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This study was carried out to evaluate changes in chemical composition and nutritional value of citrus pulp and lentils straw mixture silage treated with urea and enzyme. For this purpose citrus pulp and lentils straw leaves were harvested and chopped with cutting length 2 to 4 cm. The chopped common citrus pulp and lentils straw mixture were mixed with the urea (0,5, 1,0), enzyme (0,1,2g) ensiled in 5 Kg plastic baskets. The silageas were opened after 45 day and chemical compositions including dry matter (DM), ash, organic matter (OM), ether extract (EE), crude protein (CP), cell wall and cell wall without hemicelluloses fractions were measured according to the standard procedure (AOAC). Organic matter digestibility and organic matter in dry matter digestibility and metabolizable energy content and dry matter , digestibility were also determined by gas production (*in vitro*) and nylon bags (*in situ*) methods. Results showed that the addition of urea caused a significant increased pH, OM and CP content and reduction DM, EE, NDF and ADF content ($P < 5\%$). Addition of Enzyme caused a significant increased DM,OM, content and reduction EE,PH, NDF and ADF content ($P < 5\%$). Addition supplements urea, enzyme leads to a significant difference between the dry matter, organic matter, crude protein, crude fat, NDF and ADF compared to control ($P < 5\%$). In general, Urea and fibrolytic enzyme, both individually and simultaneously, affected the chemical composition. Digestibility results showed that urea, enzyme caused a significant increased in dry matter digestibility. In addition, the findings obtained from *in vitro* gas production method revealed that the time incubation addition urea, enzyme caused increased gas productions value. In conclusion, considering the changes in cell wall contents, hemicelluloses contents and degradability values in the present study, it can be suggested that the use of additives separately can be used to make good common citrus pulp and lentils straw mixture silage.

Key words: Citrus pulp, Lentil straw, Digestibility, Urea, mixture Enzyme



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Title:

**Effect of urea and enzyme on nutritive value of
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