

# Development and Evaluation of Zero Till Drill for Maize Crop in Andhra Pradesh

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## ABSTRACT

During the last 5 years there has been a growing effect by the government to increase the area under maize cultivation, because this crop has ability to thrive under minimal water requirement of 400-600 mm. However, the desired success has not been achieved due to its lower productivity level owing to poor level of mechanization. Preparation of seed bed is the most drudgery involves operation which requires more energy and cost. To reduce the cost involved in preparation of seed bed, to complete the sowing operation in time; a zero till drill has to be developed for maize crop which can sow the maize seed in paddy harvested field without any seed bed preparation. After fabrication and assembly of zero till drill, the field test was carried out. For calculation of cost economics the zero till drill sowing was compared with conventional method of manual dibbling. Effective field capacity of zero till drill was 0.357 ha h<sup>-1</sup>, efficiency of the zero till drill was 74.3%. Grain yield in zero tillage method was 3416 kg acre<sup>-1</sup> and manual dibbling method was 3120 kg acre<sup>-1</sup>. There was an increase of 8.66% in yield was observed in zero tillage method over manual dibbling. With zero till drill results in saving of production cost of 21%, saving in time of 75% over conventional method of manual dibbling.

**Key words:** Grain Yield, Manual dibbling, Seed Bed, Zero Till Drill.