Ann Siri has developed lightweight, horse-drawn tillage tools that are easy to handle and can be pulled by one horse.

Lightweight Horse-Drawn Tillage Tools

Ann Siri has more than 30 years of experience with draft horses, using them for almost every kind of job around her off-grid farm and machine shop. A few years ago she decided they needed lighter, easier-to-handle horse-drawn tillage tools, so she and her partner Mike Holmberg started making them.

With a large garden that was too small for a tractor, but too big to work by hand, Siri had a personal desire for better draft tillage tools. She felt most tools on the market were too heavy and usually built for 2 and 3-horse teams.

"I wanted something that could be an asset for home gardeners like myself," says Siri. "I made it ergonomic and light enough that it can be used with miniature horses for an hour of cultivating. At the same time, it's tough enough it can be used with one or two full-size draft horses."

Anny's All-In-One is made with high grade and hardened steel. At 76 lbs., the basic body with a single ripper tooth is easily moved in and out of the field or tossed in the back of a truck.

Two wheels mounted to the front end of the frame make it even easier to move. They can be quickly adjusted for height and row width.

"When you get to the end of a row or have to travel over a path or across a road, just lift up on the handle. You don't have to lay the tool on its side to drag it across," says Siri.

The handlebars and the hitching point can be easily adjusted to keep operator and horse off the row. The handlebars also are height adjustable on-the-go. The offset, combined with the light weight, makes the All-In-One ideal for tilling inside hoop houses, adds Siri.

The adjustable handlebar makes it easy to work at a comfortable height. Tool angle is also adjustable. To raise the plow point at the end of a row, simply push down on the handlebars, and the point rides out of the ground.

Tools available include a cultivator, hiller bar, ripper tooth, furrower, potato digger, finger weeder and dirt rake.

"People plowing with horses always seem to have to bend over, pushing on the plow," says Siri. "With the adjustable handle, you can stand up while working and get just the right pressure and angle on the tool."

Siri uses a receiver hitch design for easy mounting of tools. They include a cultivator, hiller bar with 10 or 14-in. shanks, ripper tooth, 6 or 8-in. furrowers, a potato digger with shovel or shank, a finger weeder and 36 or 40-in. dirt rakes.

"I hope to do even more tools if I can find the design time," says Siri.

Siri originally built the All-In-One for a client and then for her own use. When she took it to a horsepower clinic in Oregon, she discovered interest was high among those who tried it.

"After getting orders for a couple, I decided to try marketing it," says Siri.

The All-In-One's main body with a ripper tooth is priced at $2,250. Other tools vary from a 6-in. furrower (plow share) for $60 to a complete single row cultivator for $575.

Contact: FARM SHOW Followup, Ann Siri and Mike Holmberg, P.O. Box 369, Philo, Calif. 95466 (ph 707 895-2582; info@siriholmberg.com; www.siriholmberg.com).

Portable Reverse Osmosis Units Speed Up Maple Syrup Production

Five years ago, Ray Gingerich decided that small maple syrup producers might be interested in a portable reverse osmosis machine that would greatly reduce the boiling time to make syrup. He and his son built one on wheels powered by a gas engine so it could be operated onsite right where maple sap is gathered.

After successful testing, he now offers models in several sizes. Orders are backlogged for what they call the Deer Run Maple Reverse Osmosis (RO) machine.

"Reverse osmosis removes up to 60 percent of water per pass. That saves a lot of energy and time," Gingerich says. By eliminating as much as 80 percent of the water (with multiple passes) it takes much less time to cook sap down into syrup.

Gingerich, who runs 17,000 taps each spring himself, recommends leaving 20 percent water in order to get syrup with good flavor and color after finishing it off.

RO models range from 50 gal./hour to 1,200 gal./hour.

"We size our units for customers according to their tap count," Gingerich says. For example, 500 taps producing an average of 500 gal. of sap is common in his region. He recommends purchasing a 125-gal./hour unit ($1,995 for gas powered; $200 more for electric powered).

The newest model, a 50-gal./hour unit ($1,295) is made for backyard hobbyists. The largest, 1,200-gal./hour sells for $10,000.

Gas-powered, reverse osmosis machine can be operated on site right where maple syrup is gathered.

"We were the first to build small, portable gas-powered models," Gingerich notes.

He offers discounts for summer orders and cuts off orders for the following year on Dec. 15. The Gingerichs quit building the units in the spring so they have time to tend to their own maple syrup harvest, when they keep three or four reverse osmosis units running round the clock for up to eight days.

Contact: FARM SHOW Followup, Ray Gingerich, 1537 Easton Rd., Orwell, Ohio 44076 (ph 440 422-3047).

"Shop Vac" Chicken Feeder

"Worn-out wet-dry vacs can be used to make low-cost chicken feeders," says Victor Mathern, Edgeley, N. Dak., who converted an old 10-gal. Shop-Vac model with a worn-out motor.

The motor was originally bolted into the top of the machine and formed part of the cover. He removed the motor and covered the hole left in the cover by screwing on a piece of plywood. Then he used a saber saw to make feeding ports, cutting six 2-in. sq. slots into the perimeter of the vac about 4 in. up from the bottom.

"I use it to feed a few chickens that I keep on my place. The feed always stays dry, even when it's used outside," says Mathern. "I can still snap the cover on or off, which makes it easy to fill."

Contact: FARM SHOW Followup, Victor Mathern, 8156 CR 33, Edgeley, N. Dak. 58433 (ph 701 709-0365; Vmath@drtel.net).

Converted 10-gal. Shop-Vac has several feeding ports cut into the side.

Extension Hitch Solves Planter Turning Problem

"When we bought a front-fold planter and hooked it behind our Deere 8310 tractor with dual wheels, we had difficulty making short turns," says Pennsylvania farmer and seed dealer Lee Horst. "Another problem was that the folded row units could drag on the ground and it was easy to tear up the seed firmers as I drove onto a field driveway that wasn't completely level."

Horst looked into getting an extension hitch from his dealer and was shocked to learn they wanted more than $6,000 for a new one. So he decided to build one himself.

Horst's homemade extension fits on the 3-pt. quick hitch of his tractor and extends the hitch pin mounting point back 3 ft. beyond the regular drawbar. That extra length and the fact he can raise and lower the hitch solved two problems at once. "Now I don't have to worry about short turns on the road or in the field," Horst says, "and I can raise the hitch almost 2 ft. so the folded seed units are way off the ground. If I'm planting I can also raise the hitch to go through waterways."

He made the hitch crossbeam, vertical upright, and diagonal support from 3/8-in. thick by 3-in. square tubing. The crossbeam of the hitch extension is reinforced with a 1 1/2-in. dia. shaft from a combine feederhouse that Horst inserted on the inside of the tubing. The shaft extends on both sides of the hitch and mounts directly into the quick hitch brackets. "I wanted to make sure there wasn't any side-to-side and up-down give to the extension," Horst says. "I've used it with the planter full of fertilizer and seed and it's just as solid as the main hitch on the tractor."

Horst says his simple and sturdy hitch, which cost him about $320 and a few hours of labor to build, is much more versatile than a solid drawbar. "It's way handier in the field because I can raise the hitch whenever I need to and then return it to the level setting on the control dial. At the end of the season when I'm cleaning the planter I can raise the hitch way up to get the row units a long ways off the ground," Horst says.

Contact: FARM SHOW Followup, Lee Horst, 1605 Goldenville Rd., Gettysburg, Penn. 17325 (ph 717 677-8564).

Drawbar on home-built, 3-pt. mounted extension lift can be raised up to 2 ft.