Grain Drill Control Changes Seed Rate On The Go

"It lets me plant soybeans thinner on good ground and thicker on poor ground just by flipping a switch," says Keith Roberts, Morral, Ohio, who modified a 15-ft. Great Plains grain drill with an electric screw actuator tied to the meter lever and controlled by electronic micro-switches.

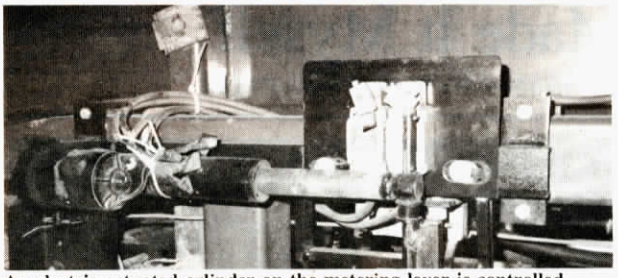
Roberts farms hilly central Ohio farmland that varies from heavy black bottom land to white clay on hilltops. Beans were always too thick on the good ground and too thin on the poor ground. Getting off to change the meter by hand would be too time consuming so, like most farmers, he just aimed for an average.

"The problem with seed drills is that they're so inaccurate. You can set them but you never know what rate they're really planting. With this system you know exactly what you're seeding at any time," says Roberts.

Roberts took a electric screw actuator from a used fertilizer applicator and mounted it horizontally so that the shaft extends just above the metering lever. Then he welded a bracket to the bottom side of the shaft and connected it to the meter lever. Above the shaft, he mounted a metal plate and attached two micro-switches which limit the movement of the actuator shaft. A small lever welded to the top of the shaft clicks the switches on and off as the shaft moves.

The key to the system is a Hiniker corn planter monitor which Roberts adapted to the grain drill using sensors made for an IH Cyclo planter. He put sensors on two of the rows and the output is sent to the control box in the cab. It gives a constant read-out of how many beans are being planted per foot at any time. To vary seed rate, Roberts simply flips the actuator switch, and it moves the meter lever.

"I vary seed rate from as low as 2 1/4 beans per foot to as much as 4 beans per foot, depending on where I am in the field," says Roberts. The micro-switches are set at the upper and lower limits so he can go quickly from one extreme to the other, or stop anywhere in between. "You get to know how much a quick flip of the switch will change the seed rate and you can see instantly on the monitor how much it changes."



An electric-actuated cylinder on the metering lever is controlled by a set of micro switches, upper right in photo.

Because seed size can vary from 2,200 seeds per lb. to 2,600 seeds per lb., Roberts set up the micro-switches so that the limits of the actuator can be changed to adjust to the size of the seed before he starts planting. He simply moves one of the switches in or out, as needed.

Roberts says he's had his best soybean yields ever the last two years. "Just the monitor alone makes a big difference. Anyone who drills beans should equip their drill with a monitor. They might be surprised to find out what they're actually planting."

Total cost for the modification, not counting the monitor, was minimal since he made use of second hand parts. Roberts pulls a pair of 15-ft. drills together and has modified both drills in the same way.

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Low-Cost Way To Double Crop Soybeans, Wheat

"It's a low cost way to tool up for double cropping soybeans and wheat, says Robert Dunton, of Topeka, Ill. He leaves skip rows when drilling winter wheat so he can come back in the spring to drill soybeans into the growing wheat crop.

Dunton uses the same Deere model 1610 drill to plant the wheat (in 10-in. rows) and to interseed soybeans six rows at a time, with 20 in. spacing between rows. When planting soybeans, he mounts a homemade toolbar, equipped with no-till coulters, on the rear of his tractor.

Dunton used the back end of an old Deere cultivator to make the toolbar. He extended it some, using tubular steel. To get enough down pressure on the coulters, he uses hydraulic down pressure, which the tractor provides, plus 1,000 lbs. of added tractor weights. The extra weight provides uniform cutting depth at all coulter locations. Each drill opener follows in the path sliced open by a coulter.

Dunton used Deere plow brackets to mount the ripple-type coulters. He tried wider waffle -type coulters but found they tore out too much ground.

Yields of his intercropped beans have run "equal to conventional planted soybeans or 5 to 7 bu. less, depending on the year," says Dunton. "The system spreads out my labor, permitting me to plant double-crop soybeans early before the wheat is headed out. If I waited until the wheat was harvested before planting the soybeans, I'd be looking at half a yield of beans. Very little of the wheat crop is destroyed in planting the beans," Dunton points out.

Illinois Farmer Finds Many Uses For "Pontoon" Tractor Wheels

When Illinois farmer T. J. Shambaugh, of Oakley, first saw steel pontoon wheels while on a trip into Arkansas rice country, he decided they had application for certain jobs back home on his central Illinois farm.

He's used them for the past five years for such jobs as double cropping (interseeding soybeans into standing wheat), for nailing tall weeds in narrow-row soybeans with a "weed wiper" bar, and for rotary ditching to drain low spots.

Shambaugh bought the wheels from Hedges Mfg. Co., of Weiner, Ark., which specializes in custom building them to fit specific tractor makes and models. No modification of the tractor itself is required to mount the pontoon wheels, says Shambaugh.

"They're virtually unstoppable in mud or snow," he points out. "On dry ground, however, they provide less traction than regular wheels and tires. I put them on and take them off as needed. Takes me about a half hour to change wheels, using the tractor loader."

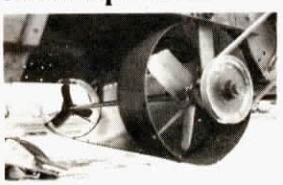
The "waterproof" pontoon wheels are 12 in. wide at the axle and taper down to a 2 in. width at the outer circumference. You don't have to have a powered front end tractor to use them," says Shambaugh. "You can drive them down the road and from field to field, but they do ride rough. When used in narrow 10-in. wide soybean rows, they do very little damage to the bean plants."

Two-Way Combine Chaff Spreader

DuWayne and George Miller, Isabel, S. Dak., built a two-way chaff spreader for their "G" Gleaner combine that they say worked great last season.

The spreader consists of a pair of 12-in. 3-bladed fans which blow the chaff out the sides of the combine. The fans are belt-driven from the straw chopper and run around 2,000 rpm's.

"We like it because of its simplicity, low cost and ease of access to the sieves," says DuWayne. "It does an excellent job of blowing chaff evenly out either side and it's reliable and efficient."



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