

Design and development of bioslurry-cum-FYM applicator

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ABSTRACT : Organic manure application in field especially bioslurry application is one of the most time consuming and laborious operation of farming, as it is done mainly with manually spreading, despite all its deficiencies, in the absence of suitable/improved application machine. Due to increased shortage of agricultural labour during the peak season, farmers have to face great difficulties in manure application in field. An applicator, the subject of this report designed manually operated Bioslurry-cum-FYM applicator for spreading bioslurry and FYM on the field. The overall length, width and height of the machine were taken as per ergonomic design consideration. The application rate of bioslurry and FYM was determined at 1/3rd, 2/3rd and full opening. The theoretical application rate of bioslurry at respective opening was 1.288 t/ha, 2.252 t/ha and 3.085 t/ha and of FYM was 1.039 t/ha, 1.455 t/ha and 2.501 t/ha, respectively. It was observed that the application width of bioslurry at 2/3rd of opening was 102.6 cm with a minimum SD and CV of 6.189 cm and 6.032%, respectively. The width of application of FYM at 2/3rd of opening was 119.8 cm with minimum SD and CV of 2.775 cm and 2.316 %, respectively.

Key Words: Bioslurry, farm yard manure, applicator, ergonomics, organic manure.