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A winch pulls a 1,500-gal. anhydrous wagon up ramps and onto the planter, next to a pair of water tanks. Boom lifts bulk seed container into place.

ONE-OF-A-KIND PLANTER CONVERTS ANHYDROUS TO LIQUID FERTILIZER ON-THE-GO

Giant New Planter: The Rest Of The Story

Two issues ago (Vol. 23, No. 3) we told you about Tim Scheetz, Nauvoo, Ill., who reworked his Cat Challenger tractor to pull a Seed Hawk planter. At the time he had not yet finished rebuilding the planter.

We recently stopped by his farm to see how the planter turned out and discovered that the giant 40-ft. planter has features on it you won't find anywhere else. He calls it the "Wizard cargo cart".

Scheetz chose the Canadian-built Seed Hawk as the basis for his planter because he felt it could plant no-till corn, beans and wheat with more efficiency than any planter he'd ever seen in the Midwest. "It's a high-capacity, one-pass rig that lets me plant all my crops in narrow rows," says Scheetz. "The great thing about the design of the Seed Hawk is that it gives you narrow rows under true no-till conditions without plugging up. I used it last fall to plant 300 acres of wheat in 12-in. rows."

The air seeder is equipped with three gangs of widely-spaced, hydraulic-operated row units that simply clamp onto the frame. Each row unit mounts on a 7-ft. arm fitted with a hydraulic cylinder. The cylinder applies downpressure to a pair of 1/2-in. wide "frac-

turing knives" that place seed and fertilizer in the ground with minimal sidewall compaction.

Seed gravity flows down to Valmar seed meters mounted on front of the rig's frame and is then blown back to the knives. Hydraulic-driven roto-tillers mount ahead of the planter units. A ground-driven wheel in front puts the seed and fertilizer meters into gear.

Scheetz welded a semi trailer detachable fifth wheel hitch and platform onto the air seeder's frame. The fifth wheel hitch carries all the weight of the planter. Two 125-gal. hydraulic oil reservoirs mount on the hitch to supply oil to operate the tillers, and two 500-gal. water tanks mount on back of the platform. A hydraulic-powered winch pulls a 1,500-gal. anhydrous wagon right up onto the planter. A hydraulic-powered boom lifts a bulk seed container up onto the planter, too.

Scheetz has set a goal of raising 300 bu. per acre corn next year, which requires a lot of nitrogen fertilizer. To accomplish this he's equipped the planter to convert anhydrous ammonia into liquid fertilizer right in the field. A heat exchanger injects anhydrous ammonia into a reactor, along with a water pump which injects water into the reactor.

This mixture is then converted into a liquid nitrogen form. The liquid nitrogen is delivered through hoses and injected into the ground 1 1/2 in. off to the side and 3 in. below the seed openers. Redball monitors let him keep an eye on the amount of fertilizer going to each row.

"As far as I know converting anhydrous to liquid nitrogen in the field is the only way to apply huge amounts of nitrogen without it being in an anhydrous form," says Scheetz. "I borrowed the idea from sugar cane growers in Louisiana. My goal is to apply 285 units of nitrogen per acre. If that nitrogen was all applied as anhydrous ammonia I'd have to apply 325 lbs. of anhydrous per acre, which would harm both the soil and the seed. Also, much of it would escape from the ground. The advantage of liquid nitrogen is that it doesn't produce vapors like anhydrous so it can be placed closer to the seed without burning it. My conversion process converts the anhydrous to 62 percent liquid nitrogen which, unlike 32 percent liquid fertilizer, can't be stored in an open container so I have to make it in the field. Another advantage of this conversion process is that I have to take only half as much water to the field as I would



Scheetz stripped the Cat Challenger down to the frame. Then he remounted the cab further ahead on the frame, raising it 16 in. and reshaping the hood. He also eliminated the back fuel tank and fitted the tractor with saddle tanks. He installed a first-of-its-kind sliding fifth wheel hitch on back of the Challenger frame to pull the planter, which is fitted with a detachable "gooseneck".

with 32 percent liquid nitrogen."

Scheetz adds that by next spring he plans to replace the rubber wheels on back of the planter with tracks for better flotation in soft ground.

Contact: FARM SHOW Followup, Tim Scheetz, 2141 N. Co. Rd. 900 E., Nauvoo, Ill. 62354 (ph 217 453-2599).

"Fast And Handy" Skid Steer Bale Wrapper

Don Arvold wanted to wrap round bales but he couldn't justify the cost of a conventional bale wrapping machine. So the Emerald, Wis., farmer built his own bale wrapper that quick-taches to his New Holland skid steer loader.

He and his partner Kenan Stahl demonstrated it at the recent Wisconsin Farm Progress Show.

"It lets one person pick up a bale, wrap it, and deliver it to the storage area in one step without the need for any other equipment. It takes less than a minute to wrap a bale. I can also use it to load bales onto wagons or even unroll them for feeding. It's small enough that it easily fits in the corner of my shed or on the back of my pickup."

The bale wrapper consists of a spear and 24-in. dia. disc that mount on a 4-ft. wide subframe. The roll of plastic mounts on a bracket that U-bolts to the "help you in" handle on the cab. The disc and spear, as well as the plastic roll holder, are rotated by hydraulic motors that operate off the skid

steer auxiliary hydraulics. The plastic roll holder is equipped with a braking system that lets the operator stretch the plastic as needed.

To wrap a bale the operator spears the bale and tips it up almost 90 degrees, then manually slips the end of the plastic under a twine string on the bale. Then he rotates the bale to wrap the plastic around it and uses the loader to raise the bale at the same time. Once the entire bale has been wrapped, he leans forward again and uses his finger to "score" part of the plastic, then brakes the roll holder so that the rest of the plastic tears through.

"It's built strong and is simple to use. The operator never even has to get out of the skid steer and has complete control over how many times he wants to wrap the bale," says Arvold. "There are only two zerks to grease and it has oversize bearings so it won't break down. The spinning spear penetrates hard bales where a stationary spear would just slide off. Because the spear tips up at almost a 90 degree angle and rotates it can also be used for other jobs. I've used it to lay out 8-



To wrap a bale the operator spears it and tips it up almost 90 degrees. Then he rotates bale to wrap the plastic around it and uses the loader to raise bale at the same time.

ft. high fence for my elk. It also works great for wrapping up old electric fence."

Sells for about \$3,000 plus S&H.

Contact: FARM SHOW Followup, Elk

Rock Ranch, 1673 250th St., Emerald, Wis.

54012 (ph 715 265-4749; E-mail:

stahl@win.bright.net)