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ROPS REBATES: THEY SAVE LIVES AND MONEY Take advantage of this critical safety opportunity.

While no one can place a monetary value on a life, New York State (NYS) knows that at least 10 NYS lives, and more than \$4 million dollars, were saved between 2007 and 2017 by retrofitting aging tractors with rollover protective structures (ROPS). The achievement easily validated the state's ROPS Rebate Program, which was launched in 2006.

ROPS are designed to create a protective zone around a tractor operator when a rollover occurs. As long as the roll bars and seatbelt keep the operator within that zone of protection, there's little risk of being crushed or injured from a tractor rollover.

As of June 2017, the NYS rebate program was rebranded as the National ROPS Rebate Program (<u>www.ROPSR4u.org</u>). In states where funds are allocated to provide a rebate for a ROPS kit, approximately 70% of the cost of purchasing and installing a ROPS kit – up \$865 – tractor owners can retrofit tractors manufactured before 1985 for an average out-of-pocket cost of \$391.

States that currently offer ROPS rebates include Massachusetts, Minnesota, New Hampshire, New York, Pennsylvania, Vermont, and Wisconsin. Farmers in other states may sign up online to be placed on a waiting list (<u>https://www.ropsr4u.org/apply.php</u>).

To enroll in the program, tractor owners can call 877-767-7748 or go to www.ROPSr4u.org. The program team will provide enrollees with sourcing information and cost estimates for ROPS kits. Full enrollment details are available on the website.

"In Nebraska, tractor rollover incidents aren't as prevalent as in areas where more small, older tractors are in use," Aaron Yoder, Ph. D., associate professor of environmental, agricultural and occupational health at the University of Nebraska Medical Center College of Public Health,

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says. "That's because many farmers here use newer tractors. But if ROPS aren't in place, a rollover in a new tractor model can be fatal, too."

The rops4u.org Rollover Facts data shows that, each year, approximately 26.7 out of every 100,000 American farmers die on the job. The tractor is the leading cause of death on a farm. The most frequent cause of tractor-related deaths are side and rear overturns (96 deaths per year).

In 80% of deaths caused by rollovers, experienced farmers are the victims. One in seven farmers involved in tractor overturns are permanently disabled. Seven out of 10 farms where these incidents occur will go out of business within five years of the tractor overturn fatality.

"ROPS are 99% effective in preventing injury or death in the event of an overturn when used with a seatbelt," Yoder says. "If a seatbelt is not in use when the overturn occurs, ROPS are 70% effective in preventing death or injury. We have not documented a case of anyone killed in a rollover when they were using both the ROPS and a seatbelt."

Roughly half of the tractors in the United States don't have rollover protection. In 8 out of 10 tractor rollover incidents, either inexperienced or aging operators are involved. That's because both young drivers and older farmers who tend to use small older tractors for minor farm chores. Newer tractors are used for major farm activities.

"Those older tractors pose the most rollover risk," Dr. Yoder says. "Scenarios where rollovers often occur are in hayfields with rolling or hilly terrain. Mowing, baling, and hauling hay on uneven terrain all put tractor operators at greater risk for a tractor rollover."

Even though in 1985 tractor manufacturers began adding ROPS to all farm tractors with more than 20 horsepower sold in the United States, some of those features are disabled or removed by tractor owners for a "variety of reasons."

"If the rollbars get in the way and are folded down or if seatbelts malfunction, the protection often isn't restored to working conditions," Yoder says. "ROPS that hinder visibility or make it difficult to operate the tractor in a tight space are common reasons the protection is folded down or removed."

All ROPS have been tested to meet crush, static, and dynamic standards set by the Society of Automotive Engineers (SAE). Testing involved impacting the ROPS in a prescribed manner with a 4,410 pound pendulum weight from behind and on both sides. The pass the test, the ROPS must remain intact and provide the specified zone distance for the operator.

While ROPS can be made of any material, as long as they meet temperature requirements and withstand the standard tests, typical ROPS installed on later model tractors are made of precision-welded steel that won't fracture in cold temperatures. ROPS designs include two-post, four-post, and ROPS with an enclosed cab. Two-post ROPS are the most common design and are available in either rigid or foldable models.

Once its installed, a ROPS should be periodically inspected and serviced to determine if extreme rust, cracks, or other types of wear have occurred. If lighting or other attachments are part of the ROPS, they should be clamped on. It's never advisable to drill holes in a ROPS because it weakens the strength of the device.

Never use ROPS as a point of attachment for a chain, hook, or cable. This could damage the ROPS.

"If a ROPS is involved in an overturn, it should be replaced," Yoder says. "A ROPS is designed to absorb energy generated by a tractor hitting the ground. They will only withstand one overturn."

Finding a ROPS to fit an older tractor can be challenging. The University of Kentucky College of Agriculture compiled information about ROPS for older tractors in "The Kentucky ROPS Guide" (<u>https://rops.ca.uky.edu</u>). Local equipment dealers should also have information about retrofitting their own tractor brands.

"Some equipment dealers may be willing to discount the cost of a ROPS and installation because they're well aware of the level of safety the ROPS provide," Yoder says. "On newer tractors, we strongly urge operators to keep their rollbars up. Fold them down if you have to, but don't leave them that way. Don't risk injury or death for the sake of convenience."

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