

Effect of fungal treated wheat straw on the diet of lactating cows

ABSTRACT

This study was conducted to investigate the effects of diets that contained different levels of fungal treated wheat straw on the intake, digestibility and performance of lactating cows. Eight primiparous Holstein cows, in late lactation ranging from 170 ± 10 days in milk and yielding 14.3 ± 1.3 kg/d of fat corrected milk (FCM) were allocated into four diets with 0, 10, 20 and 30% fungal (*Pleurotus ostreatus* coded P-41) treated wheat straw in a 4×4 Latin Square experiment. The daily intake of DM, OM, DOM, CP and TDN were not affected by substitution of alfalfa hay with fungal treated wheat straw. Inclusion of the treated straw at different levels in the diet did not affect the digestibility of nutrients, except for the ADF that was significantly ($p < 0.05$) reduced in the diet contained 30% treated straw. The types of the diet did not significantly affect daily milk and FCM production. The milk composition including fat, protein, lactose, solid non-fat (SNF) and total solid (TS) were not statistically ($p > 0.05$) different among the diets. All cows gained weight, but the inclusion of treated straw to the diet significantly ($p < 0.05$) increased the body weight gain and the highest amount was obtained in the diet containing 20% treated. Inclusion of fungal treated wheat straw up to 30% of the diet of lactating cows supplemented with a protein source such as cottonseed meal had not affected the nutrients intake and lactation performance.

Keyword: Fungal treatment; Lactating cow; Wheat straw