

Skid Loader-Mounted Sickle Mower

Andrew Lee of Hartford, Wis., converted an old New Idea pto-powered, 7-ft. sicklebar mower to a hydraulic-drive for use on his Bobcat skid loader. It's painted Allis Chalmers orange.

Lee mounted the mower on his 2008 Bobcat S160. He stripped the mower down to the sicklebar and then used 1/4-in. thick steel to build a housing and frame with brackets that quick-tach to the skid loader. He bolted a 7.2 cu. in. hydraulic motor onto the housing and designed a crank and connecting rod for it out of steel components, adding grease fittings for longevity.

A 20-in. long, 2-in. dia. hydraulic cylinder is used to raise or lower the sicklebar. A closed center electronic solenoid valve controls the flow to the cylinder in either direction.

The mower folds up vertically for transport or storage and also downward for roadside clearing. Lee can raise and lower the mower from inside the cab via rocker switches on the skid loader's in-cab joystick controls.

"I use it on my small farm to trim shrubs and tree branches along fence lines and to open up hiking trails on my property, as well as to cut roadside ditches. The front-mount mower makes it easy to see what I'm cutting," says Lee. "I bought the mower from a local farmer for \$100 and spent a little more than \$1,000 to make the conversion to hydraulic power and skid loader use. Most of that was for hydraulic components. I bought the quick-tach plates from an online retailer.

"My dad has been giving me FARM SHOW as a Christmas gift for the last 5 years. Viewing all the projects other readers have shared gave me the inspiration to build it. Many people who see it for the first time are impressed because it looks so professional and works so well."



"It's handy for doing a variety of farm work," says Andrew Lee, who converted a New Idea pto-powered, 7-ft. sicklebar mower to hydraulic-drive for use on his Bobcat skid loader.

Lee used CAD (computer aided design) to design and lay out all the systems and to verify everything before he started cutting steel. "I have about 6 hrs. in computer time and spent about 40 hrs. in the manufacturing, welding, plumbing, wiring, and painting of it," says Lee.

He says the most difficult part of the conversion was getting the Bobcat's joystick controls to "talk" to a 12-volt solenoid valve that's used to control the hydraulic cylinder. "Unlike other manufacturers, Bobcat uses a CAN BUS signal to send an electric pulse to its attachments in order to control solenoids. I found a company called 'Skid Steer Genius' that makes adapters designed to convert an electric pulse to a constant 12-volt signal (ph 360 386-5841; www.skidsteergenius.com). Their adapter allowed me to seamlessly integrate the angle adjustment of the sicklebar from the comfort of my cab."

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Mower folds up vertically for transport and downward for roadside clearing.

Honey Stick Machine Boosts Beekeeper Profits

For the past decade, Wayne Flewelling has helped beekeepers make about \$55 per quart of honey with his Honey Stick Making Machine.

The sticks - straws filled with honey or flavored honey - typically sell for 25 cents each. A quart of honey fills about 220 straws, and Flewelling's machine fills between 300 to 500 straws an hour.

"I built a machine in 2003 for myself because I wanted to make my own honey sticks," he explains. When other beekeepers wanted them, he started building them, and demand continues to grow.

His setup includes a manifold with nine

chrome-plated valves to fill the straws, a sealer, hot plate, pump and box of 2,500 straws for \$395 - the same price he charged 10 years ago when he first set up his online store.

The honey is heated to 120 to 140 degrees so that it can be pumped into the straws. Individual valves shut off the flow and the impulse sealer heats up the straw ends to close them.

Besides honey, some customers use the machine to make straws filled with maple syrup or concentrated cherry juice. The machines have been shipped all over the U.S. and to other countries.

He also offers a variety of concentrated natural flavorings used in wine and beer, including favorites such as chocolate, peach, root beer and watermelon.

"Honey straws are great for diabetics to carry. Also joggers and bicyclists like them for a quick energy boost," Flewelling says, adding they are also a healthy snack option for children and adults.

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