ABSTRACT

Evaluation Quality of Total Mixed Ration Silage -Elephant Grass (*Pennisetum purpureum*) and Ramie Leaves (*Boehmeria nivea, L. Gaud*) Based- in Two Different Silo

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The aim of this study was to compare the quality of total mixed ration (TMR) silage in two different silo (*in vitro* study) based on physical characteristics, fermentative, and utilities that were tested in vitro. There were trench silo (T) and plastic container (drum) (D). The quality judged from physical (odor, texture, moisture, color and spoilage), fermentative (pH, DM, VFA, DM degradation, CP, NH₃, CP degradation, WSC and fleigh point) and utilities (fermentation and digestion) characteristics of the silage produced. The result showed degree of damaged silage in treatment (T) were higher (9.00%) than treatment (D) (2.59%). Fermentative was known by means of pH value in the treatment (pH < 4.4). Based on the fleigh number (FN), silage produced in T could be classified as a good silage (FN= 74.00 ± 3.92 ) and silage in D could be classified as an excellent silage (FP= 118.78 ± 21.51). Digestibilities test showed that silage T were has 71.06 ± 1.82% DMD, whereas silage D were has 73.401 ± 1.17% DMD. The same pattern also occurred in the observation of OMD. Organic matter digestibility values in treatment T were 71.63 ± 1.67% OMD, while in D were 73.25 ± 1.45% OMD. There were differences of physical and fermentative characteristics silage among the silo types. Silage in drum silo is better than trench silo, but the utilities characteristics of the observations did not show any significant differences. Silage produced on both silo were fermentable and highly digestable, that support the provision of nutrients for livestock.

*Keywords*: Rami leaves, trench, plastic container, total mixed ration silage