**"Pave and plant" rig rolls fields and plants in a single pass. Planter units mount behind 24-in. dia. rollers, creating a tabletop-smooth surface for planting.**

**Folding the wings into transport position causes planter units to raise into a vertical position.**

**"I mounted an IH Cyclone box on top of each roller, with their drive wheels running on the rollers," says inventor Brian Hoogestraat.**

# First-Of-Its-Kind "Pave And Plant" Row Crop Planter

This past winter Brian Hoogestraat built an entirely new planter that rolls his fields and plants in a single pass. His "pave and plant" rig, as he calls it, creates a tabletop smooth surface for planting. The 24 planter units on 22-in. spacings mount behind the rollers.

"I mounted an IH cyclone box on top of each roller with their drive wheels running on the rollers," says Hoogestraat.

Hoogestraat has been collecting parts from old planters over the years. He used the design of an 8-row IH 800 planter with its pivot transport in his frame design. In fact, his Pave and Plant works like 3 IH 800's, two of which pivot.

He started out by building a 3-section frame out of 7 by 7-in. square tubing salvaged from old planter frames. The frame supports both the rollers and planter units.

"I built the rollers out of 1/2-in. thick, 24-in. dia. oil well pipe," says Hoogestraat. "The center roller is 12 1/2 ft. long, and the two wings are each 16 ft. long."

He capped the rollers with 1/2-in. steel plate and mounted them in the frame with 3-in. shafts and roller bearings. The center roller is positioned to ride just behind and slightly overlap the wings.

The planter units ride behind the rollers. When hydraulic lift is applied at the headlands, the center roller tips forward, lifting off the ground. This also raises the planter units and disengages the planter drive. If lift continues, all 3 roller sections tip forward, eventually raising the planter units into a vertical position, the rollers off the ground and the two wings onto their transport wheels. As lift continues, and the tractor moves ahead, the wings pivot behind the center unit.

To get the extreme lift needed to raise the 3 sets of rollers and planters, Hoogestraat combined 4 hydraulic cylinders into two. He butt-welded each pair of 3-in. dia. cylinders with 20-in. strokes into one.

"With the rams going out in either direction, I got the 40-in. strokes I needed," says Hoogestraat.

Folding the wings into transport position the way he did also meant that the marker arms had to be modified. They couldn't fold into a vertical position when not in use. Plus, they had to be 20 ft. long.

**A 3-section frame built out of 7 by 7-in. sq. tubing supports both the rollers and planter units.**

To get the extra length and reposition them for transport, Hoogestraat fabricated two-piece marker arms to fold first on themselves and then back against the side of the pave and plant. He used wing mounts from an old cultivator for the final fold.

"It worked great this spring, and we had very few problems," reports Hoogestraat.

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# "Holey" Gauge Wheels, Notched Closers Geared To Handle Mud

Brian Hoogestraat made a couple of quick planter modifications to help plant in wet soils. A few holes cut into gauge wheels changed them from mud collectors to what he calls "mud hogs". He also converted disc openers into closers with traction.

"I've been using my mud hogs for about 4 years and covered 3,000 to 4,000 acres with them," says Hoogestraat. "They don't plug up like they used to, and they've held up well."

When he got the idea of modifying his gauge wheels by cutting holes in them, Hoogestraat wasn't sure if the stamped steel would hold up when hitting rocks. He tested just a few at first.

"I use a plasma cutter to cut 4 holes out of each rim," says Hoogestraat.

The holes are about 2 in. wide with sides that taper from 4 1/2 in. long on the outside to 3 1/2 in. on the inside. Hoogestraat found it took longer to pull wheels off the planter than it did to cut the holes.

"It only took about half a day to do them all. I just eyeballed them and kept going. After you do a couple, you just get in the rhythm," he says.

When closing wheel bearings started going out, Hoogestraat substituted modified disc openers. He had to machine down the mounting bolts to match the smaller bearings on the opener discs.

"I welded 1 by 2-in. pieces of steel to the rim of disc, alternating them with spaces," says Hoogestraat. "The notches give the wheels added traction in mud."

**Hoogestraat cut holes into his planter's gauge wheels so they don't plug up with mud. He also converted disc openers into notched closing wheels for better traction in mud.**

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