

Abstract

The purpose of this study was the effects of different levels of Natuzyme Plus enzymes on chemical composition, nutritional value of *Common reed* forage silage digestibility before and after ensiling. The levels of enzymes include: zero (control), 2.5 (low), 5 (middle), 7.5 (high), gr/kg dry matter were added to *Common reed* silage. Three treatments were without the additives material to silo and after the silo opening, the three levels of dry matter (2.5, 5, and 7.5 gr/kg), were added to the enzyme. The experiment was conducted the factorial method (2×4) on based a completely randomized design. Dry matter (DM), organic matter (OM), ASH, cell wall (NDF), cell wall without hemicelluloses (ADF), extract ether (EE), crude protein (CP), and water soluble carbohydrate (WSC). Then, in order to measuring of the degradation percentage and dry matter digestibility in the investigated treatments were used by the nylon bag technique and gas production test on three indigenous male calves, respectively. Test results showed that the enzymes can improve the chemical composition of *common reed* silage and the medium and high levels of enzyme had significantly effects ($P \leq 0.05$) on NDF and ADF, The crude protein and water soluble carbohydrate in comparison to the control and low level of enzymes. The 2 levels of enzyme (5 and 7.5 gr) in comparison with control and low level of treatments have produce, the highest amount of gas before and after the silo they showed significant difference ($P \leq 0.05$) between them in terms of digestibility. Also 2 levels of enzyme (5 and 7.5 gr) in comparison with control and low level of enzymes were showed the highest amount of quickly degradation (a), part of potential degradation (a + b), decomposition rate constant (c) and the degradation effective at 0.02, 0.05, and 0.08. Also the increasing of enzymes amount caused to decrease of the lowers the decomposition sector in high and moderate levels of treatments in comparison to control and the low level enzymes treatments.

Keywords: *Common reed* forage, Enzyme, Silage, Nutritive value



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**Effect of Natuzyme Plus enzyme on the
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