

Solar Collector Keeps Shop Toasty Warm

"It's maintenance-free and keeps our farm shop comfortably warm at virtually no cost even on the coldest winter days," says Harvey Lorton and son Gary of Greenfield, Ill., who built a solar collector panel that covers the entire south wall of their 16 by 50-ft. combination machine shed and shop.

The solar heater consists of a sheet of clear fiberglass on the outside with a sheet of tin painted black to absorb heat behind. There's a 4-in. wide open space behind the tin and then a layer of fiberglass insulation. On the other side of the insulation is a second sheet of tin, which forms the inside wall of the building and keeps mice from nesting in the insulation. A 1/2 hp squirrel cage fan blows air out of the collector and into the building through five 1-ft. sq. louvered vents located along the base of the wall.

"It produces a lot of heat and there's noth-

ing to worry about mechanically," says Gary. "Even if the outside temperature is only 10 degrees, as long as the sun is shining the inside temperature will rise to 65 or 70 degrees during the day. We mounted a thermostat inside the shop that turns the fan on or off. If the thermostat is set at 65 degrees the fan will usually stop running by 3 p.m., even on cold days. It produces some heat even on cloudy days. We use a wood burning stove in the early morning to provide heat before the sun gets strong."

The Lortons also use a solar collector to dry corn in a Shivers grain bin. They installed a fiberglass solar collector on the roof and south wall of a building next to the bin and use a 5 hp electric fan to blow heated air through an 18-in. dia. plastic pipe and into the bin's aeration ducts. "The solar collector raises the air temperature about 10 degrees.



A 1/2 hp squirrel cage fan blows air out of the collector and into the building through five 1-ft. sq. louvered vents located along base of wall (above). Solar collector panel covers entire south wall of the Lorton's 16 by 50-ft. combination machine shed and shop.

We can dry about 600 bu. of 20 percent moisture corn per day in good weather," says Gary.

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With feeder rack upside down, Schum welds 54-in. high wire combination panels onto the rings and slanted bars and cuts out two openings at each end of bale.

"Wired" Round Bale Feeder Reduces Waste

Welding wire cattle panels to round bale feeders saves a lot of hay, says Robert Schum, Saint Meinrad, Ind., who modifies conventional round bale feed racks by welding 54-in. high wire panels onto the feeder rings and slanted bars.

"I have 20 of these modified bale racks on my cow-calf operation and they work great," says Schum. "I came up with the idea because I couldn't stand seeing hay go to waste. The wire panel extends 12 to 14 in. above the top ring. Cattle can't reach over the top of the wire panels and pull hay out like they can with the original feeder."

He starts out with standard 44-in. high, 8-ft. dia. steel feeders. He then tack welds the 16-ft. long, 54-in. high galvanized wire panel to the outside of the ring. He cuts out some of the wire panel between the slanted bars to leave two openings at each end of the bale that go all the way down to the ground. The full length opening keeps calves from getting their legs caught on anything when they step into the feeder.

"The wire panel design saves at least three fourths of the hay that would otherwise be wasted," says Schum. "One reason is that there are only four openings. The fewer openings, the less waste. The cattle don't have to all eat at one time but instead can take turns. I buy Red Brand heavy duty panels with 1/4-in. thick wires. They sell for \$16 to 17 apiece. It's a waste of money to buy cheaper panels with thinner wire. It's important to have six wires at the top spaced only 2 in. apart be-



Schum made this 3-pt. boom to lift the rack up by the top ring and lower it over the bale. Raising the boom leaves room to carry a bale on tractor's 3-pt. hitch.

cause they give the top of the feeder a lot of strength. It takes 25 ft. and 4 in. of panels to completely encircle the feeder. I overlap the panel ends 2 in. and then weld them together.

"The middle ring is 16 1/2 in. from the ground. I think that if it was higher - say 23 in. or so - it would save even more hay.

Schum made a 3-pt. boom that lets him lift the rack up by the top ring and lower it over the bale without ever leaving the tractor seat. The end of the boom is equipped with a triangle-shaped attachment and channel iron "catch brackets". The boom is raised or lowered by a 32-in. hydraulic cylinder and can be adjusted to a length of 8 ft. The back end of the boom mounts on a steel bracket that's clamped onto the tractor's rollbar. The bracket allows the boom to pivot up or down.

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"Pop-Up" Camper Raises With Touch Of A Button

Any pickup can be quickly converted into a 13-ft. wide "pop-up" camper that comfortably sleeps four adults and has 6 1/2 ft. of interior headroom, says the manufacturer, TICOM Corp., Canton, Mich.

"It lets you use your pickup like an RV yet you're still able to tow a boat or trailer. It dismounts from the pickup in only about 10 minutes so after you're done camping you can use your pickup for other jobs," says Joe Tyson.

The camper consists of a molded fiberglass cover and a hydraulically-operated, "scissors lift" mechanism that serves as the frame. The scissors lift mounts on a pair of steel rails that bolt to the sides of the pickup. You raise the camper cover from the cab by simply pushing a button that activates an electric/hydraulic motor. Once the cover is all the way up you slip four vinyl weatherproof panels into a "J hook" slot in the cover and then zip the panels together. Two large plywood bed platforms, one on each side, are supported by steel rods. There's a zippered door at the back and zippered windows on each side to provide ventilation.

When you're done using the camper you simply remove the four panels and lower the cover flush with the top of the pickup bed. The plywood platforms store on the bed floor and the panels in a storage sack under the cover.

"It has 6 1/2 ft. of head room and the two bunk platforms can hold up to 600 lbs. each," says sales rep Joe Tyson. "Even if you don't want a camper now you can just buy the scissors lift fiberglass cover and use it as an expandable topper to make a covered work area. The cover can be stopped at any height up to 6 1/2 ft. Raising the cover 3 or 4 ft. high protects you from the sun, wind, and rain. Because the lift goes straight up you have easy access to three sides of the pickup bed.

"The steel rails that support the scissors lift are secured by two bolts on each side and two more on a bulkhead that mounts in front of the pickup bed. The four vinyl panels mount on the sides, front, and back. They fit in a 2-ft. wide, 2-ft. long storage sack that's only about 4 in. high. Even with the two platforms and storage sack inside the bed about 90 percent of it is still available for storing other stuff."

Available to fit short or long-bed full-size GM, Chevrolet, Ford, and Dodge pickups.

An 8-ft. long camper with a standard grey



The 13-ft. wide "pop-up" camper comfortably sleeps four adults and has 6 1/2 ft. of interior headroom.



When you're done using the camper you can lower the cover flush with top of pickup bed.



The scissors lift fiberglass cover can be stopped at any height up to 6 1/2 ft., allowing you to use it as a covered work area.

primer gel coat sells for \$2,370; a 6 1/2-ft. long camper for \$2,163. An 8-ft. Tonneau cover and lift mechanism with grey primer gel coat sells for \$1,611; a 6 1/2-ft. cover for \$1,369. The cover is also available in white gel coat or painted to match the truck at an additional cost.

For more information, contact: FARM SHOW Followup, Pickup Top Up, Box 871160, Canton, Mich. 48187 (ph 800 275-9572; fax 313 641-6658).