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### Abstract

The study of wilting period on ruzi silage quality was carried out at the Faculty of Agriculture, Khon Kaen University. The design of Completely Randomized Design, CRD and replicated four times was used. The treatments were unwilted (T1), wilted for 12 h (T2), wilted for 24 h (T3) and wilted for 36 h (T4) before ensiling.

Ages of ruzi grass (*Brachiaria ruziziensis*) used in this study were approximately 50 days and they were wilted according to the treatments, 2-3 centimeter chopped length and packed in plastic container at approximately 750 grams in closed condition. Measurement on silage quality were weekly made for four weeks.

The results of this study showed that wilting of grass prior to ensiling had a significantly different in week 4 ( $P<0.01$ ); T1, T2, T3 and T4 were 21.59, 23.11, 23.75 and 27.52 %DM (78.41, 76.89, 76.25 and 72.48 % moisture), respectively. The pH value of ruzi silage was a significantly different ( $P<0.01$ ). The pH value of T1, T2, T3 and T4 were 5.00, 4.03, 4.38 and 4.57, respectively. Ammonia-nitrogen per total nitrogen contents ( $\text{NH}_3\text{-N/TN}$ ) of ruzi silage was significantly different ( $P<0.01$ ) in week 2, 3 and 4, but did not significantly differ in week 1.  $\text{NH}_3\text{-N/TN}$  contents all treatments trend to increased from the early period to the end of ensiling, T1, T2, T3 and T4 were 25.49, 12.96, 19.78 and 11.47 %DM, respectively in week 4.

Crude Protein, (CP) of ruzi silage had a significant difference ( $P<0.01$ ) in week 1, 2 and 3 but did not significant differ in week 4. In all period of ensiling CP contents highest in T3, were 10.58, 11.09, 12.05 and 10.37 %DM in week 1, 2, 3 and 4, respectively. NDF contents of ruzi silage in every week of this study were not significantly different, but trends to increased with an increase wilting period. In all period of ensiled intervals, NDF contents trend

to decreased from the early period to the end of ensiling, as in week 1, NDF contents was during 63.40–66.38 %DM and in week 4 was during 61.83–63.24 %DM. ADF contents were significantly different ( $P<0.01$ ) and in all period of ensiled intervals trend to slowly increased from the early to the end of ensiling. ADF contents in the end of ensiling founded that T1 and T4 higher than T2 and T3.

The all results suggested that wilting 12 hours before ensiling would give the best quality of ruzi silage.

Keywords : Silage, Wilting period, Moisture content, Silage quality