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# ***Small Scale Farm Mechanization***

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***<http://vegetables.wsu.edu>***

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## Tillage

- Incorporate crop residues
- Weed control
- Create fine seed bed
- Disease and insect management
- Soil aeration
- Break up soil pan












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image courtesy prairiedays.com


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Kleinhenz



**Plowing – initial ground breaking roll over soil, brings bottom to top, requires most HP**

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## Marking Rows







## Mechanical Seeding



## Transplant Holes



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## Cultivation

- **Weed control**
- **Crops that are easily cultivated**
  - **sweet corn**
  - **beans**
  - **garlic**
- **Crops not easily cultivated**
  - **carrots**
  - **onions**
  - **beets**

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## Weed Control



**Wheel Hoe**



















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<ul style="list-style-type: none"><li>• <b>Provide water to crop but not weeds</b></li><li>• <b>Moisture in the canopy can promote disease</b></li></ul>	











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## Harvest

- **Labor**
- **Sorting – quality control**
- **Field cooling – hydrocooling and fan**
- **Storage - The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks, USDA ARS Ag Handbook No. 66**  
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## Mechanical Harvesting







