

Changes in vitamin D content in milk from sheep grazing in mountain areas

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Summary

Sheep's milk is becoming increasingly popular in dairy industry technology due to its high content of bio-active substances. Owing to its high content of fat-soluble vitamins such as A, D and E, it exhibits strong antioxidant activity. It contributes to the neutralization of reactive oxygen species, which are a factor in the development of many diseases. Vitamin D supports the immune, skeletal, nervous, circulatory, and digestive systems and regulates calcium and phosphate metabolism, which is essential to normal bone development and mineralization. The purpose of the present study was to determine changes in vitamin D content in sheep milk during lactation. The study was conducted on two breeds of sheep – Polish Mountain sheep and Podhale Zackel. The sheep grazed in the Małe Pieniny Mountains, in the pasture in Jaworki. Testing of the samples was commissioned to JARS Commercial Company. A total of 550 animals were used in the study: 250 Polish Mountain ewes and 300 Podhale Zackel ewes. The study lasted from May to September and involved bulk sampling, carried out twice a month. Samples were taken from milking of 50 randomly selected animals of each breed from the entire herd. Average milk yield and vitamin D content were analysed. Analysis of the data indicated that the stage of lactation significantly affected milk yield, which decreased as it progressed, and the amount of vitamin D, which increased as it progressed.

KEY WORDS: sheep, milk, vitamin D