Revising the transplanter

New equipment can speed up the sluggish pace of placing transplants in the field.

By Kelly Barton

The last major renovation of transplanters was decades ago, when hitches were added to the machinery so tractors, rather than mules, could pull the equipment.

Though new models now can pierce plastic and reduce some labor, a truly automated transplanter that did not require workers would be the biggest renovation in the equipment since horses were put to pasture.

"Innovations in transplanters have occurred during the past several decades and have culminated in what are described as automatic transplanters," said Hal Brewer, an agricultural engineer with the USDA Agricultural Research Service in Tifton, Ga. "These transplanters still require a great deal of hand labor, are not compatible in how they accept seedlings from greenhouse operations, and are not widely available to growers."

While many growers have resigned themselves to the fact that transplanting always will be a slow, tedious job, some agricultural engineers say they are nearing fully-automated transplanting equiment.

Brewer has been experimenting with automated equipment since the mid-1970s. The results of his labor could be commercially available this decade, he said.

Brewer's automated transplanting system uses free-cell trays to grow seedlings, automatic sorters to grade emerged seedlings and automatic packing machines to transfer grown seedlings into shipping modules. The modules are delivered to automatic transplanters in the field, and all of the automated machines are controlled by computers.

"Where our equipment differs is we don't have any people riding the transplanter to shift the seedlings

