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Influences of ensiling wet barley distillers' grain with sugar beet pulp on lactating performance of dairy cows

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An experiment was conducted to evaluate the effect of ensiling wet barley distillers' grain with different levels of sugar beet pulp on dairy cattle performance was examined. Eighteen Holstein dairy cows (86±10 day's postpartum 600±20 kg BW), were penned individually and randomly allocated to three treatments in a balanced completely randomized design (repeated measures). Three diets were formulated to compose 7.5% of TMR. Treatments were an ensiled mixture of 60% barley distillers' grain (BDG)with 40% beet pulp (BP) (BDGBP 40%), ensiled mixture of 80% BDG with 20% BP (BDGBP 20%), and BDG 100% ensiled without 0.0%BP (BDGBP 0%). Experimental diets contained, 40% forage (60:40, corn silage: alfalfa hay) and 60% concentrate. Cows were fed a total mixed ration and milked three times daily. Diet concentrations of NDF, ADF and CP were 33.2, 19.6 and 16.4% DM (for BGBP 40%), 33.7, 20 and 16.8% DM (for BGBP 20%) and 33.8, 20.5 and 16.8% DM (BGBP 0%), respectively. The feed intakes, daily milk yield and milk composition were not significantly different between treatments. There was no significant effect of treatments on rumen pH and NH_3-N. Also there was no significant effect on blood plasma metabolites. It is concluded that partial substitution BG ensiled with or without BP for corn silage did not have any negative effect on the performance of Holstein dairy cows.

Assessment of nutritional values of Caraway seed pulp (CSP) by *in situ* and *in vitro* technique

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Factors obstruct animal production in Afghanistan, as well as other countries are numerous and serious. Among of them unstable price and shortage of some of the conventional protein sources. Caraway seed pulp (CSP) is a major agro-industrial by-product from extract herb factory. The CSP are high in protein and fat with reported ether extract (EE) of 6%, CP of 15.2%, ADF of 51% and NDF of 55%. Because of the nutrient content, CSPappear to be a desirable feed ingredient in ruminant nutrition. The ruminal degradability of dry matter in CSP were estimated up to 48 h in three rumen fistulaed Holstein steer using the mobile nylon bag method. Treated Samples of CSP with PEG and urea were also fermented using Menk and Steingass gas production technique up to 96 h. Samples were run in duplicate in two separate runs. The estimated parameters of degradability's of DM indicated that CSP had high potential of degradability. The quickly degradable DN fraction (a) was 25.41 and potentially degradable DM fraction (b) of CSP was 55.15. Cumulative gas production after 96 h incubation had no affected by PEG or urea although amount of gas produced in CSP containing PEG was 18% higher that control group.