

Equipment

Transplanting Through Plastic

ity to jump across ditches.
Estimated planting speed is 6090 per minute with the semi-automatic model, and 120 plants per minute with the one that is fully automatic.
"Automatic planters are not new to the industry, but most have had limited success in being accepted by growers," Faulring says.
"Some of the reasons for the slow acceptance have been the need for

## Plastic mulch is no barrier to the new Posi-Flow Planting System.

## By Jean D. Aylsworth Staff Writer

ITH more and more vegetable crops being grown under plastic mulch, agricultural design engineer Frank Faulring of Renaldo Sales and Service, North Collins, NY, saw the need for equipment to effectively plant seed or transplants through the plastic. The company developed the Posi-Flow Planting System that utilizes a single injector tool bar concept to burn holes into the plastic, inject seed or position transplants, inject plug mix where applicable, and wet the planted material. "Simplicity is one of the key elements of this system," Faulring says. "It is able to perform many functions with a mechanism that has just seven moving parts." Growers using the transplanting

cause at that time most growers were direct seeding," he says. "Today, by our own estimates, nearly 90% of the growers we come in contact with use transplants."

## How It Works

With the plant setter, the flow of plants through the machine starts when the tray is pushed into place and a series of pokers dislodge a row of plants from the tray onto a series of corresponding needles attached to a belt. The needle belt moves the plants vertically. When a row has cleared the tray, the pokers slide the tray horizontally one cell space, withdraws it, repositions it over the next row of justed depth. In the last step, a pair of reciprocating packer wheels packs the soil tightly around the plant.

The plant setter is unique in that it can work with a variety of different commercially available transplant trays without any modification.



**66** Simplicity is one of the key elements of this system. "The only limiting factor is that the tray must be of rigid plastic and have drain holes in each cell," Faulring says. "Plants are handled by the root zone area only with no contact to the foliage or stem area by machine parts."

The plant setting system will be released in two models: one fully automatic and the other semi-automatic.

The fully automatic model will be equipped with a tray indexing system requiring one worker for every 4-6 units. The semi-automatic model will have a manual feeder system requiring one worker per unit. The company says the semi-automatic model should be available for shipment this fall, with a conversion kit available as an upgrade for total automation ready in 1993. Planting melon seed through plastic using the Posi-Flow system. It is adaptable to various production methods.

use of special trays or sizes of plants and limited adaptability to various row centers. Also, virtually all of these other planters are designed for in-row bare ground planting with no capabilities for planting through plastic mulch. "The Posi-Flow system, on the other hand, is adaptable to various production methods, including growing under plastic. The equipment offers choices for growers that make it suitable for almost any vegetable operation."

system can add or subtract functions depending on their own needs. Various accessories for the system — such as the burner and water injector — will work equally well in the transplanter.

Each unit can be changed to accommodate various row configurations. Faulring says these options make the equipment adaptable for vegetable growers with 20 to 2000 acres.

"We started developing the seed planter about eight years ago be**99** — Frank Faulring, Renaldo

plants, and dislodges them onto the needle — all in one cycle. As the needle belt moves the plant downward, a stripper device grabs the root zone portion of the plant, removes it from the needle belt, and deposits it in the planting cup. This cup carries the plant down, and releases it after the cup has penetrated the bed to its ad-

## Make The Adjustment

Both models can be adjusted for in-row spacing from 8-24 inches. Both will work on bare ground as well as plastic mulch, can be used on raised beds, and have the abil-