

Abstract

This study was carried out to evaluate changes in chemical composition and nutritional value of fungi compost silage in response to urea and molasses. For this aim, fungi compost was prepared and chopped with a cutting length of about 2 to 4 cm. The chopped fungi compost was then mixed with urea (2%), molasses (5% and 10%) and ensiled in 5 kg plastic baskets. The silages were opened after 45 days and chemical compositions including dry matter (DM), organic matter (OM), Ash, ether extract (EE), crude protein (CP), cell wall and cell wall without hemicellulose fractions were measured according to the standard procedure. Dry matter digestibility, metabolizable energy content and dry matter degradability were also determined by gas production (*in vitro*) and nylon bags (*in situ*) methods. Results showed that the addition of urea caused a significant increase in PH, DM, CP, OM and EE content and decreased Ash, ADF and NDF content. Addition of molasses caused a significant increase in DM, CP, Ash and EE content and decreased PH, ADF and NDF content. The *in situ* degradability outputs indicated an increased DM degradability. In addition, the findings obtained from *in vitro* gas production method revealed that the time of incubation with the addition of urea and molasses was decreased. In conclusion, considering the changes in cell wall contents, hemicellulose contents and degradability values in the present study, it can be suggested that the use of supplements urea and molasses can be used to make good fungi compost silage.

Key words: Fungi compost, Gas production, Degradability



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