Abstract

Extruded pellets were made based on deoiled rice bran and paddy husk using glycerol and
Effect of Plasticizer on the Properties of Pellets Made from Agro-Industrial Wastes

cashew nut shell liquid as plasticizer. Effects of incorporation levels of glycerol (GL, 6 to 14 %) and cashew nut shell liquid (CNSL, 6 to 14%) on the physical and functional characteristics of extruded pellets based on deoiled rice bran and paddy husk powders were studied. For A3 samples (12% GL) radial expansion (RE-1. 052), bulk density (BD-0. 697 g/cm3), water solubility index (WSI-13. 000%), water binding capacity (WBC -5. 237%) and hardness (HD-498. 253 N) were observed. However, in case of B3 samples (12% CNSL), radial expansion (RE-1. 019), bulk density (BD-0. 567 g/cm3), water solubility index (WSI- 15. 037 %), water binding capacity (WBC-4. 785) and hardness (HD- 495. 027 N) were observed. Results indicated that GL and CNSL had a significant effect on physical and functional properties of the pellets. The results suggest that deoiled rice bran and paddy husk powder can be plasticized with glycerol and cashew nut shell liquid for the development of durable pellets using extrusion technology to be used further for the development of biodegradable molded pots.

References


**Index Terms**

Computer Science

Applied Science

**Keywords**

Cashew Nut Shell Liquid  Glycerol  Physical And Functional Properties.