"Tripled" 4020 Floats Across Fields

Inventor, manufacturer, and organic farmer Curt Forde recently sent us pictures of his Deere 4020 fitted with triples on back and big flotation tires on front. It lets him run his "backward" rotary hoe across the field in any direction to take out small weeds after the crop emerges.

Forde is inventor of the Flow Shield, a flat plate that bolts to cultivator shanks above each shovel to break up dirt chunks when cultivating at high speed, eliminating damage to crops and burying weeds (Vol. 39, No. 2). They speed up cultivating for commercial organic farmers, doing the job better and faster when crops are 6 to 8 in. tall.

For an earlier pass, after emergence but when weeds are still tiny, Forde has pioneered a method of turning rotary hoe wheels backward so they're less aggressive but still effective.

He crosses fields at a 45 degree angle to get weeds in the row, so he had to minimize damage from tractor tires. That's when he got the idea of modifying his 4020 to accept triples on back with flotation tires on front.

To mount the front tires, he uses a couple mounting plates that bolt on inside the rim to hold the tire in place, with one plate fitting the original hub and the other fitting the flotation tire.

To mount the triples, he used a combination of clamp-on duals and truck rims fitted welded-on braces and clamps.

After a lot of experimentation, he runs the inside tires at 10 psi, the middle tires at 5 psi, and the outside ones at 2 psi.

"It's amazing how well the tractor handles," says Forde. "When you just have one set of tires on back, the wheel sinks in so the tractor is always climbing out of the wheel rut. With triples, the wheels are always on top of the ground so steering is easy and you seem to have more power."

Forde's website features many of the techniques he has developed to improve organic farming over the past 20 years, such as "reverse tillage".

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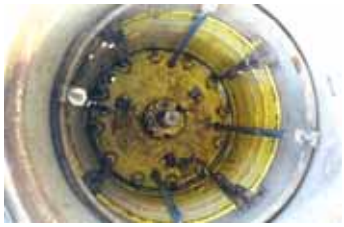
Forde cultivates newly emerged crop at a 45 degree angle using a rotary hoe with the hoe wheels turned backward.



These two plates are used to mount the big flotation tires up front. Forde used a truck rim to make a "triple clamp" with welded-on bracing.

Straddle Cart Handy For Garden Harvest

A "straddle cart" used by a Canadian market gardener would be handy for home gardeners, too. Most FARM SHOW readers probably already have the materials they'd need to build it.

"A straddle cart is tall and wide enough to straddle a crop row or bed even as the crop grows and fills in," says Reid Allaway, a vegetable farmer, tinkerer and manager of infrastructure, machinery and green manures at Tourne-Sol co-operative farm, a small to medium-sized organic CSA and seed farm outside Montreal.

He copied the basic design from Michel Massuard at Vallon des Sources farm, using 1-in. galvanized square tubing left from a greenhouse project, mountain bike and fat bike tires, angle iron for loading platforms (about 6 in. off the ground) to hold the totes, and pieces of metal for bracing and counterweight over the outrigger tire.

The tires are set 60 in. apart to fit Tourne-Sol's bed system and ride in the same wheel tracks as the tractors that prepare the beds. The crossbar over the bed is about 36 in. above the ground, offering adequate clearance for most plants.

It works well for moving the cart along rows of zucchini or lettuce - two crops where the cart is mostly used.

"The appeal in using it for lettuce is the high capacity. Because lettuce isn't very heavy we can stack right up to our eyes or beyond and haul a lot of bins out to the end of the 300-ft. bed with each trip. A couple pickers can harvest 600+ (small) heads of lettuce and haul them all out to the end of the bed in just two trips," Allaway says. "Because they are heavier, totes of zucchini are only stacked 5-high rather than 6-high."

Empty totes are dropped off with one trip down the bed and then totes are filled before starting a return trip to collect them. Totes are loaded onto the cart's platforms - alternating back and forth to keep the cart balanced. Many totes can be moved at once to save a lot of time and walking. The cart is easy to maneuver by pulling or pushing the square tubing handle.

Allaway notes that he upgraded the load-bearing wheel from a standard mountain bike wheel/tire to a fat bike wheel/tire. If he or farm co-worker Julien Vedel, who also built a cart, were to build a third cart, they would move the load platforms a couple inches toward the outrigger wheel to put the center of mass between the wheels.

Straddle cart's tires are 60 in. apart to fit between rows of zucchini or lettuce. Workers load totes onto a pair of platforms.

The carts are used regularly at Tourne-Sol farm, Allaway says, and a similar design might be useful for home gardeners.

"They are good for hauling materials, or harvesting in narrow alleys and working around tall or bushy crops arranged in rows," he says.

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Easy Funnel Made From PVC Pipe

Dennis Howell was tired of spilling oil and needing two hands to put oil into his tractors and trucks. He tried different funnels but found none of them were large enough, worked with one hand, or were durable. "None of the funnels I used worked like I thought they should, or lasted long enough to be worth it."

He came up with his own design using pvc pipe. "It stays still, straight and is the last funnel you'll ever use on your truck or tractor," he says.

Howell's funnel starts with 4-in. pvc and reduces down to 1 or 3/4-in., depending on the needs of your tractor or truck. He uses a 22-1/2 degree bend to keep the funnel upright when filling.

The pieces are glued together. Costs are about $10 to $15 per funnel, unless you have pvc laying around to use, says Howell. "I have made about a dozen of these for friends and neighbors. They're easy to make and don't cost a lot. You can angle them however you need to fit a particular piece of equipment."

Pvc pipe funnel has a 22 1/2 degree bend to keep it upright when filling.

Contact: FARM SHOW Followup, Dennis Howell, Vernon Center, Minn. (ph 507 380-4375).

A 4-ft. length of 1/2-in. foam pipe insulation was sealed along its split, then stuffed into pickup's exhaust pipe.

Nifty Way To Kill Gophers

Karl Scheibengraber, Lisbon, Wis., wanted to use exhaust from his Ford Ranger pickup to "gas" gophers but he needed an airtight flexible pipe that would attach to the tailpipe.

One day he had a "eureka" moment and took a 4-ft. length of 1/2-in. foam pipe insulation, sealed it along its split, and stuffed it into the 2 1/2-in. dia. Ranger exhaust pipe. It was a perfect fit.

Then he parked next to a gopher hole and stuffed the other end down into the tunnel. After idling the pickup for a while, he pulled out the tube, filled the hole with dirt, and his gopher problem was gone.

He notes that the pipe insulation fits very tightly into the tailpipe and the heat of the exhaust has not been a problem.

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