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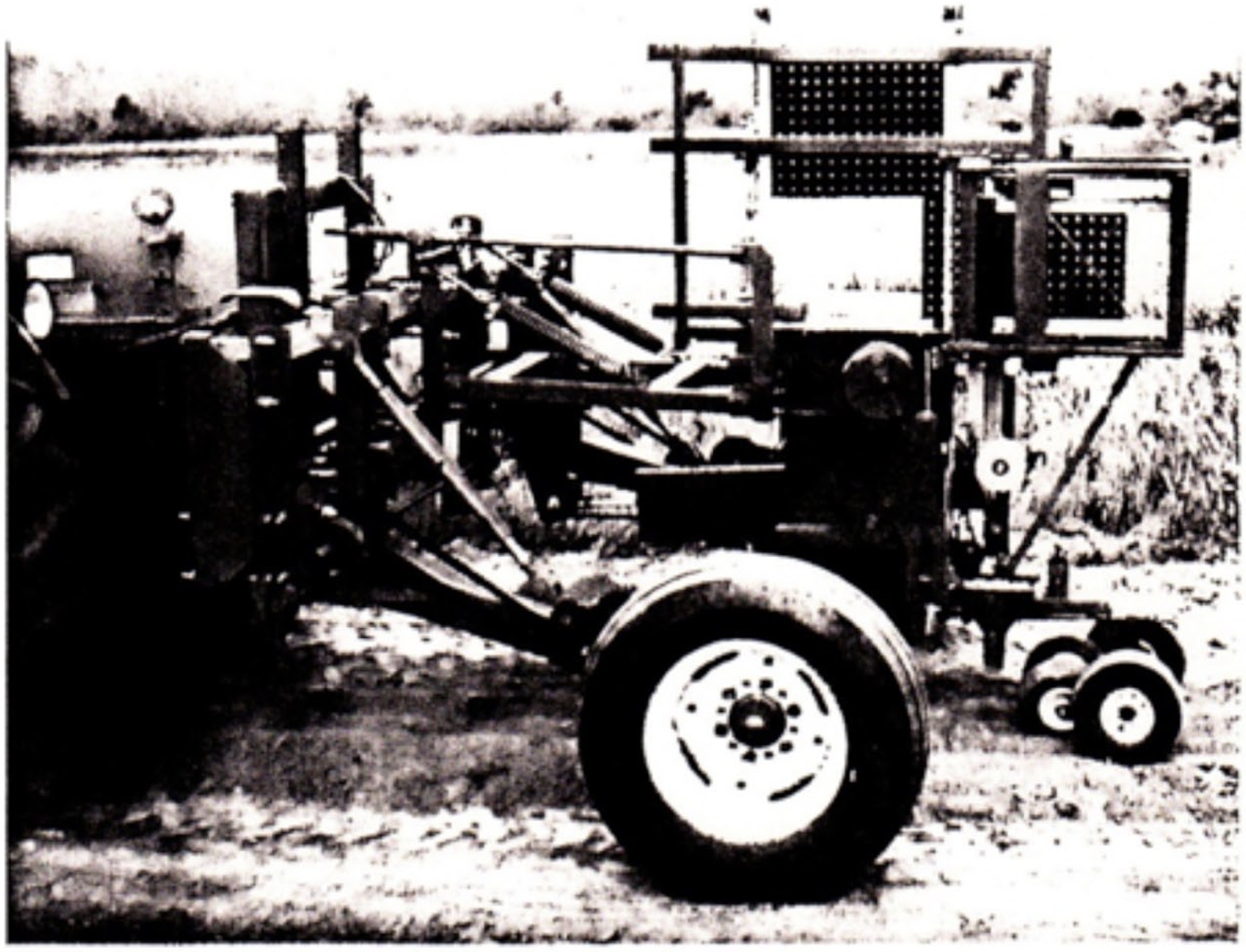
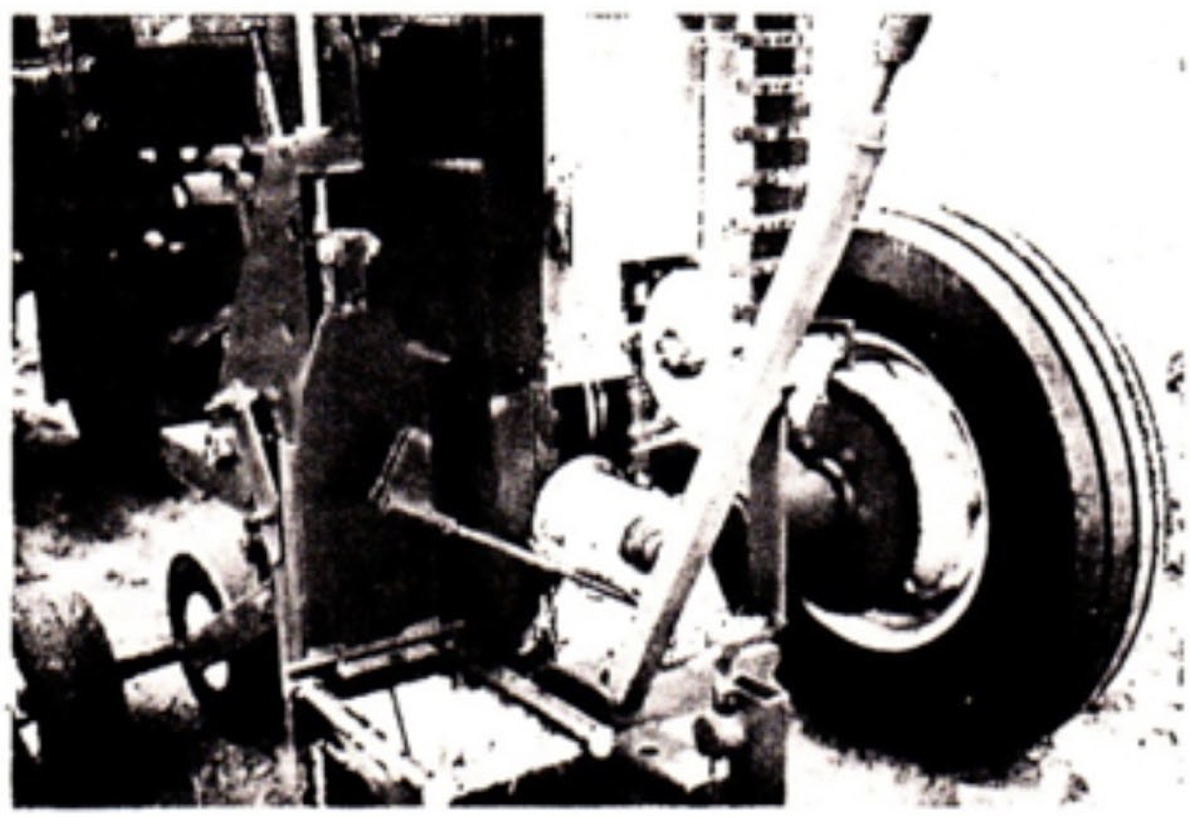
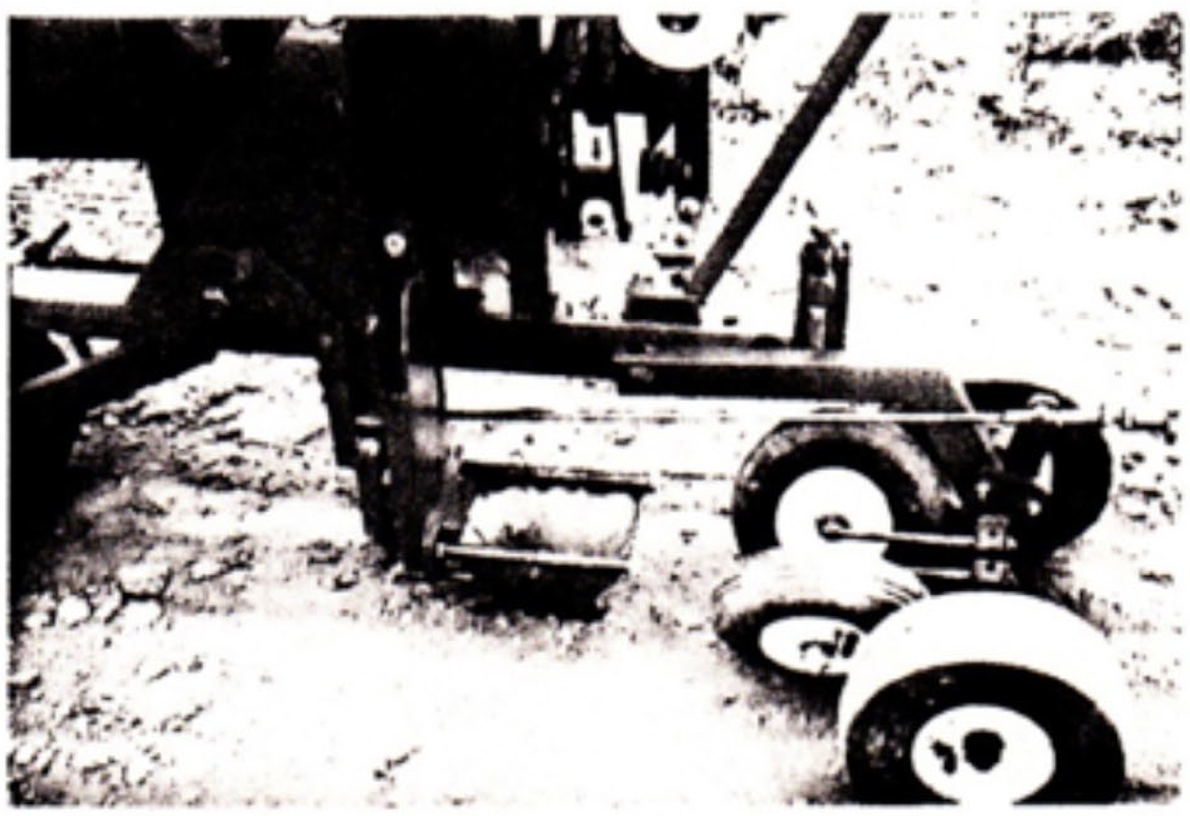


A transplanter from Renaldo Sales and Services can plant 120 transplants per minute. The new equipment should be available sometime this year.





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