

THE INFLUENCE OF FEED ADDITIVES ON DAIRY COWS PRODUCTIVITY

Zita Bartkevičiūtė, Janina Černiauskienė

Lietuvos veterinarijos akademija, Gyvulių mitybos katedra, Tilžės g. 18, LT-3022 Kaunas; tel. (8-37) 36 34 08

Summary. The influence of the mineral, energetical and protein feed additives on the milk yield and milk composition was analyzed in dairy cows. The experiment comprised of twelve 3-4 lactation Lithuanian Black-and-White breed cows, which were divided into control and experimental groups of 6 cows in each. The average milk yield during the last lactation was 5 500 kg. The cows in both groups were fed with farm feed. The ration of the dairy cows during the stable period consisted (% of dry matter): hay – 25%, pre-wilted silage – 35%, fodder beet – 10%, barley flour and rape cake – 30%, and during the grazing period – grass – 84% and barley flour – 16%, respectively. In addition, to each cows daily ration was added 0.10 kg of salt (NaCl). According to the chemical composition of the feeds, the rations of the experimental group, were enriched by adding mineral, energetical and protein feed additives. The cows were fed with additives from the beginning of dry period until 100th day of lactation and data on the cows productivity continued to be registered until day 270.

It was found, that during the first 100 days of lactation cow from control group in average produced 2010 kg of natural or 2009 kg of corrected milk, and cows from experimental group – 2564 kg and 2479 kg (27.5% and 23.4% increment ($P < 0.05$)), respectively. In addition, in experimental group compared to controls milk was on 0.20% higher in protein level and on 0.27% lower in fat level ($P < 0.05$). This tendency continued on the remaining 170 days of the experiment. During controlled period of 270 days the cows from experimental group produced 801 kg of natural or 711 kg of corrected milk, and were increased on 16.9% and 15.0% compared to the controls ($P < 0.05$). Continously, in experimental group milk was on 0.24% higher in protein level and on 0.11% lower in fat level ($P < 0.05$).

The results from this study demonstrate that during the first 100 days of lactation feed additives are indispensable for keeping within physiological level in blood of cows the most important mineral elements such as calcium, phosphorus, magnesium and glucose.

Keywords: dairy cows, productivity, feed additives.