



Sam Blank's automated feed slicer cuts hay from big round or square bales with a dual action sickle.

## Home-Built Bale Slicer Makes Great Feed

"My brother and I used to slice big hay bales with a rotating drum that had protruding knives," says Sam Blank of Narvon, Penn., "but hay stems and twine sometimes got wrapped around the drum. We decided to build our own system using a sickle bar cutter that would slice pieces of hay from big bales and hopefully not plug up."

Sam and his brother built a rectangular shaped chamber large enough to hold different sizes of round bales or large square bales. Blank says it's about 5 ft. wide by 6 ft. long with 4-ft. tall sidewalls. It's open in the back and has a wood floor with a slatted chain similar to the apron on a manure spreader or silage wagon. "The chamber stands on four legs that can adjust the box height from a few feet off the ground up to a level that would put sliced hay in a small feed wagon," Blank says. Bales are placed in the chamber by a loader tractor or skid steer.

"The slicer operates like an old fashioned sickle bar without the fingers," Blank says. "Two sickle bars are mounted together with a cam drive moving the sickles in opposite directions, creating a slicing action. A small hydraulic motor that gets its hydraulic power from a 13 hp gas engine drives the cam. Increasing or decreasing the hydraulic flow to the motor changes the sickle speed."

"We mounted the sickle on hydraulic arms so it can move down the face of a bale by its own weight, or an operator can regulate the speed of the cut," says Blank. "When it's done with one cut, we raise it up so the platform apron chain can move the bale



Sickle arm is raised by hydraulic cylinders to cut off slices of bale as it's moved forward by apron chains.

back and start another slice down."

Blank says, "we usually cut 3 in. of hay from the face of a bale at a time, which makes a real nice texture for dairy cattle." In the past year Blank's brother used the machine to slice about 100 bales without any problems. He says the gasoline engine provides plenty of power to run the hydraulic cylinders that lift the slicer as well as the motor that drives the sickles.

"It works better than the rotary drum, and it works better than a tub grinder where a complete bale goes in at once," Blank says. He plans to build and sell hay slicers for around \$6,400.

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## How To Keep Pop-Up Sprinklers Vertical

"The heavy clay soil in my lawn makes it difficult to keep pop-up sprinklers vertical. Over time they tend to lean to one side or the other, which leads to uneven watering. I came up with a method that keeps them vertical," says John Ottem, Broomfield, Colo.

He cuts a 14-in. length of 1 1/2-in. dia. pvc pipe, drills a hole in it about 5 1/2 in. from one end, and then uses a jigsaw to enlarge the hole until it will accommodate a 1/2-in. plastic fitting that screws onto the bottom of the sprinkler head. Then he buries the pipe and sprinkler in the ground and hooks up to the water pipe.

"Now I never have sprinklers that lean to one side or the other, and my lawn is always evenly watered," says Ottem. "If I happen to hit a sprinkler with my lawn mower wheel, it's much less likely to break or leak because the pipe stabilizes and protects the sprinkler."

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Plastic elbow fits through hole in pvc pipe and screws onto bottom of sprinkler head. Pipe and sprinkler are then buried in the ground and hooked up to water pipe.

## Thistle "Kicker" Pulls Out The Root

"It'll take out the biggest thistles, root and all," says John Solbach, Lawrence, Kan., about his homemade "thistle kicker".

It consists of a 9-in. curved metal blade, made from a light truck or car leaf spring, welded to a 1-in. dia. pipe handle. The back side of the blade edge is sharpened. You push down on an angle iron footrest to shove the blade into the ground next to the thistle.

Start 1 to 2 in. from the plant and push the blade about 4 in. into the ground, then pull back on the handle until the blade bites into the thistle's root and pops it out.

"The curvature of the blade and sharpening the back side of the blade work together to catch the thistle's conical root," says Solbach. "It'll work on any plant with a conical root."

He says it also works great as a transplant tool for small bare root trees. "I use the tool to uproot small saplings, and then to make a hole into which I can plant the tree."

He has also used the tool to put the tires back on a truck after getting the tire repaired. "I simply position the blade under the wheel hub and roll the tire over the blade. Then I push down on the handle to raise the tire until it's level with the lug bolts. It's much easier than wrestling with a tire by hand."

The tool can also be used to hold sheet rock up in place when you're putting it on a wall off the floor.

A local manufacturer has begun making the thistle kicker and it's for sale at a local hardware store, as well as a grocery store. Two sizes are available. They sell for \$70 (field size) and \$60 (garden size) plus S&H.

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Homemade "thistle kicker" consists of a 9-in. curved metal blade welded to a 1-in. dia. pipe handle.



Back side of blade is sharpened.



Solar kiln is made from clear reinforced plastic attached with cable ties to a metal tubing frame. Note vent at top left.

## Simple Kiln Cuts Wood Drying Time

George Tyler, Louisa, Va., came up with a simple, low-cost way to speed up the process of drying firewood using a simple solar kiln.

He sets up a tent of clear reinforced plastic with 1 cord of firewood stacked inside. The plastic is attached with plastic cable ties to a frame made of metal tubing. An opening is cut into one side of the plastic. The corners of the frame are anchored in poured concrete.

"Almost as soon as I started using it, I noticed condensation forming at the top so I installed a pair of vents at one end to eliminate the moisture buildup," says Tyler. "In the past, I covered my firewood with a tarp but it took about 6 mos. to dry. I've been using this solar kiln for 3 years now, and it has

reduced the drying time by half. It now takes only about 3 mos. for green wood to dry. On a sunny winter day, it'll get up to about 115 degrees inside the kiln."

The lightweight, chrome-plated tubing that Tyler used for the frame came from a local museum where it had been used as part of an exhibit. It came in 6-ft. lengths that were threaded at one end. He used screw-in "globes" to connect the corners. "The tubing screws into holes in the globes, which allows it to be set up at any angle that I want," says Tyler.

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