

Cutting Trees As Easy As Mowing The Lawn

When Larry McKnight had to remove a group of small cedar trees along the edge of his Villa Ridge, Mo. property, he knew he would have a difficult time cutting trees close to the ground because of his bad knees and back. So McKnight designed, built and patented the FlipDown Chainsaw cutter.

He bolted together a frame of steel tubing on a balloon tire to hold a chainsaw a couple of inches off the ground. With the tug of a rope, the saw can be positioned horizontally or vertically. The operator starts the saw, then steps behind the handle and squeezes a throttle attached by a cable to the saw's trigger. In a horizontal position the saw cuts trees

up to 6-in. in diameter. In a vertical position it can cut limbs close to the ground and cut felled trees.

"The advantage of one wheel is that I can use it as a pivot point for moving the chainsaw bar into the tree being cut," McKnight explains.

In a promotional video, he saws down 16 trees in five minutes. Small diameter trees shorter than 5 ft. fall easily. McKnight recommends that with larger trees, a second person guide trees over with a push pole.

"I'm 68, and the main thing is that I don't have to get on my hands and knees to cut," he says. "The next best thing is you can't get hurt. You don't even get hit by chips. The



With the tug of a rope, chainsaw bar can be positioned horizontally or vertically.

operator is more than 5 ft. from the tip of the chainsaw bar."

McKnight has tried three types of consumer chainsaws (commercial models are too large), and they've fit on his frame and worked just fine. It takes about 20 minutes to bolt the saw to the frame, he says, and the whole unit - including a saw - is light enough

to lift up on a workbench to sharpen the chain.

"I'd like to license it, and I'm open to work with a business that would see potential in developing this," McKnight says.

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Easy-To-Make Cattle Feeder

You can buy inexpensive cattle trough feeders at just about any farm supply store. But a year or two later, the "beer can" metal will look pretty beat up, says Darol Dickinson at the Dickinson Cattle Co., Barnesville, Ohio.

"Having had this problem for years, we started experimenting with the idea of using 24-in. dia. plastic culvert to make inexpensive troughs.

"We cut them in half lengthways with a saw and then cut used 55-gal. plastic drums into fourths to close in the ends of the troughs. We used a section of the troughs to serve as legs, bolting them on upside down with 2-in. fender washers (use stainless or galvanized bolts and washers). We also use bolts and large washers to attach the barrel ends.

"You have to drill a hole into each reinforcement ridge so water will drain out the bottom and not freeze, as well as the inside bottom of each trough.

"These troughs won't rust and are made

Made from 24-in. dia. plastic culvert, trough feeder won't rust and will last for years, says Dickinson Cattle Co.



from heavy-wall plastic that will last for the next 50 years or so. You can make them to any size you need.

"For a smaller feeder use 18-in. dia. tub-

ing, which can be attached to a wall or fence. A 20-ft. long culvert sells for about \$10 per running foot, depending on where you purchase."

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Ultralight Crop Sprayer Provides Low-Cost Application

You can cut rates, costs and worry with your own ultralight spray rig, says Todd Ellefson. The native North Dakotan got his first experience with ultralights on his family farm.

"We had a wet year and couldn't get into the fields to spray," he recalls. "All the crop dusters were booked. We saw an article on spraying with an ultralight and bought one."

Ellefson sprayed thousands of acres of soybeans, sunflowers and wheat with the rig. "It paid for itself that year alone, and we would have kept using it, but it had problems with nozzles plugging up," he says. "As it was, we used it for three years before I left the farm to work in the ultralight industry."

Now Ellefson is promoting a new sport plane, the GT500 from QuickSilver Mfg., and a matching controlled droplet spray system. The company claims it will cover six acres per minute or as much as 150 acres per hour, depending on speed and rate. What makes that possible with only a 32-gal. tank is a 90 percent reduction in water use and a claimed 90 percent better coverage. The boom length of 28 ft. will generally cover a spray width of 60 ft., says Ellefson.

"When spraying, you fly only 5 to 10 ft. above the crop at speeds of about 50 miles per hour," he explains. "The turbulence created by the plane and the specially designed nozzles with their

propeller drives create 50 to 300 micron droplets, and force them under and around leaves."

Ellefson notes that coverage is so fast and at such a low cost per acre that multiple applications can be made if the first application doesn't do the job.

Quicksilver claims application costs for the GT500 of as low as 28¢/acre, suggesting this can provide a savings of as much as 73 percent per acre over a commercial applicator. Costs again depend on application rates.

The GT500 with spray system is priced at \$42,795. Ellefson says the 38-lb. spray system was custom designed for the GT500 with the tank placed in what is otherwise a rear seat.

The GT500 can be equipped with floats for water landing and take offs. It is equipped with a full size instrumentation panel with navigational avionics and a rocket deployed parachute designed to lower the entire aircraft with pilot and passenger.

While only a few plane kits and spray systems have been sold to date, Ellefson expects the number to increase dramatically. Two reasons are improvements the company has made to its spray system and FAA standards.

"Our new spray nozzles eliminate the plugging problems I ran into on our farm," he says. A bigger problem has been FAA certification.

In the past, says Ellefson, FFA inspec-



QuickSilver's ultralight crop sprayer has a matching controlled droplet spray system.

tors tended to interpret the rules differently. He reports the company now has documentation that should streamline applications. He admits the company is just getting its feet wet with this application in the U.S., though the system is in use in Latin America.

The plane comes as a "to be assembled" kit. Ellefson says they are easy to build with 95 percent of the holes predrilled and no bending or other major fabricating to be done.

Ellefson says the minimum requirement for the GT500 is a sport pilot license which

requires 20 hours of training, 15 dual and five solo. However, due to recent rule changes the amount of training required is unclear at this time.

"It's possible that a farmer making applications may need a private pilot's licenses which requires 40 hours of flight time," he says. "He would also need the same ag permits he would if spraying on the ground."

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