One way to anchor plastic jugs is to run lengths of rerod through the handles. "The jugs let me plant 1, 2 or even 3 weeks earlier than usual," says Jim Shover.

Plant Early With Mini-Greenhouses

Jim Shover plants early using dozens of 1-gal. greenhouses made from plastic water jugs. Planting seedlings under the uncapped jugs protects them against cold snaps without cooking them in hot spells. It also protects them against winds that can stress or even snap a tender seedling.

"I can plant 1, 2 or even 3 weeks earlier than usual," says Shover. "I keep the jugs in place until the leaves start to protrude from the neck of the jug."

Shover uses the little greenhouses to kick-start everything from strawberries to sweet corn in hills. As one crop gets past the danger stage, he moves the jugs to new seeds or seedlings just set out in his raised beds.

There are multiple options for securing the jugs in place. When setting out plants that will spread and take up a lot of room in a bed, he will cut away 3 sides of the bottom of a jug. This allows him to set it in place with the bottom bent back and away and the large opening over the plant.

"The fourth side of the bottom becomes a hinged flap that I can secure in place with a clod of dirt, a stone or half a brick," says Shover. "I just push some dirt up over the other 3 edges to seal it."

If setting multiple jugs out in a row across the width of the garden beds, Shover can cut the jug bottom away completely and push them into the soil with handles facing the same direction. A length of rebar slipped through the handles provides needed weight to secure the jugs in place. It also provides a handle for lifting jugs away.

Another method of anchoring the jugs is to fold the bottoms out to the side and set a brick on top.

Single jugs without bottoms can be secured simply by slipping them over a stick adjacent to a seedling. The stick is taller than the jug and sticks out of the top opening, keeping the jug from blowing over.

"With the cap off, there is no worry about heat either," says Shover. "The only damage comes when the leaves touch the side of the jug."

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Dick Schirado turned a swather into a self-propelled rake by mounting the rake arms in place of the swather's header and mounting a dolly on the rake's drawbar.

Self-Propelled Rake

Dick Schirado hated to waste a good swather when the header was shot, so he turned it into a self-propelled rake.

"I had the swather tractor and an old V-Rake, so I mounted the rake arms to the header arms on the swather," says Schirado. "I mounted a dolly from an old air seeder tank to the rake's drawbar."

Opening and closing the rake arms required more hydraulic pressure than available on the swather. Schirado mounted a hydraulic pump on the power shaft that had driven the head.

"It's a better rake this way, more stable," says Schirado. "It used to tip in ditches; now I can rake any terrain. It's easier on my neck, too. I don't have to look behind me. I only have to watch the hay coming at me."

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Spring-Loaded Draw Pin Puller

Any farmer who's ever unhooked grain, silage or hay wagons during harvest knows the process requires a lot of time and steps during a busy day. Sasketchewan farmer Bob Eylofson found a way to make the unhooking process a whole lot easier. He built a simple device he calls the Farmland Pin Puller.

Eylofson says the device saved him a lot of steps and he thought it was worth building for other farmers. He brought the idea to Troy Schimke of GroundUp Ag in North Dakota. Schimke had his engineer refine the design so it mounted easier, was adjustable for different length pins and folded when not in use.

Now the refined Farmland Pin Puller is a metal frame, pulley and rope system with a universal mounting that fits most tractors. The puller frame is bolted to a tractor's drawbar just in front of the hammerstrap. A vertical arm extends up from the mounting bracket and holds a horizontal cross bar. When the horizontal bar is extended above a draw pin and the puller is connected to the metal lift strap, it will automatically remove the pin, even when the operator is in the tractor.

Eylofson and Schimke say the key to the Pin Puller's workability is a compression spring located in the horizontal arm. Instead of moving the tractor back to loosen the pin, you simply hook onto the pin and when you move the tractor the pin is pulled by the spring-loaded puller and you drive away. The Pin Puller is adjustable vertically and horizontally to match different drawbar and drawpin configuations. The vertical and horizontal assembly are easy to remove when the puller isn't being used.

Spring-loaded pin puller yanks out the pin when tractor position is shifted.

Schimke says several farmers who've bought the Pin Puller have told him it's well worth the investment because it saves time and steps throughout harvest.

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Tree Plucker Lifts Out Trees, Roots And All

"We built it heavy so it'll last when you're just beating the crap out of it," says machinist Matt Olander about the Tree Plucker he built to remove hybrid poplar trees up to 8 in. in dia. With the power of a 100 hp. Deere track skid loader behind it, trees are plucked out, roots and all.

"This is made for speed," Olander says. "It can clear an acre of trees in an hour."

The need for the unique plucker came about because local land owners had leased their land to plant hybrid poplar trees in several counties of Minnesota for pulpwood. But after demand changed, land owners were offered a buyout - basically to cover the cost of removing the trees to put the land back into crop production. The poor quality wood wasn't even worth hauling to distant chipping plants, so many landowners bulldozed and burned the trees in their fields. Olander and a neighbor worked on the Tree Plucker for their own use.

To build the jaws he used 1/2-in. steel and machined the bushings, pins and slides and added grease zerks.

It's old-school mechanics, he explains, because hydraulics take too much time. The Tree Plucker can remove a tree in about 5 to 6 seconds. The operator runs into the tree with the spring-pressured jaws, which close and grab on impact. They open and release the tree when the skid loader stops.

It's a rough job, Olander admits, hitting into trees all day. A steel cage in front of the skidloader protects the driver. But pulling the whole tree up saves the step of dealing with roots later. There is less dirt on the roots than when trees are bulldozed, so they dry faster when piled in berms for burning at a later date. Meanwhile, producers are able to fill the holes left by the trees by plowing and can plant crops between the berms.

After doing their own properties, Olander started contracting out to other farmers. Besides taking out hybrid poplar, the Tree Plucker works well on removing smaller trees under power lines and along fence lines.

With the power of a 100 hp Deere track skid loader behind it, Tree Plucker plucks trees out roots and all (above). Spring-pressure jaws close and grab on impact, then open to release tree when skid loader stops.

It works best in lighter soils and for smaller trees, Olander notes. He doesn't manufacture the Tree Plucker.

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