



Steve Kauffman built an 11-ft. field cultivator for his restored 1972 Allis Chalmers 616 garden tractor. "It's made to scale and is bigger than anything on the market," he says.



Kauffman's friend Amos built this 3-pt. mounted, 6-bottom moldboard plow for his restored AC 616 tractor. The plow has 8-in. moldboards and covers a 4-ft. wide swath.

## "Made To Scale" Garden Tractor Tillage Tools

"My friend Amos built a 6-bottom moldboard plow and I built an 11-ft. wide field cultivator for our recently restored Allis Chalmers 616 garden tractors. The implements are made to scale and are bigger than anything on the market," says Steve Kauffman, Manheim, Penn.

The two 616 garden tractors were built in 1972 and are identical, except that Amos made a custom hood so his tractor looks like a real Allis Chalmers D21. Once the tractors were restored, the men took on the challenge of building tillage tools for them.

"You can buy 1-bottom moldboard plows and little field cultivators for garden tractors

that are only 5 ft. wide. But as far as I know, no one makes an 11-ft. field cultivator or a 6-bottom moldboard plow," says Kauffman. "The Allis Chalmers 616 garden tractor was the company's first utility tractor and it was made to look just like their big 185 and 190 models. I bought the tractor a year ago. I had wanted a 616 ever since I was a kid but it took me 40 years before I finally got one."

Amos had a head start when building the plow because he already had a full-sized D21 tractor and a 6-bottom moldboard plow to go with it. So he made measurements of the plow and then shrunk it down to create his 3-pt. mounted mini plow. "He made the 8-in.

moldboards from scratch by rolling a piece of sheet metal and then cutting the moldboards out with a torch to the right shape. The plow covers a 4-ft. wide swath," says Kauffman.

To build his field cultivator, Kauffman found a neighbor with an Allis Chalmers field cultivator and took measurements and photos. The cultivator is equipped with hydraulic-fold, 2 1/2-ft. wings on either side and 6-in. depth wheels on front, which came off a hay tedder. He built the cultivator by using the teeth off an old drag harrow and using a plasma cutter to narrow them down to scale. He built a rake on back of the cultivator by using the rake teeth off an old New Holland

rake.

"I'm in the ag equipment sales business and often spend time going to farms, which is where I found many of the parts I needed to build the field cultivator," says Kauffman.

"We proved to everyone that our implements matched up perfectly with the tractors and could really turn the soil over. My tractor has new, 16-in. wide lugged rear tires which helped add traction, and my 250-lb. weight over the rear axle didn't hurt, either."

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Multi-purpose implement makes growing potatoes an easier job. Components include: 1. Fertilizer spreader plate; 2. Hilling discs; 3. Cultivator shovels; 4. Fertilizer funnel; 5. Handles from a rototiller; 6. Toolbar; and 7. Child-size bike tires.

## "Made It Myself" Garden Implement

Retired after a career in the seed potato industry, Doug Edwards still plants potatoes for his family. Although he plants his seed potatoes by hand, he needed a hiller and cultivator.

"My first thought was to use disks to hill the beds for potatoes," he says. "Then I decided to add cultivator shovels to either side to get the weeds."

The main frame was a steel bar to which he mounted a set of handles from a rototiller. At either end he mounted U-shaped brackets for 2 child-sized bike tires. The brackets were made from 1 by 1/4-in. steel strap. Rods attached loosely to the ends of the bar extend forward to attach to the lawn tractor. Edwards welded a 6-in. wide steel bar perpendicular to the main frame and extending to the rear. It serves as a mount for the toolbar.

"I used 2 lengths of angle iron to make the toolbar, leaving a space in between to mount tools," says Edwards.

Hilling disks are mounted to channel iron arms. The arms bolt through a steel plate that

rides underneath the toolbar and through a short length of channel iron that fits above the slot of the toolbar. This lets him adjust the disks to the right or left or change their angle. Cultivator shovels bolt to the far sides of the toolbar.

When Edwards needed to fertilize the potatoes, he mounted an old funnel to the center of the toolbar with a flat tab in the neck of the funnel.

"It took a bit of time to calibrate it, but now I can adjust the flow of fertilizer," says Edwards.

To spread the fertilizer in the center of the bed, Edwards mounted a vertical arm of steel tubing to the toolbar and behind the funnel. He bolted a rectangular steel plate to a small piece of steel tubing that rides inside the arm and is held in place by a set screw.

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Rutkoski's small Ford tractor didn't have enough power on its own to make full-size round bales. But it's no problem making them with a tow-behind pto cart powered by a Chevy 350 engine.

## PTO Cart Lets Small Tractor Do Big Job

A pto cart was just what Al Rutkoski needed to run an 851 New Holland round baler with an 801 Ford. The Ford didn't have enough power on its own to make full-size bales. But with a pto cart powered by a Chevy 350, making big round bales was no problem.

"I didn't need a bigger tractor except to run this baler," explains Rutkoski. "I came up with the idea of using a separate engine."

Running a pto off an engine usually requires reversing direction of the drive. Instead, Rutkoski found a 350 engine from a 1976 4-WD pickup and a transmission and transfer case from a 1987 Chevy pickup. He used a governor off a New Holland combine to keep engine rpm's constant. He picked up a still-in-the-box carburetor for a 1967 Cadillac at auction. He made a cart to carry the power unit.

"I set it up so the front driveshaft faces the baler's pto shaft," explains Rutkoski. "The transmission is a 4-speed with high and low

for 8 gears forward. When baling, I set the engine to run at 2,000 rpm's."

Rutkoski took the original Chevy front driveshaft and welded 540 pto splines on the end. He mounted it to the cart with a support bearing for attaching the baler pto shaft.

Hand controls for on/off, starter, clutch and throttle, as well as a tachometer, are mounted to a pipe mounted to the tongue of the cart. Rutkoski can reach behind him to control the engine and the pto from his tractor seat. The 801 provides hydraulic power.

"I might add a power steering pump to the engine for live hydraulics, so I have the option of using my truck on the baler," says Rutkoski. "As it is, I can even pull the baler behind my repowered TE20 Ferguson.

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The governor off a New Holland combine is used to keep engine rpm's constant.