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Independently Powered 3-Pt. Hitch Lift Arms

David Brazeau doesn't have to get off his Farmall H to adjust the pitch or tilt on his rear grader blade. Independent hydraulics on all three arms of his 3-pt. hitch let him do it all and more from the seat. His homemade 3-pt. even helps him get his H unstuck in mud or snow.

"Makes it easy to grade a crown on my driveway or clean out the ditch along the side," says Brazeau. "If I push it down against a plank it'll lift the rear end of the tractor off the ground."

To get this kind of control, Brazeau, with the help of his friend Mike Foss, assembled a complex network of hydraulic valves and hoses. They direct fluid to either the front-mounted loader and bucket or to the rear-mounted 3-pt.

Brazeau used 3-in. bore and 16-in. stroke cylinders for the lift arms and as an option for replacing the top-link arm.

He fabricated brackets for the lift arms and bolted them to the rear axle housing of the H. The cylinders are mounted about 8 in. above and in line with the lift arms. The rams pin to a second bracket that is mounted a few inches

behind and above each lift arm.

"The bracket at the end of the lift arm is just high enough for the cylinder to clear the turnbuckle on the arm," explains Brazeau.

The arms and brackets form a parallelogram. By retracting or extending the fixed "top" side, the arm is forced up or down.

The key to working the cylinders is the weave of valves and hydraulic hoses mounted ahead of the steering wheel. The H had hydraulics for an old trip loader and 3 lines for a belly mower.

"I plugged two of the belly mower lines and ran the other up to a 2-way valve," says Brazeau. "I also added a cylinder to control the bucket."

He used the initial 2-way valve to direct fluid from the hydraulic pump forward to the bucket or to the rear for the 3-pt. If going to the 3-pt., fluid goes to another 2-way valve that supplies either the left lift cylinders or the top-link cylinder. The valve has up, down, float and power beyond options. If fluid is directed to the left lift cylinder, power beyond can direct fluid to still another 2-way valve with up, down, neutral and float control for



A complex network of hydraulic valves and hoses direct fluid to either the front-mounted loader and bucket, or to the rear-mounted 3-pt. hitch.

the right cylinder. Which cylinder moves is determined by valve positions.

"I can control the top link cylinder or the arms, set one arm to float or neutral and control the other arm, or control both arms at the same time," says Brazeau. "I don't know of another 3-pt. that has down pressure and that kind of control."

If doing it over, Brazeau would make a few changes, such as swapping the position of the

lift arms and their cylinders. He would also add a proportion valve to the flow between the arms.

"If directing fluid to both arms and one carries more weight than the other, that arm will drop," says Brazeau. "A proportion valve would take care of that."

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Wooden Tree Tubes "Better Than Plastic"

BioBark wooden tree "tubes" protect trees for 3 to 5 growing seasons before breaking down naturally, says inventor Carter McCamy. "They're better for the environment and cost less than leading plastic tubes."

McCamy runs an environmental construction company doing restoration, native planting and sewer revention work. Recognizing the demand for a better tree shelter, he first tried biodegradable plastic. Made from corn gluten, he found the prototypes were too brittle.

"I decided to try hardwood stakes with natural bindings," says McCamy. "They provide protection against deer for at least 3 years, and they don't need to be removed or recycled."

The BioBark shelters are 1/4-in. dia. stakes bound with rope. Installation is as simple as wrapping a planted tree and tying the shelter off at the top, middle and bottom. Four attached stakes are inserted into the ground to hold the shelter in place. They come in 36 and 48-in. tall sizes, in quantities of 20 per bundle. Suggested retail price is \$125 and \$145 per bundle, respectively. Quantity orders are priced at \$112.90 and \$126 per bundle.

"We are currently working on a shrub shelter for shrubs up to 24 in. across," says McCamy. "We think homeowners will love it."



Wooden tree "tubes" protect trees for 3 to 5 growing seasons before breaking down naturally.

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Cameron Messinger built this trailer out of 1/2-in. plywood and 2 by 4's to pull behind his Sears Craftsman garden tractor.

"Built From Scratch" Plywood Trailer

By Cameron Messinger

I'm 14 years old and live in Hummelstown, Penn. I've been reading FARM SHOW for about a year and go through every issue cover-to-cover.

I built a trailer out of 1/2-in. plywood and 2 by 4's to pull behind my Sears Craftsman garden tractor. It's 6 ft. long by 3 ft. wide and 1 ft. deep. I've used it to haul two 80-lb. hay bales at a time or big loads of grass clippings.

It rides on four 10-in. wheels, mounted on axles that pivot like the front axle on a tractor. I painted the trailer myself, including the red striping.

The back tailgate is held up by a gate hasp and lays down flat like a pickup tailgate. I recently wired the trailer for lights, which are powered by the tractor battery and activated by a switch on the dash of the tractor. There's a box on the tongue to hold tools and supplies.



Trailer rides on four 10-in. wheels mounted on 5/8-in. threaded rod axles fixed to wood brackets. Axles move up and down inside oblong slots in wheel mounts.

A trailer jack holds the tongue up off the ground.

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