

Abstract

The purpose of this study was to determine the effects of different levels of yeast and molasses on chemical component, nutritive value and *Atriplex lentiformis* silage digestibility. The levels of yeast include: zero (control), 2.5 and 5 g/kg dry matter and levels of molasses include: zero (control), 10 and 15 percent were added to Atriplex and they were silo. The experiment was conducted using the factorial method (3 × 3) on a completely randomized design. The chemical components included: dry matter (DM), organic matter (OM), Ash, cell wall (NDF), cell wall without hemicellulose (ADF), ether extract (EE), crude protein (CP) and water soluble carbohydrate (WSC). Then, in order to measure the degradation percent of dry matter and organic matter digestibility in the investigated treatments, the nylon bag technique and gas production test were used on three fistulated male calves, respectively. Test results showed that adding the levels of 2.5 g/kg yeast had no significant effects on organic matter, cell wall, cell wall without hemicellulose, crude protein and ether extract compared with the treatment control, but increased dry matter and pH, and decreased water soluble carbohydrate. Adding the levels of 5 g/kg yeast increased dry matter, Ash, cell wall, cell wall without hemicellulose and decreased organic matter, ether extract, water soluble carbohydrate and pH but had no significant effects on crude protein. Adding the levels of 10 percent molasses decreased cell wall, cell wall without hemicellulose, organic matter and pH but increased dry matter, water soluble carbohydrate, Ash and had no significant effects on crude protein and ether extract. Levels of 15 percent molasses decreased cell wall, cell wall without hemicellulose, crude protein, Ash and increased dry matter, water soluble carbohydrate, ether extract and pH. The levels of 5g/kg yeast and 15% molasses produced the highest amount of gas, they showed a significant difference ($p < 0.05$) with control. Levels of 2.5 g/kg yeast and 10% molasses showed the highest amount of digestible dry matter and no significant difference with control. The results indicate that adding yeast and molasses to *Atriplex lentiformis* silage improved its nutritive value and levels of 5g/kg yeast and 15% molasses showed the best results.

Keywords: yeast, molasses, silo, Atriplex, nutritive value.



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**Effect of yeast (*Saccaromyces cereveasia*) and
molasses on the nutritive value of
Atriplex lentiformis silage**

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