



Jeff Wuebker built this 12-row, side dress rig that's equipped with 500-gal. tanks front and back. A cantilevered center beam holds front tank in place.



Rear tank sits on frame mounted on his Deere 8440's 3-pt. hitch.

Home-Built Side Dress Rig For Liquid N

With 500-gal. tanks front and back, Jeff Wuebker's 12-row, side dress rig covers a lot of ground between fills. A cantilevered center frame beam holds the front tank in place. The rear tank sits on a frame mounted on the Deere 8440's 3-pt. hitch.

"The 18 1/2-in. wide center frame holds the tank low enough that I can see over the top without a problem," says Wuebker. "The narrow support doesn't interfere with the front wheels, so I still have a tight turning radius."

The center beam is actually two 94-in. lengths of 3-in. by 6-in., 3/8-in. thick rectangular tubing. The two lengths are connected at the ends by 12-in. sections welded between them, and 40 in. of the center beam extends under the frame of the tractor.

Two 19 1/2-in. long steel hooks are welded to the outside of the center beam at the 40-in. mark. Cut out of 3/4-in. thick plate, they extend up and "hook" the front weight brackets on the 8400.

Two 6-in. wide by 18-in. high, 1-in. thick steel plates are welded to the sides of the center beam at the end under the tractor frame. The 3/4-in. holes drilled in the plates match existing bolt holes in the engine block/

frame of the tractor.

"Our dealer told us the tires would be the limiting factor, not the frame," Wuebker says.

The remaining 54 in. of the center beam extend out in front of the tractor grill to support the used 500-gal. tank. When Wuebker and his brother, who is his farming partner, bought the tank, it came with a support cradle made from 1-in. by 3-in. channel iron. They simply welded it to the center beam tubing.

"We use a skid steer to mount the tank and the center beam," says Wuebker. "We have to take the front grill off the tractor and tilt the tank in close to hook the front weight bracket. Once the hooks are in place and the end plates are bolted to the tractor, there is plenty of room to remount the grill."

The rear 500-gal. tank is mounted to a framework made from two 4-in. by 4-in. toolbars formerly used for side dressing. The Wuebkers picked up two newer ones at an auction. One was reserved for use as a toolbar. The other was paired with an older toolbar to make the tank frame to hang on the 3-pt. hitch.

"We cut them down and turned one so it faced forward and the second faced backwards and welded them together," says

Wuebker. "They are about 5 ft. wide from front to back, enough to support the tank, which is about 4 ft. in diameter."

The rear toolbar on the tank support frame has its original hitch for a trailing anhydrous tank. The applicator toolbar bolts tight to it. With the entire rear unit suspended by the 3-pt. hitch, Wuebker can back into a corner of a field or other tight spot without a problem.

The working toolbar has five knives on the main frame. Each of the hydraulically-operated wings has three knives.

A 1 1/2-in. hose runs from the front tank to the rear. A hydraulically-driven pump pulls 28 percent liquid N from the tanks. A bypass valve lets Wuebker shut down the flow to the knives while the pump continues to work, sending fluid back into the rear tank.

Wuebker pumps the liquid fertilizer through a flow divider to 12 application tubes. Each is connected to a Wilger ball flow indicator.

"A quick glance back tells me the knives are all working correctly," says Wuebker. "If one ball is getting restricted, and I need to stop at the row end and check it."

Ball valves on the tank make it easy to fill without running over or splashing fluid on the tractor. They also avoid splashing by never filling beyond the 450-gal. mark.

The Wuebkers have an Ag Leader Insight controller mounted on the unit. Though they use manual controls for the most part, they can use it to change rates on-the-go and do variable rate applications.

"Being able to change rates is one reason we switched to a hydraulic pump from the original ground driven unit," says Wuebker.

The two toolbars only cost the brothers about \$50 each some years ago. The tanks were also relatively cheap. The only real costs were the pump and controller and time spent welding.

"Our dad loved to weld and taught both of us," says Wuebker. "If we need something for the farm, we build it."

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One-Of-A-Kind Prefab House

Jim Struble prefabricated his multi-story, 4,500 sq. ft. house, assembling it in 3-story segments on the ground using round logs, flat-sided laminated beams, and structural panels. Even the roof was pre-fabbed in panels that could be lifted in place.

"I spent several years just planning everything out," says Struble, a former shop teacher and automotive engineer. Building on the ground in sections let him build the house himself at a much lower cost.

He cut 90 logs for the project and milled out 45 on a mobile bandsaw-style sawmill.

The building has a cement foundation with the bottom level serving as storage. The dimensions for each of the three floors above it are 32 ft. wide by 44 ft. long.

Struble used round logs for beams on the first and third floors with laminated beams on the second floor. Squared timbers on the outside walls of the first and third levels match round log beams used on the interior.

"Using the same size and type of wood ensures they will shrink at the same rate as they dry over time," explains Struble.

Using round logs for posts and beams meant each one had to be precisely measured and accounted for in the plan. Even the most uniform pair of logs differed to some degree. Log tapers from one end to the other had to be taken into account. His sawmill helped him to precisely prepare posts and beams for the unique design.

Struble selected Y-shaped logs for posts and fitted the top ends with support plates. Round log beams sawn flat on their top side, were notched to rest on the support plate. When lifted into place, the beam support plate rested on half a post support plate. When the next three-floor segment was erected, a new beam support plate would rest on the other half of the post support plate. Butt or end plates were fixed to each beam end.

"The support plates on the posts and beams provided flat facing surfaces that could be screwed together, just as the butt plates on the beam ends did," explains Struble. "If one log end was larger diameter than the facing one, I just notched it deeper so the flat top surfaces matched up level."

When he finished, the assembled 39 panels of floor, roof and exterior walls were within 1/16-in. on one side and 3/4-in. on the other of the 32-ft. by 44-ft. plan.

Struble still has substantial work remaining on the interior. However once complete, he and his wife will have living quarters on the third level. First and second levels will each have a two-bedroom suite and a one-bedroom suite. An elevator is being installed at one end of the house next to a stair tower. Each suite and Struble's living quarters will have views of Lake Huron, six nearby islands and a light-house. Struble says it has all been worth it.

"Doing the construction this way, I was able to do it all with the help of a friend in



Jim Struble prefabricated this multi-story, 4,500 sq. ft. house himself, assembling it in 3-story segments on the ground. House is shown here nearly complete.



Even the roof was pre-fabbed in panels that could be lifted into place.

his 70's who operated the crane," explains Struble. "Each panel as it was let down could be shifted around with a bar until it was in just the right spot. I couldn't have done it by myself any other way."

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Struble selected Y-shaped logs for internal support posts, fitting the top with support plates.