

Performance Evaluation of High Clearance Tractor Sprayer for Cotton Crop

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ABSTRACT

Agriculture is one of the major sectors in Indian economy. Cotton 'the white gold' is one of the most important commercial. It sustains the country's cotton textile industry, which is perhaps the largest segment of organized industries in the country. India ranks third in the world in production of cotton crop. The spraying and weeding units were constructed on the developed high clearance unit for cotton crop. Spraying system was fabricated for applying chemical at various stages of the crop, a spraying unit with liquid quantity of 300 litres' with developed and attached to the high clearance tractor. Three nozzles were used for spraying and mounted on the boom to cover three rows of the crop. The nozzle height can be adjusted based on the crop requirement. The field performance of developed high clearance sprayer indicated that the machine can cover an area of 1200 m² with 150 litres, the tank is refilled after spraying of the 0.24 ha area, the tank refilling time was 15 minutes and the boom sprayer field speed was varied from 2 to 4 km/h depending upon the field condition.

Key words: *High clearance tractor, sprayer, nozzles, cotton crop*