Update Kit For Deere Max-Emerge Planters

"I like my Deere Max-Emerge 7200 vacuum planter but I thought it could be improved," says Dale Ven Huizien, who farms near Stockton, III. He came up with a patent pending vacuum meter update kit for Deere planters that works so well it's now being sold by S.I. Distributing, St. Marys, Ohio.

The kit is designed to improve seed spacing in the row and also improve accuracy of plant populations. The new design allows you to plant most seed corn sizes, even mixed sizes, without having to change the vacuum pressure setting.

Ven Huizien has tested the kit for three years on his own farm as well as others.

The kit includes a new 40-cell seed corn disk. Current Deere vacuum meters use a 30cell corn disk. The 40-cell disk needs fewer revolutions to plant the same number of seeds as a 30-cell disk and therefore turns slower. Since the vacuum meter turns slower, you can plant at a faster ground speed without having to increase meter rpm's.

The kit also comes with a modified, adjustable "double eliminator" that's said to virtually eliminate doubles and allows you to plant corn at one vacuum pressure setting, regardless of seed size.

Instead of mounting his Yetter Seed Jet on a gravity wagon, Doug Martin mounted it on a tandem axle grain truck equipped with a 600-bu. box. "It lets us haul a lot more bulk seed, and we can transport it at highway speeds which saves a lot of time," he says.



New kit for Deere vacuum meters is designed to improve seed spacing in the row and also improve planting accuracy.

According to the company, the new design also allows for better seed pickup on hillsides and in high humidity conditions. The seed drops straight down when released from the disk and won't kick out sideways and bounce down the seed tube.

Cost is about \$65 per row.

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Truck-Mounted Seed Blower

The popular Yetter Seed Jet is normally used to blow bulk seed from a gravity wagon to a planter. The Yetter system includes a gas engine, blower, mini hopper, and flexible tubing that runs to a hand-held cyclone that's used to fill the planter with seed.

Instead of mounting the equipment on a wagon, Doug Martin mounted his Seed Jet on a tandem axle grain truck equipped with a 600-bu. box.

"It lets us haul a lot more bulk seed than we could with a gravity wagon, and we can transport seed at highway speeds which saves a lot of time," says Martin, who farms with his father, Jeff, and uncle Tom near Mt. Pulaski, Ill

Jerry Tschantz, an employee of the Martins, did the actual work. He bolted a homemade metal shelf onto one side of the truck frame, just ahead of the rear left wheels, to hold the gas engine and blower. He mounted the inlet hopper on back of the truck box and added a length of rubber skirting on top of the hopper to keep seed from overflowing as the box is raised. The hopper swings so it always stays level as the truck bed is raised.

"We use it for both corn and beans and couldn't be happier with it," says Martin. "We buy the seed in bulk bags and use a forklift to dump them into the truck. The cyclone is attached to about 35 ft. of stainless steel flexible tubing. We added a pair of metal handlebars on top of the cyclone to make it easier to handle. A sheet of plywood keeps the truck's rear wheels from throwing mud up onto the engine and blower."

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Shelf under bed of truck holds gas engine and blower.

Wrenches, saws, and other tools are all pow-

ered by air. So why not cars? Motor Development International (MDI), headquartered in Nice, France, has designed and built what they call a Compressed Air

Technology (CAT) car. It made headlines last fall when it made an appearance at the Paris Auto Show.

The company is currently looking for production partners around the world. They already have a U.S. subsidiary based in New York and the company hopes to begin production in 2003.

"We have had some delays," says Shiva Vencat of MDI, "but will have vehicles to demonstrate the technology and its capabilities for the U.S. market by the second half of 2003."

The CAT design relies on a lightweight body with a small rear-mounted engine and a 1,500-pound aluminum and fiberglass frame. Compressed air stored in two steel-



Seed meter allows planting speeds of 9 mph or more "with greater accuracy in seed spacing than most current planters can maintain at half that speed or less," says inventor Tom Heimbuch.

High Speed Seed Meter "Doubles Planting Speed"

Looking for a way to plant at higher speeds without loss of accuracy, Tom Heimbuch, Cogswell, North Dakota, designed a new seed meter with only one moving part that can be retrofitted to most planters. He says it allows planting speeds of 9 mph or more "with greater accuracy in seed spacing than most current planters can maintain at half that speed or less".

Heimbuch filed for patents on two separate parts of the seed meter in July of 1999 and May of 2000.

"The first patent is on what we call the placement wheel," he says. "The second patent covers the method of singulating the seed."

Heimbuch's placement wheel accelerates the seed backward at the speed the planter is moving forward, giving it a negative speed. This means that when seed touches ground it stays where it hits. "I worked out the physics of this backward to come up with this concept," he says. "It allows the planter to be accurate to within plus or minus 1/4 inch." He says this is a standard deviation of less

than 4, while the standard deviation on a typical new planter is 3.0 to 3.5. Once planters have been used awhile, the standard deviation on accuracy can go up to 5.0 or more, depending on the amount of wear. O n c e he had the placement wheel perfected, he realized he needed a better method of singulating seed. "Current singulation methods aren't accurate at higher speeds," he says.

His universal singulation disc can be produced to handle any size of seed. "There's a separate singulation disc for every crop. It will work with small-seeded vegetables or the largest dry beans," he says.

Heimbuch is now looking for a manufacturer to produce the new planting units, with the idea of making them available for retrofitting existing planters. "We can make kits that take only 30 minutes per row or so to install," he says. "With only one moving part, it should be relatively maintenance free." He figures the cost will be about \$1,000 per row.

"One of the positive aspects of this idea is that if you're able to double your planting speed, you can use an 8-row planter to do the same job as a typical 16-row planter," he says. "The only thing that will keep you from going faster than 8 or 9 mph is the condition of the field. If you can drive faster and still control the tractor, this meter will still be accurate."

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Air-Powered Car Ready For Market

reinforced thermoplastic air tanks attach to the undercarriage of the car. Air in the tanks is cooled to minus 100 degrees Centigrade and compressed to 4,500 lbs per square inch.

The air is injected into the engine where it expands rapidly as it is heated by ambient air in two consecutive chambers. The heat exchange process between the first smaller chamber and a second larger chamber drives the engine's four pistons. The only exhaust is pollution-free, filtered air.

The five-seat car is designed for commuters and short haul drivers such as taxies and delivery vehicles. It has a range of 120 miles at an average of 30 mph, but can go from zero to 50 mph in seven seconds, according to MDI. The vehicle has yet to be tested by an independent agency.

The air car is equipped with a compressor that can run off any outlet for partial refills. MDI is confident that commercial air service stations will develop where a CAT vehicle



Car is powered by compressed air stored in two steel-reinforced thermoplastic air tanks that attach to car's undercarriage.

can be refilled quickly. They have designed such a station that they say will cost \$100,000. CAT vehicles are projected to cost between \$12,000 and \$15,000.

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