

Utilization of fungal treated wheat straw in the diet of late lactating cow

ABSTRACT

Eight primiparous Holstein cows, in late lactation (255 ± 10 days in milk) and yielding 10.3 ± 1.3 kg/d of 4% fat corrected milk (FCM) were allocated into two groups randomly. Two diets containing 30% wheat straw either untreated (UWS) or treated with *Pleurotus ostreatus* (FTWS) were offered as total mixed ration (TMR). In vivo digestibility of the diets was determined, using acid insoluble ash as a marker. Daily milk production was recorded and milk samples were collected and analysed. Diet FTWS resulted in significantly ($p<0.05$) higher dry matter intake (DMI) (12.2 ± 0.86 vs. 10.6 ± 1.3), DM digestibility (58.8 vs. 52.3) and milk yield (9 vs. 7.5 kg). Milk fat contents were 34.2 and 35.6 g/liter that did not differ between cows fed treated or untreated straw. However, the concentrations of lactose, solid non fat, total solids and milk protein for diets UWS and FTWS were 57.3 and 54.9, 98.9 and 93.2, 134.5 and 127.4, 35.7 and 32.3 g/l, respectively, which differed significantly ($p<0.05$). The average body weights gain (BWG) for UWS and FTWS were 272 and 743 g/d, respectively ($p<0.05$). The FCM yield per kg of DMI was similar (0.68 and 0.67 liter) for the two groups, but BWG/kgDMI was higher in the FTWS diet.

Keyword: Fungal treatment; Lactating cow; Wheat straw