"Tractor Guard" Window Protectors

"Our patented new Tractor Guard window protectors are designed to protect your tractor's windows and mirrors from flying rocks, trash and other debris. They're held on with suction cups and bungee cords, which makes them easy to install when you're heading out to a job that might damage windows," says Lyle Silbernagel, U.S. Farm Innovations, Austin, Texas.

The clear polycarbonate covers – similar in style to police riot gear – are made in England. Silbernagel recently became a representative for the manufacturer and is now setting up dealers across North America. They're available to fit all tractor windows, doors, lights and mirrors. Hood guards and wheel guards are also available.

"It's a relatively inexpensive solution when you consider tractors often cost \$200,000 or more," says Silbernagel. "When you include labor, the cost to replace a rear tractor window and gasket can be up to \$1,000. Ordinary plexiglass can be used to protect tractor cab windows, but it will break and scratch more easily and over time will start to yellow. You can use wire meshes, but they're difficult to install and remove, they don't look good, and they're hard to see through. Tractor Guard protectors have about the same light transmission as ordinary glass. They're lightweight and it takes only about 2 min. to install or remove them."

According to Silbernagel, flying rocks are an especially big problem for anyone who operates disc mowers. "Disc mowers are far more likely to throw out rocks and debris than conventional sickle mowers. A rock the size of a pea can do as much damage as a bullet. Some disc mowers come with chains that hang down from the machine or come equipped with a tarp around them, but that won't stop all the rocks. Shredders and balers also cause a lot of broken windows on tractors."

According to Silbernagel, Tractor Guard protectors have a high impact resistance that's more than 200 times that of ordinary glass. "In tests we used a shotgun with shells containing ball bearings and shot at a Tractor Guard cover from 10 yards away. They didn't break."

Prices range from \$190 to \$700, depending on the size and type of window or door. "The cost is generally less than what you'd pay for a replacement window, and you'll have the security of knowing you won't be replacing the same window again and will be less likely to get hurt," says Silbernagel.



Powered drop-panel attachment drops down quickly to cover mower's chute opening at the touch of a button. Photo shows panel in the open position.

Drop Down Panel Stops Mower Stone-Throwing

With the touch of a button, Nathan Goldschmidt can stop his mower from throwing grass and stones. His powered drop-panel attachment drops down quickly to cover the chute opening as needed.

"When I ran a lawn service, it was always a problem when grass flew out across a sidewalk or rocks got thrown," recalls Goldschmidt. "I wanted a way to close off the grass chute or to partially shut it down."

After returning from a tour in Afghanistan, he and his dad came up with a solution. "We use two solenoids to close the panel and a spring to open it when the solenoids are turned off," says Goldschmidt. "Initially, we used an internal hinge, but it took too much power for the solenoids to close it. The external hinge works better."

Currently Goldschmidt has a switch for the solenoids by the mower ignition key. However, he plans to relocate it to the steering handle for faster reaction time by the operator.

"It will close in half a second, no matter how much grass is coming out," he says. "The two solenoids have a total pull of about 30 lbs."

Originally, he used a double layer of mud flap material for the 6-in. wide by 13-in. long panel. He is switching to ABS plastic to reduce grass buildup. Regardless of the



"We use 2 solenoids to close the panel and a spring to open it when the solenoids are turned off," says inventor Nathan Goldschmidt.

material, Goldschmidt means for the panel to be the weak link in his attachment.

"I wanted the hinge really strong and the panel weak," he says. "If the operator drives into something with the panel extended, it will give. The hinge and other components won't be damaged. Replacing the plastic is cheap and easy."

Goldschmidt has attachments designed for Toro and Cub Cadet zero-turn mowers. He'll work on other decks if there is demand.

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Window protectors are designed to protect your tractor's windows and mirrors from flying rocks and trash. They're held on with suction cups and bungee cords.

"We can custom build Tractor Guards to fit any tractor, skid loader, or heavy construction equipment. Just call and give us the year, make, model and/or dimensions."

The company also offers a Quad Gard for ATV's that's designed to protect the driver from the elements as well as tree branches and shrubs. Prices vary from \$300 to \$900 depending on the model.

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Electric-Operated "Moving Scarecrow"

"Our moving scarecrow keeps pests from destroying crops in gardens, wildlife food plots, orchards and fields. It's the next best thing to staying in the field yourself," says Bruce Craven, Baxley, Ga.

The scarecrow consists of a metal frame adapted to hold a human form that swivels back and forth. The top part of the frame is fitted with a pvc cross arm where you can attach clothes to look like a scarecrow, or just add a T-shirt, plastic bags, etc. An electric motor causes the scarecrow post to swivel back and forth. Pop cans can be strung from the cross arms to make a loud rattling noise.

A 12-volt deep cycle rechargeable battery provides power. An automatic timing device is used to adjust on-off cycles to conserve battery power.

Two models are available, one stationary and the other portable. The stationary model uses a length of 3/4-in. dia. pipe driven into the ground, with a 3-ft. length of 1-in. dia. pipe slipped over the top that swivels back and forth on a 1-in. block-type washer.

The portable model comes with a framemounted post on large plastic wheels and follows a cable up to 1/4-mile long. A reversing switch at the end of the cable causes the motor to reverse polarity and run backward. The motor bolts onto the frame and chain-drives a sprocket mounted at one end of the axle.

"It's a low cost but effective way to control pests in the field," says Craven. "If you want you could add sound emitting devices such as a horn with a recorded message, a beeper, or even a propane cannon.

"To cover large areas, I spread the scarecrows about 200 ft. apart and use a single motor to operate up to 5 scarecrows at the same time. I usually hang an empty plastic fertilizer sack on the frame, but you can dress up the scarecrow any way you want.

"I came up with the idea because I like to hunt. For years I planted wildlife food plots for deer but other wildlife ate up much of the crop.

"The moveable scarecrow works best in areas like orchards where there's room to travel. I don't recommend using it in row crops because it doesn't always stay exactly in line with the cable and could cause crop damage."



Scarecrow's metal frame holds a human form that swivels back and forth via an electric motor. Portable model can be fitted with a propane cannon.



To cover large areas, Craven spreads the scarecrows about 200 ft. apart. He uses an electric motor to operate up to 5 scarecrows at the same time. Unit in photo is fitted with plastic bags and tin cans.

The stationary model comes with the electric motor. Sells for \$225 plus S&H. The mobile model comes with the motor, wheels and frame, and sells for \$325 plus S&H.

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