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The Inclusion of the Cabbage Waste in Buffalo Ration Made of Sugarcane Waste and Its Effect on Characteristics of the Silage

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Abstract : The objective of the research was to study the influence of the inclusion of the cabbage waste into a buffalo rations made of sugarcane waste on the feed formula and characteristic of complete feed silage. Research carried out a two-stage i.e. the feed formulation and experiment of making complete feed silage. Feed formulation is done by linear programming. Data input is the price of feed stuffs and their nutrient contents as well as requirements for rations, while the output is the use of each feed stuff and the price of complete feed. The experiment of complete feed silage was done by a completely random design 4 x 4. The treatments were 4 inclusion levels of the cabbage waste i.e. 0%,(T1) 5%(T2), 10%(T3) and 15% (T4), with 4 replications. The result of feed formulation for T1 was cabbage (0%), sugarcane top (17.9%), bagasse (33.3%), Molasses (5.0%), cabagge (0%), Thitonia sp (10.0%), rice brand (2.7%), palm kernel cake (20.0%), corn meal (9.1%), bond meal (1.5%) and salt (0.5%). The formula of T2 was cabagge (5%), sugarcane top (1.7%), bagasse (45.2%), Molasses (5.0%), , Thitonia sp (10.0%), rice brand (3.6%), palm kernel cake (20.0%), corn meal (7.5%), bond meal (1.5%) and salt (0.5%). The formula of T3 was cabbage (10%), sugarcane top (0%), bagasse (45.3%), Molasses (5.0%), Thitonia sp (10.0%), rice brand (3.8%), palm kernel cake (20.0%), corn meal (3.9%), bond meal (1.5%) and salt(0.5%). The formula of T4 was cabagge (15.0%), sugarcane top (0%), bagasse (44.1%), Molasses (5.0%), Thitonia sp (10.0%), rice brand (3.9%), palm kernel cake (20.0%), corn meal (0%), bond meal (1.5%) and salt (0.5%). An increase in the level of inclusion of the cabbage waste can decrease the cost of rations. The cost of rations (IDR/kg on DM basis) were 1442, 1367, 1333, and 1300 respectively. The rations formula were not significantly ($P > 0.05$) influent the on fungal colonies, smell, texture and color of the complete ration silage, but the pH increased significantly ($P < 0.05$). It concluded that inclusion of cabbage waste can minimize the cost of buffalo ration, without decreasing the silage quality of complete feed.

Keywords : buffalo, cabbage, complete feed, sillage characteristic, sugarcane waste
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