RESEARCH ARTICLE

DEVELOPMENT AND MODIFICATION OF BROAD BED FURROW MACHINE WITH WEEDER ATTACHMENT FOR WATER STRESSED CROP

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Abstract: Farmers follow traditional methods for sowing water stress crop. Some farmers used seed drill to sow water stress crops, but the yield of water stress crops was reduced due to improper drainage of the field. To solve these issues, a broad bed furrow machine powered by a tractor has been developed and evaluated. The method of water stress crop sowing is gaining popularity sowing to its main advantages is saving in irrigation water and other critical farm input as compared to sowing on flat fields. Mechanical management of weeds allows farmers to reduce or even eradicate the use of herbicides and contribute to a better climate. Once covered by moving dirt, weeds are mostly killed during mechanical weeding; hence for weeding with the broad bed furrow machine weeders are attached.The actual seed application rate with fluted exposure of broad bed furrow machine was 18 mm and 27 mm,also the actual fertilizer application rate was calculated. Field performance was evaluated by field capacity was 0.37 ha/hr, field efficiency was 68.5%, Weeding index of the machine was 70%. The functional performance of different system of seed drill was satisfactory during field. Seed drill gives fairly uniform row to row spacing.

Keyword: Broad bed furrow machine, Design of weeder attachment, Water stress crop, Efficiency

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