Billy Mayhew converted an Allis Chalmers 4-row corn planter into this 2-wheeled round bale mover. A remote-controlled electric winch is used to raise and lower the bale.

He removed seed boxes from the planter and welded braces to the bottom of the planter carriage, then bolted on a 3-pt. bale spear.

Round Bale Mover Built From Corn Planter

"It may look a little different, but it works great and saved me money," says Billy Mayhew, Bedford, Va., who converted an Allis Chalmers 4-row corn planter into a 2-wheeled round bale mover.

He pulls the unit behind his 4-wheeler and uses a remote controlled electric winch to raise and lower the bale.

"To build it I took all the seed boxes off the planter and welded 2 braces to the bottom of the planter carriage, then bolted on a 3-pt. mounted bale spear," says Mayhew. "Spacers in the bolts allow the spear to pivot. I added a receiver hitch to the planter frame and mounted a 2,000-lb., 12-volt winch on it. The winch is used to tilt the spear forward and backward in order to raise and lower the bale."

When not in use, the remote control stores on a length of tubing attached to the receiver hitch. "To use the winch on my pickup I just pull a pin and remove the receiver hitch, winch and remote control together as one unit," says Mayhew.

He took a hydraulic cylinder off the planter carriage and added a top link that lets him adjust the position of the carriage. "I plan to get rid of the winch and replace the top link with a 12-volt actuator, which will let me raise and lower the wheels instead of the bale spear," notes Mayhew.

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New Ways To Plant "Energy" Crops

New Energy Farms (NEF) is making "energy crops" easier to raise with their innovative planting systems. From planter technology to plant propagation, NEF is cutting the cost and speeding the productivity of biofuel crops.

"Our planting systems can adapt to different planting densities with different crops," explains Paul Carver of NEF. "We've worked with 6 different perennial grasses from Miscanthus to sugar cane for biomass, bioethanol, animal feed and sugar."

Traditionally, many of these grasses have been hand-planted. NEF realized planting needed to be automated to catch on in a big way.

Working with W.H. Loxton in the U.K., NEF developed a fully automatic planter to plant rhizomes into properly prepared fields. It can handle all known rhizome types. The planter can cover more than 50 acres a day with a hopper that holds enough material to plant nearly 4 acres at a fill. It can variably rate plant from 4,800 to 24,000 pieces of rhizomes per acre. The 4-row unit plants on a 30-in. row spacing.

Because lots of potential biofuel crops require vegetative cuttings, not rhizomes, NEF also developed and introduced the Crop Expansion Encapsulation & Drilling System (CEEDS). Instead of cuttings, plant tissue is compressed into pellets encapsulated in a growing medium that can contain growth promoter and/or crop protection products. It can be handled and planted much like an overgrown seed by conventional equipment or with the planter developed by NEF.

"With CEEDS, we're trying to make establishment of energy crops as precise as planting corn," says Carver.

The method cuts the time required to multiply new cultivars by a third. It cuts planting material volume by 75 percent and transportation costs by 80 percent compared to rhizome or stem cuttings.

CEEDS plant tissue is healthier, and shoots emerge with more vigor and in greater number than with rhizomes or stem cuttings. Because the plant tissue used is produced under controlled, greenhouse conditions, new cultivars can be produced faster and at any time of the year.

"We have clones for Miscanthus, Arundo donax, Napier Grass, Energy Cane and Sugar Cane," says Carver.

With cellulosic ethanol plants now in place in Iowa and Kansas and a plant planned to open in North Carolina, biofuel crops may soon be in high demand. Chemtex, the North Carolina plant, is projecting a need for 300,000 tons of energy crops.

"There are some large biofuel projects that will need feedstock crops put in the ground in a fairly narrow window," said Carver. "We're aiming at 16 ton per acre yields with our equipment."

New Energy Farms is developing ways to plant perennial grasses used for biofuel. The 4-row planter shown above can cover more than 50 acres a day and can variable-rate plant up to 24,000 pieces of rhizomes per acre.

For biofuel crops that require vegetative cuttings, plant tissue is compressed into pellets encapsulated in a growing medium.

Carver says NEF is talking with several agricultural equipment manufacturers. "We haven't decided yet if we'll lease or sell equipment," says Carver. "Pricing has not yet been determined either."

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Home-Built 3-Pt. Root Ripper

"I needed a 3-pt. mounted ripper to rip roots around tree stumps. I didn't like the light-duty Cat.I rippers on the market, and the heavy-duty ones were too expensive. So I built my own," says Connor Bishop, Guilford, Ct.

He used 2-in. sq., 1/4-in. wall tubing to build the unit's frame and bolted the ripper blade to it using 1-in. bolts. He used 3/4-in. thick, 5-in. wide flat steel for the blade.

"I attached the 3-pt. lift arm pins in the center of the square tubes by making square 'washers' out of thick steel," says Bishop. "The hole in each washer is the same diameter as the pin, and the outside dimension of the washer is square, just small enough to fit inside the tube. I welded 2 of the washers on the pin, one at the end and one part way up. Then I slid them into the square tube and welded them in."

He used a cutting torch to bevel the blade's cutting edge and angled the blade's tip by cutting the flat steel at an angle, repositioning the cut piece, and then rewelding it in after making a deep "V" to allow weld metal to fill in the gap.

"It works great and has held up well," says Bishop. "On larger stumps I use it to rip roots and then push the stump out with my Deere MC dozer. I can rip out smaller or rotten stumps with the blade itself by lifting the 3-pt. while driving forward.

"I used about 10 ft. of sq. tubing for the frame and 3 ft. of flat bar for the blade."

See a video of the ripper in action at www.farmshow.com.

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Connor Bishop used 2-in. sq. tubing to build ripper frame and bolted a homemade blade to it. Tractor's 3-pt. lift arms attach to sq. tubing with square "washers."