Three-In-One Machine "Shapes, Covers, And Irrigates" Seedbeds For Vegetable Crops

Michael Dunn, operator of a fruit and vegetable farm near Chesterfield, Ill., designed and built a three-in-one machine that shapes planting beds, lays down drip irrigation hose, and then covers the seedbed and drip hose with a 3-ft. wide layer of black plastic.

The 3-pt. mounted machine is made from angle iron and sheet metal. A spool of perforated irrigation hose is carried on top with a roll of plastic underneath. A pair of small rubber wheels holds the plastic against the ground while a pair of angled steel blades throw dirt onto the edges of the plastic behind the wheels. A steel roller helps flatten the plastic against the bed ahead of the wheels.

"It does a nice job and is a low cost way to eliminate chemicals and conserve water at the same time. As far as I know there's nothing like it on the market," says Dunn. "I use a 22 hp tractor to pull it. I used it for the first time last spring to plant strawberries in rows 18 in. apart, with one row on each side of the bed. I used a razor or knife to slit the plastic and then hand planted the strawberry plants, staggering them within the rows. The drip irrigation hose runs down the center of the bed and between the two rows. It drips water out every 12 in. so it irrigates just the plants and not the surrounding soil, which conserves water.

"To start down the row I first hand feed the plastic and hose under the roller and wheels, then let the machine down and pull forward. Since the photos were taken I've replaced the angled steel plates with discs which do a better job of pulling dirt up on top of the edges of the plastic.

"I think the same machine could be used with any vegetable or fruit crop that does well in raised beds, including cantaloupe, watermelons, tomatoes, bell peppers, etc. The black plastic draws heat to the soil which gets plants off to a faster start."

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Dunn's machine shapes planting beds, lays down drip irrigation hose, and then covers seedbed and drip hose with a 3-ft. wide layer of black plastic.

"Tree Pusher Fork" Works Great For Clearing Trees

"I used to push trees over with the bucket on my front-end loader but pushing down some stubborn trees was hard on it. I got tired of repairing the bucket so I decided to come up with some kind of pusher," says Calvin Jackson, Chouteau, Okla., who ended up with what he calls a "tree pusher fork".

"I've been using it for several months to clear land and I don't see how I could ever improve it. It'll pull the hole tree, including stump and roots," says Jackson.

The V-shaped pusher is made from 1-in. thick steel plate. Key to its success is a 3/4-in. steel bar that's welded to the inside edge of the "V". It provides a good grip on the trunk without cutting it off. The "V" is angled at 30°.

The tree pusher mounts on front of a 40-hp. dozer. "I've pushed out trees as large as 20 in. dia. with the dozer. I also put it on a 70 hp. farm tractor and it did a good job as long as it could get traction. Being able to get all the tractor front end weight on the tree trunk is the key to pulling out the tree so the hydraulic system needs to have good down pressure," notes Jackson, who says he tilts the fork down slightly as he pushes against the tree and then lowers the fork. Once the tree starts to pull out, he backs up, lowers the fork under the exposed roots, and pushes again while lifting so the entire tree comes out of the ground. Then he can use the fork to pick up the tree and move it to a pile.

The tree pusher attaches to the loader frame with four pins.

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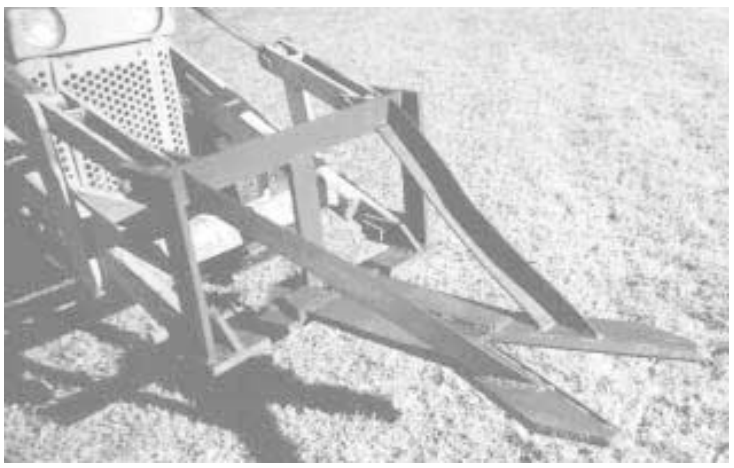

V-shaped pusher has a 3/4-in. steel bar that's welded to inside edge of "V". It provides a good grip on tree trunk without cutting it off.

Splitter-Equipped Spreader Hauls Wood Home

"I split wood with it, haul the wood in it, and then automatically unload with it using the apron chain," says Mark Deneen, Spring Grove, Minn., who mounted a home-built wood splitter on back of an old manure spreader.

He started with a Knight 250-bu. spreader that already had the beaters removed. He removed the pto shaft and shortened up the pto drive chain that originally operated the apron, then mounted a hydraulic motor on front of the spreader. The motor drives the apron. To power the spreader – and the splitter on back - he mounted a 12 hp, electric-start gas engine equipped with a 2-stage hydraulic pump on the tongue.

To build the splitter, he used a 6-ft. length of 8-in. wide steel I-beam and a 4-in. dia., 32-in. long hydraulic cylinder. The splitter has a stand at the bottom and is bolted to the side of the spreader at the back. A steel slide allows the splitter to be lowered to the ground to make it easier to split big chunks.

"I split wood for my outdoor wood burning stove which I use to heat my home. It works a lot better than the 3-pt. mounted splitter I had been using because I don't need a separate tractor to power the splitter and another rig to haul the wood home," says Deneen.

"I paid $500 for the spreader which was in good shape with no rust. Except for the log splitter valve, all the parts are from used material. The spreader will hold about 1 1/2 cords of split wood. I mounted a spotlight on top of the splitter so I can work at night. I use it a lot because I operate a welding shop and often have to split wood in the dark. The light is powered by a starter-generator on the engine.

"The splitter controls are on back and the apron and endgate controls on front. To unload wood I put the pickup transmission in neutral. As the wood piles up on the ground the spreader pushes itself forward."

Deneen says he's willing to build spreader-splitters for others.

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Deneen mounted home-built splitter on back of a Knight 250-bu. spreader.

To power the spreader - and the splitter on back - he mounted a 12 hp, electric-start gas engine equipped with a 2-stage hydraulic pump on the tongue.