



Computerized, portable shade shelter automatically opens when the sun comes out and closes (as shown above) when the wind blows too hard.

## Portable Shade Shelter Opens, Closes Automatically

This new portable shade shelter opens when the sun comes out and closes up tight when the wind blows too hard. Developed by the same creative thinking that produced "Good To Go Gates" (Vol. 40, No. 4), the shelter takes cattle comfort to a new level.

"A past customer asked me to build him a shade shelter like one available commercially," says Anthony Gilbert. "I suggested coming up with a better design. He wanted it to be something that either his 70-year-old mother or 14-year-old son could close."

It took him 2 years, but Gilbert came up with a computerized, automated system that opens up to provide 1,100-sq. ft. of shaded area. A light sensor tells the small onboard computer to open the shelter with the sun and close it at night. An anemometer measures wind speed, triggering automatic closure when it hits 140 rotations per min. for 10 min. straight. When the anemometer falls to 80 rotations per min. or less for 10 min., the shelter opens back up. If the sun has gone down before wind speed lessens, the shelter stays closed for the night.

The computer and electric motor controls are powered by a battery that's charged by a small solar panel. If desired, the computer can be set up for remote control with Bluetooth,

Wi-Fi or both. Operators can alter settings and delays, as well as monitor the system, via their smartphone or other devices. As it is, the system can be controlled with a manual switch and reprogrammed on site.

"The first week we had the prototype in place, a storm blew through the area with 100 kilometer per hour winds," says Gilbert. "The shelter closed up tight before the high winds hit and didn't reopen until they died down."

Once the shelter has closed, it can be moved around the pasture with a UTV, skid steer or compact tractor. Aside from its mobility, Gilbert says the only thing the portable shade shelter has in common with its competition is shade cloth, which is used in many different applications.

"We plan to have a batch ready to sell this coming spring," says Gilbert. "We want to get a few out to see how they do before going into full production. However, so far the prototype has outperformed anything we expected."

The Good To Go shade shelter (base model) will retail for approximately \$15,000 (Canadian).

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## Palm Oil Dairy Feed Catching On

Silver Palm from Silver Maple Equipment is a low-cost, bypass fat for dairy cows. The premium quality palm oil is a fractionated, long chain, fatty acid in an energy-dense bead form. It is highly stable in all weather conditions with a melting point of around 137 degrees.

"It's easy to handle and mix, and is free from dust and objectionable odor, making it highly palatable," says James Huber, Silver Maple Equipment. "I started selling it in 2019 on a local basis here in Lancaster County. Since then, I have shipped it as far as Wisconsin."

Huber is a dairy farmer himself and was looking for a low-cost feed supplement for his herd. He notes that bypass fats are considered generic or commodity-type products. He admits that a lot of farmers care less about what they feed and more about the cost.

"Dairy farmers can often save quite a bit of money with Silver Palm compared to other bypass fats," says Huber.

He suggests that Silver Palm is both price competitive and a quality product. His supplier is a large company in India that also supplies food companies. Finding the right supplier was the difficult part.

"It took quite a bit of work to learn the importing process and find a good supplier," says Huber. "Currently the demand for palm



Premium palm oil fat is a good way to cut feed costs for dairy cows, says Silver Maple Equipment.

oil is exceeding the supply."

Silver Palm is available in 55-lb. bags and 1,400-lb. totes. Prices are available upon request.

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## Rolling Stairway Stable & Safe

Bill Hettler wanted something safer than a step ladder when pruning tree branches or working on his sheds, so he made a 2-wheeled staircase complete with a working platform and aluminum safety railing. He pulls the staircase behind his Cub Cadet garden tractor.

"I only use it a few times a year, but it really comes in handy," says Hettler. "It's a lot more stable than a step ladder and built heavier than the rolling step ladders found at big box stores. Growing up I learned to build things from my father, who always found ways to make something work easier and better. He liked to say, 'The lazy man is the inventor.'"

The 2-ft. square platform is 4 1/2 ft. off the ground. "That's a little shorter than a 6-ft. step ladder. However, the staircase's 6-in. wheels are solid steel and don't flex like rubber tires would," says Hettler. "Also, the wheels and axle are much wider than the ladder. As a result, the staircase doesn't move at all when I'm standing on the platform and using my gas-powered pole pruner. I can reach almost 20 ft. high."

The stairway's frame is made from 2-in., 1/4 in. thick angle iron. The 2-ft. wide steps are made from composite wood, with the bottom step welded to the tongue. The tongue is a piece of pipe that's welded to a square metal axle. Hettler already had the axle as



Bill Hettler says his 2-wheeled rolling stairway provides a safer way to prune tree branches or work on his sheds.

well as the steel wheels, which came from his days doing construction work. He cut the axle down to the right length.

He made the railing by cutting up an 8-ft. long aluminum railing, cutting it up into sections and using metal braces and 1/4-in. carriage bolts to connect the sections together.

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## Swimming Pool Heated By Wood Burning Stove

An Ohio man found a simple way to heat his outdoor swimming pool. He set up a do-it-yourself barrel stove and installed a series of 12 copper tubes inside it. The tubes gather heat off the stove, and the swimming pool's pump circulates the heated water back into the pool.

Roofing contractor Matt Studer of Bloomville, Ohio, recently sent us photos of the stove, which is owned by Greg Mathies, who is one of his customers. Mathies bought the stove from another person who put the system together. The stove is located about 15 ft. from Mathies's 28 by 14-ft. pool.

The inventor modified a commercial wood burning barrel stove kit that has everything you need to turn a 55-gal. barrel into a high-capacity wood burning stove. "You can buy stove kits for less than \$100, so it's an inexpensive way to add heat to a swimming pool," says Studer. "The same idea could be used for other purposes, such as to heat a stock tank."

The inventor cut a door into one end of the barrel and installed 6 pairs of 1-in. dia. copper tubes inside. The tubes run in pairs spaced about 4 in. apart and go back and forth the length of the stove, entering and exiting through holes cut into both ends of the stove. "The tubes surround the burning wood, which sits on a curved steel rack," says Studer.

A pair of underground copper tubes fitted with 90-degree elbows are attached to the



Studer installed 12 copper tubes inside barrel stove. Tubes gather heat off stove, and swimming pool's pump circulates the heated water through underground tubes into pool.

stove. One tube delivers unheated pool water to the stove, and the other sends the heated water back.

"The water makes a total of 12 passes through the tubes inside the barrel before it goes back to the pool so it gets pretty hot. It probably increases the pool's water temperature by 15 to 20 degrees," says Studer.

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## Big-Wheeled Push Mower Cuts Down Brush

Mike Marshall recently sent FARM SHOW photos of what he calls his "vegetation mower". It's a regular self-propelled push mower equipped with 4 large wheels that provide extra clearance to mow right over small rocks and even small trees.

"It'll mow down saplings up to 1 in. thick. I didn't modify the blade at all," says Marshall. "It's great for clearing brush. I wasn't sure it would hold up but so far no problem."

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Mower's 4 large wheels provide enough extra clearance to cut down brush.