

Performance Evaluation of Mini Tractor Drawn Punch Planter for Maize Crop

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ABSTRACT

A mini tractor drawn punch planter was developed and performance was evaluated for maize crop. Three forward speeds (0.8, 1.3 and 1.7 km h⁻¹), two seed spacings (24 and 16 cm), two types of punches (type 1 and type 2) were selected to evaluate the punch planter in two different types of soil conditions (sandy clay loam and clay with rice fallow). The seed disposing parameters like seed miss index, seeds multiple index and quality of feed index were analyzed. In sandy clay loam soils, quality of feed index was decreased from 84.9 to 83.4% and 85.8 to 84.9% for 24 cm punch spacing and for type1 and type 2 punches, respectively, if speed increased from 0.8 to 1.7 kmh⁻¹. In clay soils with rice fallow field, the quality of feed index was decreased from 81.9 to 80.7% and 84.3 to 83.4% for 24 cm punch spacing and for type1 and type 2 punches, respectively, if speed increased from 0.8 to 1.7 kmh⁻¹.

Keywords: *Punch planter, Quality of feed index, Seed miss index, Seeds multiple index.*