

## Tractor Operated Garlic Weeder for Raised Bed

### Utility

Currently, weed control in garlic is predominantly carried out manually using traditional hand tools in an upright bending posture, which often causes back pain and physical strain among labourers. Weeding alone accounts for nearly one-fourth of the total cost of garlic cultivation and typically requires 50–60 man-days per hectare. Moreover, labour availability during peak agricultural periods is often inadequate, leading to delayed weeding operations and consequent yield reduction. At present, no suitable mechanical weeder exists for garlic crops. To address this issue, a tractor-operated garlic weeder has been developed to improve efficiency and reduce labour dependency.



### Salient features

- Mechanical weeding in garlic crop
- Saving in labour, cost and time

Particulars	Details
Type of tine	Spring type (Ø6 mm, 300 mm length)
Number of rows	7 and 10
Row spacing	100 and 150 mm
Provision for depth control	Two depth control wheels at both side
Suitable crops	Garlic & Onion
Soil type	Black cotton soil
Soil moisture content	20-25 % (db)
Depth of operation	45-60 mm
Forward speed	1.0-1.5 km/h
Effective field capacity	0.12-0.16 ha/h
Field efficiency	75-85 %
Weeding efficiency	65.0-75.0%

### Benefits over conventional/ traditional method

Save 60-70% cost and 85-95% labour as compared to manual dibbling.

**Design:** ICAR-CIAE, Bhopal

**Commercialization Status:** Ready for Commercialization

**Proposed stakeholders:** Farmers, Custom Hiring Centre operators etc.

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