RESEARCH PAPER | International Journal of Agricultural Engineering | Volume 7 | Issue 1 | April, 2014 | 221–224

Bulk density of biomass and particle density of their briquettes

SHINDE VAIBHAVKUMAR BHAGWANRAO AND **M. SINGARAVELU**

Received : 23.01.2014; **Revised :** 11.03.2014; **Accepted :** 25.03.2014

See end of the Paper for authors' affiliation

Correspondence to :

SHINDE VAIBHAVKUMAR BHAGWANRAO
Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA
Email : svbbioenergy@gmail.com

ABSTRACT : The direct burning of agricultural residues in domestic as well as industrial applications is found to be very inefficient. Moreover, some of the drawbacks like transportation, storage and handling problems are also associated with its use. One of the approaches, which are being actively pursued worldwide towards improved and efficient utilization of agricultural and other biomass residues, is their densification in order to produce pellets or briquettes. Bulk density is a major physical property in designing the logistic system for biomass handling. The size, shape, moisture content, particle density, and surface characteristics are the factors affecting the bulk density. Bulk density is an important characteristic of biomass that influences directly the cost of feedstock delivered to a bio-refinery and storage cost. Present study deals with the determination of gives the density of the powdered biomass such as Cotton Stalk(CS), Pigeon Pea Stalk(PPS), Cumbu Napier Grass(CNG), Ground Nut Shell(GNS) and Sunflower Stalk(SS) besides their various briquettes diameter. Among the biomass combu napier grass found higher bulk density and among the biomass briquettes Cotton Stalk briquettes has the highest and Pigeon Pea Stalk briquettes has the lowest value besides their diameter size of 40, 50 and 60 mm diameter.

KEY WORDS : Bulk density, Particle density, Biomass, Briquettes

HOW TO CITE THIS PAPER : Bhagwanrao, Shinde Vaibhavkumar and Singaravelu, M. (2014). Bulk density of biomass and particle density of their briquettes. *Internat. J. Agric. Engg.*, **7**(1) : 221-224.