

Effect of moisture content on physical properties of animal feed pellets from pineapple plant waste

ABSTRACT

Presently, pineapple residues are recycled through open burning before replanting, thus contributed to the air pollution. One of the possible ways to manage pineapple residues is by converting them into animal feed by densification process. Densification of biomass into pellet can increase bulk density, improve storability, reduce transportation costs, and enables easier handling with proper storage equipment. The range of pellet's friability, bulk density, true density and porosity are between 0.85 - 1.22%, 303.31 - 345.24 kg m⁻³, 1502.65 - 1520.35 kg m⁻³ and 77.022 - 80.05%, respectively. Thus, from the analysis, the best condition to produce pellets from pineapple plant waste, was at 35% of moisture level.

Keyword: Agro-waste; Densification; Extrusion; Moisture content; Pellets; Pineapple plant waste