POTENTIAL OF ENSILING AND UTILIZATION OF ANAEROBICALLY DIGESTED CATTLE MANURE WITH GUINEA GRASS

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An experiment was conducted to study the ensiling characteristics, nutritive value and digestibility of anaerobically digested cattle manure (ADCM). Different levels of ADCM (0, 10, 20, 30, 40, and 50% dry matter basis) were ensiled with mature Guinea grass and 2% rice bran.

After 7 weeks the silage and preensiled samples were analysed for dry matter, total ash, crude protein (AOAC. 1970), ether extract (Iso. 1982), acid insoluble ash (AIA), (Keulen and Young. 1977), acid detergent fibre (ADF). Acid detergent lignin (ADL) (Goering and Van Soest.1970), In Vitro digestibility (Tilley and Terry.1963), Soluble carbohydrates (Dubois,et.al. 1956), Volatile fatty acid (VFA) (Erwin,et.al.1961), and pH.

Total ash, ADL ($P<0.05$), AIA and pH ($P<0.05$) increased with increasing ADCM levels while organic matter ($P<0.05$) decreased. Crude protein ether extract, ADF and cellulose showed no significant difference between treatments. Total VFA, soluble carbohydrates ($P<0.05$), propionic acid, isovaleric acid, valeric acid and lactic acid ($P<0.01$) showed an increase with ADCM levels, while acetic acid ($P<0.01$) showed a decrease. High levels of ADCM decreased the in vitro organic matter digestibility ($P<0.05$).

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