Chemical Properties Of Silage Made From The Mixture Of Cassava Peel Waste, Pineapple Waste And Guinea Grass

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A study was carried out to determine the quality of silage produced from guinea grass, cassava peels and pineapple waste mixture at different lengths of storage. The materials were mixed into nine different ratios including the three sole feeds and ensiled for 30, 60, 90, 120 and 150 days with each treatment replicated three times. A total of one hundred and thirty five bottles (960ml) were used for the ensilage. At the expiration of each length of storage, the silage were opened, mixed and analysed. There was a significant reduction (P<0.05) in the dry matter (DM) and crude protein (CP) content of the silage produced. The DM was reduced from 33.13% after 30 days to 25.45% after 150 days and the CP content of the silage was reduced from 8.80% after 30 days of ensilage to 6.00% after 150 days. The CP, NDF and ADF contents of the silage were significantly higher (P<0.05) that that of the un-ensiled materials. The highest CP content (9.09%) was obtained in sole cassava peel silage and was not significantly different from 8.89% obtained in 75% cassava peel: 25%guinea grass. Sole cassava peel silage also had the highest DM highest (40.99%) while the least DM content (15.20%) occurred in sole pineapple waste silage. The highest value of HCN was obtained in 100%cassava peel silage and the least value in 100% guinea grass. Interaction of length of storage and mixture had significant effect (P<0.05) on DM, CP, EE, NDF, ADF, ADL, CELLULOSE, Hemicellulose, ash and HCN content. 50% cassava peel waste: 25%guinea grass:25% pineapple waste from the 90 to 150 days had the best in terms of lowest HCN. The reduction in chemical composition after 150 days is still within required range for ruminant animal feeds.

Key words: silage, guinea grass, cassava