Made It Myself

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These photos show front and back views of combine sprayer.

Old Deere Combine Makes Low-Cost Crop Sprayer

Bruce Krabseth, Alamo, N. Dak., turned a 1968 Deere 95 combine into a selfpropelled sprayer equipped with a 68-ft. boom that offers great visibility and covers acres fast.

Krabseth stripped away the back of the combine including the straw walker, sieves, and grain tank unloading auger. He mounted a 300-gal. tank behind the cab at the back of the machine and a 160-gal. saddle tank on each side. He also mounted a 30-gal. chemical inductor tank behind the spray tank on back of the frame. He replaced the header with a 3-section boom.

"It gave me a low-cost sprayer that I can use for both preplant and postemergence herbicides," says Krabseth, who built the sprayer two years ago. "I can raise the boom up to 36 in. high and spray postemergence herbicides at about 12 mph and cover 90 acres in an hour. I used it to spray more than 1,000 acres on my farm last year. The combine's belt-drive variable transmission lets me operate at variable speeds for different rates of application. All controls are in the cab.

"I use a Raven monitor that automatically keeps a uniform application rate no matter what speed I go. The monitor is mounted inside the grain tank which I cover with a wooden roof. The roof protects the monitor from spray drift and always keeps it dry. The sprayer pump, which is powered by an orbit motor, is also mounted under the roof. Since the cab sits high above the booms, I have great visibility and avoid chemical odors. The sprayer is powered by the combine's original 100 hp 6-cyl. gas engine.

"I built it two years ago for about \$5,000. My biggest expense was for the monitor. I also bought Blumhardt nozzles and hoses. A new spray rig of comparable capacity would cost up to \$60,000. I had been hiring a custom applicator. I figure I paid for the sprayer in one year."

The boom is raised and lowered from the cab by the feederhouse hydraulic cylinders. It's hinged in two places and can be manually folded against the sides of the combine.

Krabseth used 1-in. sq. steel hollow tubing to build the center section of the boom and 1/4-in. solid square steel to build the lightweight outside sections. He bolted the frame from a skid-mounted pickup sprayer to the feeder housing, then bolted the center section of his homebuilt spray boom to the frame.

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Concrete Catch Basin For Fuel Tanks

After hearing horror stories about farmers forced to dispose of contaminated soil after a fuel spill, John Dewey decided to construct a concrete catch basin under his fuel tanks so he'd never have a problem.

He made the concrete tank big enough to hold the contents of his 2,000-gal. diesel tank and also the smaller 500-gal. gas tank. He installed a sump to pump out rainwater that accumulates in bottom of basin and ran electrical lines to tanks to power the sump and fuel pumps. He used explosion proof fittings to wire the pumps.

As long as he was going to the trouble of building it, Dewey made sure the catch basin was built to EPA standards so it'll qualify if the government ever requires farmers to build them. He spent \$750.

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"Floating Brace" Keeps Corner Posts Straight

You can keep corner fence posts straight and eliminate the need for an extra post by using an angled "floating brace" to support the post, says Tom Cadwallader, University of Wisconsin extension livestock agent.

The "floating brace" consists of a wooden post nailed no more than 30 in. high on the corner post and angled downward to a cement slab where the end of the post is free to move back and forth. The two posts are tied together by wrapping two lengths of high-tensile, galvanized wire around the bottom end of the brace post and about 2 in. off the ground on the corner post. A ratchet-type tightener is used to tighten up the wire so the floating post squeezes up against the corner post, forcing it to straighten up.

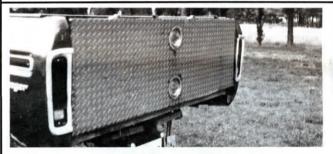
"It's an easy way to keep the corner post straight and eliminates the need for an extra vertical post to support the brace post. Works great with electric perimeter fences," says Cadwallader. "The secret is to keep the floating brace post fairly low on the corner post so that all force is at ground level in a straight line.

"New Zealand farmers have used floating brace posts for years. One caution is that you have to use the right kind of backfill and an adequate size corner post to prevent freezing and thawing from



heaving it out of the ground. I use a mixture of sand and gravel as backfill. I release tension on the wires in winter and tighten them back up the following spring. The bottom end of the post is beveled so it rests flat on the concrete slab. I used a pre-poured 4-in. thick, 14-in. dia. concrete slab that sells for \$1.50."

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2-Way Tailgate Hinges At Top And Bottom

"When I bought an F-250 Ford pickup several years ago and installed a dump hoist on the box, I became aware of the flimsiness of the tailgate. I decided to make a better one," says T.L. Williams, Winston-Salem, N.C.

"While thinking about the idea, I thought about how convenient it would be to have one that hinged at the bottom like a normal dump truck. The problem with that was that I also needed it to open like a normal pickup tailgate. That's when I got the idea of building a 2-way tailgate with a hinge at top and bottom.

"Being a volunteer fireman, I was familiar with the twist latches on fire truck compartment doors. I decided to put twist latches at top and bottom of my tailgate with rods and socket hinges that would let me open the gate either way.

"I first built a steel tube frame for the tailgate and then installed the outside steel plating with the twist latches in place. The conventional hinge plates were removed from the truck and replaced with plates with pipe sockets. Lengths of flatstock with rod ends were attached to the twist latches and aligned with the sockets top and bottom. Then the



inside plating was mounted in place.

"When we first tested it, we found that the sides of the pickup box spread out just enough so the pivot rods slipped out of the sockets, so we had to make a bracket to stabilize the bed side. It slips into the reastake pockets on the sides and can be lifted out when not needed. We also added two ramp slots to top of the tailgate to make it easier to load lawnmowers and other equipment into the truck."

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