

Haematological parameters of the blood of cows fed diets containing glycerin

Summary

The aim of the study was to analyse the effect of glycerin supplementation of dairy cow diets on haematological indices. The trial was carried out on two farms keeping 72 (farm S) and 68 (farm R) dairy cows (Polish HF, Black-and-White variety). On both farms the diets were based on maize silage and hay, and on farm S they cows also received haylage. Cows with daily milk yield of over 25 kg received a concentrate mixture. Forty-eight cows were used in the experiment. The experimental factor was glycerin (300 g/head/day) added to the diet for 4 weeks (1 week preceding calving and 3 weeks of lactation). During the experiment (2nd and 6th weeks of lactation) feed intake and milk yield were measured and samples were taken of feeds, milk and blood. The results were analysed statistically using Statistica 5.1.G using analysis of variance. Significance of differences between means was determined by Duncan's multiple confidence interval at 0.05 and 0.01. The glycerin supplement (300 g/head/day) influenced the values of blood indices, increasing haematological parameters and leukocyte count and elevating the proportion of lymphocytes in the leukogram. In cases of energy deficiency during the periparturient period in dairy cows, a supplement of 300g/head/d of pure glycerin, administered a week before calving and for 3 weeks of lactation, can be an effective prophylaxis of metabolic diseases in high-yield dairy cows.

KEY WORDS: cows, periparturient period, glycerin, milk yield, blood