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PRESS RELEASE

For More Information:

ELLEN G. DUYSSEN

**Central States Center for Agricultural Safety
and Health**

University of Nebraska Medical Center

College of Public Health, Room 3035

984388 Nebraska Medical Center

Omaha, NE 68198-4388

402.552.3394

FOR IMMEDIATE RELEASE

*By UNMC, Central States Center for Agricultural
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ROPS SAVE LIVES

Your life is well worth protecting.

Statistics have shown that 99.9% of tractor operators using a Roll Over Protective Structure (ROPS) and a seat belt survive a rollover with few injuries. University of Nebraska Medical Center (UNMC) College of Public Health Associate Professor, UNMC Department of Environmental, Agricultural & Occupational Health, Aaron Yoder, PhD, says there has been no documentation of a rollover fatality when tractor operators used ROPS and a seatbelt.

“Old tractors pose the most rollover risk,” Yoder said. “Scenarios, where rollovers occur most often, are in hayfields with hilly or rolling terrain or when operators mow, bale, or haul hay on uneven terrain. Those are the situations where tractor operators are most at risk.”

ROPS are roll bar or cage frames designed specifically for wheel and track-type agricultural tractors. They are available as two-post frames (with solid fold-down versions), four-post frames, and ROPS with enclosed cabs. **ROPS don't prevent overturns**, but they all provide a zone of protection for operators if one occurs.

ROPS are engineered to mount on specific tractor models and designed to operate with the tractor's mounting brackets and frame. This makes the structure flexible yet rigid enough to withstand loads produced during a turnover. Any prototype

ROPS must pass engineered, crush, static, and dynamic tests to ensure adequate performance before being mass-produced. The Society sets standards for ROPS prototypes for Automotive Engineers (SAE) and the American Society of Agricultural Engineers (ASAE). Factory-installed ROPS are certified to meet maximum rollover impact and dynamic forces.

Statistics show that:

- 1 in 10 operators overturn a tractor in their lifetime.
- 80% of deaths caused by tractor overturns involve experienced operators.
- 1 in 7 farmers involved in tractor overturns is permanently disabled.
- 7 of 10 farms will go out of business within 5 years following a tractor-related fatality.
- A one-time installation of a ROPS (Rollover Protective Structure) will protect whoever drives the tractor for the life of the tractor.
- Use of a ROPS and a seat belt is estimated to be 99% effective in preventing death or serious injury in the event of a tractor rollover.
- A ROPS normally limits the degree of rollover, thereby reducing damage to the tractor.
- A ROPS with an enclosed cab also prevents tractor operators from being knocked out of their tractor seat from rough ground or low-hanging tree limbs, provides protection from the sun and other weather hazards, and reduces risk for the unsafe practice of extra riders on tractors.

Before 1967, farmers had little protection against these types of incidents. However, by 1986, ROPS became part of the design of new tractor models. ROPS is 99% effective in preventing serious injury or death when used with a seatbelt. The National ROPS Rebate Program has made retrofitting ROPS on older model tractors very cost-effective. ROPS kit costs generally fall under \$500 per tractor.

“Rebate conditions vary from state to state,” Yoder said. “According to the rebate rules, ROPS kits must be certified to national or international standards. Tractor dealers or ROPS manufacturers can discuss certification standards with tractor owners.”

Yoder notes that tractor rollover incidents are less frequent in Nebraska because most farmers use newer tractors. However, a rollover can still occur with a newer tractor, and the potential for a fatality is significantly increased if ROPS aren't in place.

According to tractor rollover statistics, 8 out of 10 rollover incidents involve inexperienced or aging operators. Young drivers and older operators are more likely to use an older model tractor for minor farm activities.

During testing, a ROPS must absorb impact energy without excessive deformation, so the operator's protection zone is intact. A dynamic test involves hitting the ROPS in a prescribed manner with a 4,410-pound pendulum weight from and behind and from both sides. The ROPS must remain intact and maintain specific distances from the operator. A ROPS can be made from any material if that material meets temperature requirements and passes the tests set forth by the standards. Typically, ROPS are made of precision welded steel that will not fracture in cold temperatures.

Homemade ROPS are not recommended because they cannot be verified to meet design standards or tested for durability, which puts operators at significant risk. The special steels, bolts, and welding supplies used for certified ROPS are not readily available to farmers. Using homemade ROPS could also result in serious liability issues if an overturn occurs.

ROPS maintenance includes inspecting for rust, cracks, or other signs of wear. Any of these could cause the ROPS to fail during a rollover. If wear is a concern, contact the ROPS manufacturer or dealer to determine a suitable course of action.

Never modify, abuse, or misuse a ROPS. Never drill holes into the ROPS frame or weld additional steel to it. Any lighting or light attachments should be clamped onto a ROPS.

Never use a ROPS as a point of attachment for a chain, hook, or cable. Using it to pull another object could damage it or result in a rear overturn.

If a tractor with ROPS overturns, the ROPS must be replaced because they are specifically designed to absorb energy generated when the tractor contacts the ground. ROPS are designed and certified to withstand a single overturn.

Tractor and aftermarket manufacturers have designed and developed ROPS for most tractor models. Low-cost retrofit kits are available for many tractor brands. Agricultural equipment dealers are approved to install a retrofit ROPS and seat belt.

A Guide to Agricultural Rollover Protection for various tractor models is available at <https://rops.ca.uky.edu>. The searchable database includes instructions for using the guide, information about ROPS, a list of ROPS suppliers,

and information about gray-market tractors (tractors intended for sale in a country other than the United States).

A seat belt is an integral part of a ROPS since it keeps the operator within the protective zone created by the roll bar or roll cage. However, a ROPS alone won't completely protect the tractor operator in the event of a turnover. While combining the two offers the best protection, installing ROPS on all tractors is essential for agricultural injury protection.

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