



University of Zabol
Graduate school
Faculty of Agriculture
Department of Animal Science

**The Thesis Submitted for the Degree of Master of Science
(In the Field of Animal Nutrition Science)**

Title:

**Study of chemical composition and nutritive
value of palm leaves treated with feed additives**

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This study was carried out to evaluate changes in chemical composition and nutritional value of Palm leaves silage treated with urea, Date wastes and natural zeolite. For this aim Palm leaves were harvested and chopped with cutting length about 2 to 4 cm. The chopped common Palm leaves then were mixed with the urea (%5), Date wastes (%15) and natural zeolite (4 gr/kg DM) ensiled in 5 Kg plastic baskets. The silageas were opened after 45 day and chemical compositions inculuding dry matter (DM), ash, organic matter (OM), ether extract (EE), curde protein (CP), cell well and cell well without hemicelluloses fractions were measured according to the standard procedure (AOAC). Organic matter digestibility digestibility Organic matter in dty matter and metabolizable energy content and dty 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, Ash, NDF and ADF content ($p < \%5$). Addition of Date wastes caused a significant increased CP and OM content a sifsignicant reduction pH, DM, Ash, NDF and ADF content. addition of natural zeolite increased DM, EE, Ash, NDF, ADF and CP and reduction pH and OM content ($p < \%5$). addition supplements urea, Date wastes and natural zeolite caused a significant different in chemical composition ($p < \%5$). Digestibility results showed that urea, Date wastes and natural zeolite caused a sifsignicant increased in dry matter digestibility. In addition, the findings obtained from in vitro gas production metod revealed that the time incubation addition urea, Date wastes and natural zeolite caused increased gas productions value. In conclution, considering the changes in cell wall contents, hemicelluioses 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 Palm leaves silage.

Key words: Palm Leave, Nutritive Value, Date wastes, Urea, Zeolite