THE EFFECTS OF DIFFERENT STARCH LEVEL STARTERS WITH OR WITHOUT AMYLASE ON PERFORMANCE AND HEALTH PARAMETERS IN CALVES

M. M. Efil[1], O. Topal[2], D. Udum[3], H. Gençoğlu[1], H. Batmaz[2]
gencoglu@uludag.edu.tr

[1]Uludag University, Faculty of Veterinary Medicine,
Department of Animal Nutrition and Nutritional Diseases, Bursa, Turkey
[2]Uludag University, Faculty of Veterinary Medicine,
Department of Internal Medicine, Bursa, Turkey
[3]Uludag University, Faculty of Veterinary Medicine,
Department of Biochemistry, Bursa, Turkey

The purpose of this study is to evaluate effects of calf starter feeds with different starch levels on feed intake, body weight gain, feed conversion, blood glucose levels, rumen pH, wither height, chest widht, body length, clinic and respiratory score in 0–56 day calves.

The research was carried out in calf unit in İtimat Agriculture and Animal Husbandry. Therefore, 6 groups were formed and 90 Holstein-Friesian female calves were used totally as 15 calves in each group. Starter feed containing 23 %, 28 % and 33 % starch in 88 % dry matter and same feeds with amylase enzyme (*RumiStar*, *DSM Animal Nutrition & Health*, Turkey) added at a dose of 1 kg/ton were given to groups respectively. The groups were named as 23E–, 23E+, 28E–, 28E+, 33E– and 33E+ according to the starch content of the calf starter feeds and whether or not the enzyme is contained. Body weights of the calves measured at 0, 28, and 56 days; calf starter consumption and feed conversion were calculated weekly. On 56th day, approximately 10 ml of blood sample was taken, glucose values were measured. In addition, on 56th day, wither height, chest widht, body length was measured and clinic and respiratory score was recorded. Ph measurement was made in rumen fluid taken on 56th day. Statistical analysis of datas was performed by one-way ANOVA method and pearson chi-square method for clinic and respiratory score records was applied with SPSS package program.

The average starter feed consumption until 56th day was 12.2 kg and there was no difference between groups. No difference was found between groups for daily body weight gain, feed conversion, wither height, chest widht, body length, clinic and respiratory score. However, the pH value of 23E+ feds was higher than 33E+ feds ($P<0.05$). Then, 23E– feds had the lowest blood glucose levels (72.9 mg/dL) and were found different from 23E+, 28E– and 33E+ feds.

It was concluded that calves fed 23E+ diet have higher rumen pH, which may contribute to health and performance.

Keywords: CALVES, STARTER, RUMEN pH, HEALTH