed for each trait. The breed had significant effect (P<0.0001) on milk production traits. Holstein cows on HOL farms had larger lacatation milk yield (936.2 kg), as well as milk fat (36.7 kg) and protein yield (32.6 kg). Protein content (3.28 %) was the same, while milk fat content was smaller (0,03%) compared to Holstein cows in HOL/SIM farms. Simmental cows in SIM farms produced smaller amount of lactation milk yield (473.7 kg), milk fat (20.2 kg) and protein yield (18.2 kg), as well as smaller milk fat (0.03 %) and protein content (0.06 %) than Simmental cows on HOL/SIM farms. These results show that Holstein cows had better, and Simmental cows worse milk production traits on single breed farms. Possible explanation was atributted to different production needs of cows coming from different breeds, as well as higher technology level on specialized larger dairy farms.

Key words:dairy farms, breed structure, dairy characteristics