

CONTROL OF SELENIUM AND VITAMIN E DEFICIENCY IN CALVES AND FEED

Jurgis Kulpys¹, Edmundas Paulauskas²

¹*Lietuvos veterinarijos akademija, Gyvūnų mitybos katedra, LT-47181 Kaunas; tel. 36 34 08;
el. paštas: rolandas@lva.lt*

²*Lietuvos žemės ūkio konsultavimo tarnyba, LT-5150 Joniškis; tel. 54 301;
el. paštas: jonspec.lzukt@post.omnitel.net*

Summary. In Lithuania the selenium (Se) content of forage is usually marginal or deficient. Consequently the intrauterine supply of Se is not always sufficient and the newborn calves have inadequate stores of Se. Similarly colostrum levels of Se could be low. The selenium requirement for the growing calf can be achieved by using Se enriched milk substitutes. Comparable but less severe situation exists with vitamin E supply. The clinical signs of Se and vit. E deficiency are retarded growth of animal, increased risk of infectious diseases and white muscle disease which causes a significant mortality rate. The risk of disease is increased during periods of cold, stress and access to fresh grass.

The results of the experimental study showed that all calves under age of 4 months were clinically healthy, despite of decreased availability of Se and vit. E in feed. Control calves received 0,1 mg Se of DM/kg⁻¹ fodder while experimental calves either 0,2 or 0,3 mg Se of DM/kg⁻¹ fodder, respectively. The mean (SD) of Se in blood was 15,7 (0,01) µg% and 12,2 (0,003) µg% in experimental and 8,3±0,003 µg% in control calves, respectively.

There was no significant effect of Se and vit. E deficiency on calves growth. At the end of experiment the arithmetic mean (SD) of cattle liveweight reached 891(12) kg in control group, and 872 (10) kg and 904 (9) kg experimental groups.

Keywords: Se, vit. E, deficiency, control.