

Home-built track system uses rollers to carry big logs onto sawmill.



Sawmill Track System Saves Labor And Lumber

Mitch Poganski appreciated the versatility and work his portable Lucas 6-18 Swing Blade Sawmill could do. It sawed large diameter logs vertically and horizontally, had only five teeth to sharpen, and could be set up anywhere.

"The downside is you have to do so much manhandling to position the logs before you can start cutting them," he says. "Using a skid loader or forklift, the operator eliminates the back work."

He uses the equipment to place the logs on the track he built that has rollers to carry the log onto the mill. He used angle iron for the frame and welded 6 by 18-in. pieces of 1/2-in. flat steel spacer plates that have a plastic board under them so they don't freeze down.

The rollers can be adjusted according to the length of the log.

To set the log up in the best position for cutting, Poganski added a jack.

"By extending or retracting the jack attached to the roller track frame, this will align or straighten the path of the blade to get the most lumber out of the log," he says.

Poganski made his mill-loading system out of used rollers and materials. It worked well for the 5 years he owned the mill.

He is willing to answer questions about the details of his system to anyone interested.

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Terraformer 8650 comes with a telescoping frame and adjustable wing tips, allowing operator to form infinite "V" configurations.

Earth-Shaping "Multi-Tool" Is Two Machines In One

"Our new pull-type Terraformer 8650, earth-shaping multi-tool does the work of a pull-type V-wing and a Puldozer, allowing you to contour land fast and efficiently. It's the most versatile land contouring machine on the market," says Darin Hubscher, Ag Shield, Benito, Manitoba.

The Terraformer weighs over 31,000 lbs. and requires a tractor with at least 350 hp. It comes with a bull pull hitch and rides on a pair of radial flotation tires. Maximum cutting width is 28 ft. Transport width is less than 12 ft., with a low center of gravity for safe transport. Hydraulic cylinders and electric-over-hydraulic valves control all operations.

But what really sets the hydraulic-operated Terraformer apart is that it can be adjusted to form infinite "V" configurations. The adjustments are made by activating a telescoping frame that attaches to the wings and slides forward or backward on the Terraformer's main beam. By changing the angle of a wing tip at the end of each main

V-wing, you can capture or release dirt.

"The infinite adjustments let you match the Terraformer's configuration to your tractor's pulling capabilities," says Hubscher.

The wing tips can be operated independently or straightened out to work like a land plane. "In the wide V mode, the Terraformer can cut a flat ditch bottom with ease," says Hubscher. "By spreading the main V-wings out and pointing the wing tips forward, the machine forms a U-blade configuration that can capture up to 27 yards of soil at a time."

The machine can be equipped with GPS auto grade, which makes it easy to follow the grade on slopes. The accuracy is within fractions of an inch, notes Hubscher.

The Terraformer retails for \$129,500 in Canada and \$109,000 in U.S. funds.

Contact: FARM SHOW Followup, Ag Shield, 170 Hwy. 83 North, Benito, Manitoba Canada R0L 0C0 (ph 866 473-6503; sales@agshield.com; www.terraformer.ca).



The Pine Bine uses conveyors and a fan to remove cones and sticks from pine straw, leaving only perfectly clean straw to be baled.

"Pine Bine" Turns Needles Into Mulch

Pine straw is a popular, long-lasting mulch, and an annual crop that can add income while waiting for pine trees to mature for harvest. The problem has been the lack of mechanization for harvesting it.

The Pine Bine, developed by five North Carolina State University engineering students, takes care of the most labor-intensive part of harvesting longleaf pine needles - removing cones, twigs and debris to produce clean, marketable mulch.

Like a combine, the Pine Bine uses conveyors and a fan, says Ben Cranfill, one of the student engineers, who have all graduated. The pine straw - either unrolled from a bale or pitchforked loose into the machine - is loaded on a conveyor. The straw goes through a doffer (a rotating cylinder with tines) that fluffs up and spreads out the straw before it falls onto a faster conveyor that spreads it out in a thin, even layer. The straw then moves over an airstream that blows the clean straw up and over an adjustable baffle and onto another conveyor, and the sticks, cones, and debris fall into a separate pile.

Since building a prototype in 2018, Cranfill and the other engineering graduates, Ben Cauthen, Alex Greeson, Will Marsh and Matthew Parker, formed Innovative Agricultural Technologies, and are working on finetuning the patent-pending Pine Bine for production.

It's something the members of the NC Pine Needle Producers Association have suggested as a project for years, Cauthen says.

"We are ag engineers and saw a problem we could solve," Cranfill says.

Many producers have 500 to 4,000 acres of

longleaf pine or loblolly pine trees.

"Good stands yield 100 to 200 square bales of pine straw per acre per year. It takes crews of 40 plus people to get 2,000 bales/day," Parker says. With the Pine Bine it takes a lot fewer workers to bale the same amount.

Some labor is still needed to rake or blow the pine needles from under the trees into windrows. But much of the operation can be mechanized with a round baler picking up the needles along with any sticks and debris, and then running the round bales through the Pine Bine and conveying the cleaned needles to a small square baler.

The partners continue to work with producers to customize pine straw harvesting equipment, such as designing a small cleaner that can be pulled through the pine trees. They are also working with an equipment manufacturer that builds niche equipment to bring their designs to market.

The Pine Bine has earned awards including the best agricultural senior design project of 2018 in the AGCO National Student Design Competition in Detroit as well as the 2020 People's Choice Award in the American Farm Bureau Federation's Ag Innovation Challenge in Austin, Texas.

The five partners have other jobs but hope to continue designing innovative agricultural equipment to meet regional producers' needs through their company, Innovative Agricultural Technologies, LLC.

Contact: FARM SHOW Followup, Innovative Agricultural Technologies, LLC, 272 Ring Rd., Carthage, N.C. 28327 (ph 910 639-8115; www.pinebine.com; customer-support@pinebine.com).

Keep Critters Away With Crop Cage

If gardening has been frustrating due to critters eating and destroying the fruits of your hard labor, you might consider caging them. The plants, that is, not the critters.

While it's likely not practical to cage your whole garden, at \$159 the 4 by 12-ft. Crop Cage sold by Gardener's Supply Co. is reasonably priced and big enough to protect a fair amount of your most prized plants. The powder-coated steel frame with netting is light enough to move wherever you need it. Yet it stands up to the wind when secured to the ground with Extra Tall Earth Staples (sold separately). It has zippered doors and is 6-ft. tall so a gardener can enter to comfortably weed, maintain or harvest.

Customers report that the cage has saved berries from birds and peas and beans from rabbits. It's also great to protect vines and young trees from deer.

Because there is no netting on the ground, some gardeners report that small critters such as squirrels and birds manage to get in the cage from underneath if there are any



Crop Cage comes with a powder-coated steel frame with netting and zippered doors, and is light enough to move wherever you need it.

openings and some have issues with squirrels chewing holes in the netting. Gardener's Supply emphasizes that when assembling the frame it's important to make sure all the tubes are fully seated so that the netting fits properly.

Contact FARM SHOW Followup, Gardener's Supply Co., 128 Intervale Rd., Burlington, Vt. 05401 (ph 888 833-1412; www.gardeners.com).