

## ANALYSIS OF REPRODUCTIVE PERFORMANCE, MILK COMPOSITION AND QUALITY OF INDIGENOUS COWS: LITHUANIAN LIGHT GREY AND WHITE BACKED

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**Abstract.** Lithuanian farm animal genetic resources have a selective, economic, scientific, ecological, cultural, and historical importance to the Republic of Lithuania, and are an important part of global biodiversity. In Lithuania, now we have more than 20 cattle breeds of which 4 breeds are local: Lithuanian Black and White, Lithuanian Red (modern breeds), Lithuanian Light Grey and Lithuanian White Backed (indigenous). However due to the rapid agricultural development, highly productive and specialized cattle supplanted local breeds, which appeared on the verge of extinction. Only after forming relict gene-stocking herds and starting to breed by pure breeding, indigenous breeds were retained (Baltrėnaitė et al., 2003). As the old indigenous cattle breeds were poorly studied, our research was directed to analyze changes of reproductive performance and productivity parameters of indigenous, Lithuanian Light Grey and White Backed, cows. Data analysis showed that number of lactations of Light Grey and White Backed cows is higher than of Black and White and Red cows, moreover their average age at first calving is less and calving interval is shorter, that means indigenous cows are productive for a longer time period. The average milk yield of Light Grey cows is quite high (15.442 kg) and is close enough to milk yield of the most productive (16.035 kg) Black and White cows. Milk of Light Grey and White Backed cows is characterized by high level of milk protein (3.406 and 3.408 % respectively) and less fat (4.134 and 4.320 % respectively). The average amount of Light Grey and White Backed cows' milk protein and fat is influenced by lactation period. Whereas calving season has an impact on milk yield, milk protein, fat and somatic cells count of both indigenous breeds.

**Keywords:** indigenous; cows; reproduction; milk; productivity