



# Conservation Systems Research

## *Vegetable Transplanter for High Residue Systems*

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**Conventional vegetable transplanters** can be modified to work in high-residue conservation systems.

In the absence of plowing, the transplanter must be capable of:

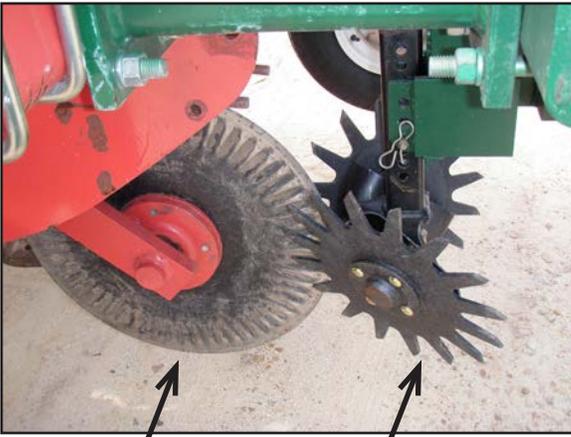
- Breaking compacted soil layers with minimal disturbance of surface soil.
- Pushing cover crop residue aside to prevent jamming, hairpinning, and blowout.
- Provide good soil contact with the seedlings.

### **Modifications for High Residue Systems**

Modified RJ Transplanter (RJ Equipment, Inc., [www.rjequipment.net](http://www.rjequipment.net)).

Modifications include a subsoiling shank to breakup subsoil compaction with minimal surface disturbance, a coulter to cut through the residue, and row cleaners to push residue away from the seedling bed.





Coulter

Row Cleaners

### Row Cleaners

Row cleaners slide residue to the sides of the seedling bed, avoiding residue buildup that could jam the transplanter or leave residue in the row to cause poor seedling placement or soil contact with the seedlings.



Coulter

Row Cleaners



### Transplanting into Clean Zone

Seedlings are transplanted into the cleaned zone.

Residue has been moved aside to allow good contact with the soil and to keep residue from interfering with the operation.

Press wheels firm soil around seedling roots.

**Major benefits of transplanting vegetables into cover crop residue include:**

- moisture retention,
- improved soil quality,
- cleaner vegetables,
- erosion control, and
- weed control.

