

It's Time for a Change, One Way or Another

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The rallying cry for agricultural safety and health for over half a century has been tractor overturns, which kill between 150 and 250 farm workers each year in the U.S. The most interesting aspect of this issue is that the solution to the problem has existed for about forty years—an engineering intervention that has been tested, certified, and proven effective. The effectiveness of this intervention has been shown not just in some esoteric experimental sense, but through clearly documented decreases in tractor overturn fatalities on a national scale (Thelin, 1990). This intervention not only provides proven protection from tractor overturns, but when used as recommended, reduces the risk of death from operators falling from moving tractors, and from collisions between tractors and other vehicles on public roadways. In fact, the effectiveness of this intervention would classify it as a “wonder drug” if we were discussing a vaccine for some chronic disease. What is this “wonder drug,” this proven saver of lives? It is the roll-over protective structure, more commonly known by its acronym, the ROPS.

There is a long history to the development of the ROPS, taking it from a concept in the 1940s to a proven intervention by the end of the 1960s (Arndt, 1971). Countries like Sweden took advantage of this new “wonder drug,” mandated its use, and soon reaped the benefits of having ROPS on their agricultural tractors (Thelin, 1990). Other European countries have followed Sweden's lead and have duplicated the decreases in tractor overturn deaths found by the Swedes. Yet, since its introduction, there has been an undercurrent of resistance to the use of ROPS by the farming community in the U.S.

The first attempt at requiring the use of ROPS on agricultural tractors in the U.S. occurred in 1976 with the adoption of the Occupational Safety and Health Administration's regulation 29 CFR 1928.51 (OSHA, 1975). This standard basically requires a farmer to have a ROPS on farm tractors that were manufactured after the fall of 1976 and that are used by employees on a farm. This standard is limited in scope since it excludes tractors not used by employees, or tractors used in low-clearance areas. Since its adoption, the standard has not been actively enforced because of an OSHA appropriations rider that prevents OSHA from enforcing any standards on farms with less than 11 employees. A second attempt to increase the use of ROPS in the U.S. occurred in 1985 with the passage of ASAE Standard S318.10 (*ASAE Standards*, 1985). This voluntary standard recommended the use of ROPS on all new tractors manufactured for use in the U.S., with few exceptions. Since the adoption of S318.10, however, no standards, voluntary or otherwise, have addressed the use of ROPS at the national level.

A major question is: what impact has there been from these standards? Based on information collected in 1993 by the National Institute for Occupational Safety and Health (NIOSH), use of ROPS on newly manufactured tractors exceeded 50% for the first time in the five years following the adoption of the 1975 OSHA standard; ROPS use then exceeded 90% on newly manufactured tractors within four years of the adoption of the 1985 ASAE voluntary standard (Myers and Snyder, 1995). Despite these improvements in the use of ROPS on new tractors, fully 62% of the 4.8 million tractors in use on farms in 1993 were not equipped with ROPS. This is due in large part to the longevity of farm tractors used on farms in the U.S.

Since 1993, there has been a continued push to increase the use of ROPS on older tractors in the U.S. This includes incentives by the manufacturers to sell ROPS at cost for older farm tractors, the publication of resource guides to inform farm operators where to purchase ROPS for older farm tractors, the development of ROPS designs for older model tractors manufactured before the availability of ROPS, and the continued use of educational campaigns and community programs to promote the benefits of ROPS on older tractors. The issue of ROPS continues to be on the agenda at major agricultural safety and health conferences annually, and was the main focus of a special policy conference in 1997 (Great Plains Center of Agricultural Safety and Health, 1997).

But what has been the outcome of all this activity during the 1990s? Where are we today, and just where are we headed with the whole issue of ROPS in the future? The answers are not encouraging. Based on current data, there is strong evidence that the activities of the 1990s have had little impact on decreasing the number and rate of tractor overturn fatalities in the U.S. (Myers, 2003). On the positive side, new data collected in 2002 for NIOSH show that the overall proportion of tractors equipped with ROPS on farms now stands at 50%; however, these same data strongly suggest that most, if not all, of this increase is due to the implementation of the 1985 ASAE standard. The impacts of the incentive programs, educational programs, and public meetings promoting ROPS are dwarfed by this one voluntary standard.

The 2002 data also reinforce a major conclusion drawn by Myers and Snyder (1995) from the 1993 NIOSH data. If the agricultural safety and health community does nothing at all, then the replacement of older tractors with new ROPS-equipped tractors brought about by the 1985 ASAE standard will, on its own, take care of the ROPS use issue around the year 2020. Put quite simply, by doing nothing, we are 16 years away from achieving the goal of having a protective level of ROPS use on farms in the U.S. By continuing the present incentive or educational activities designed to promote ROPS use to the farming community, we are still 16 years away from achieving this goal (Myers, 2003).

These data indicate that ROPS use on tractors in the U.S. only increased when some form of standard was applied to the problem. We have made it to where we are today because of the OSHA and ASAE standards. Without these two events, it is safe to say that ROPS use in the U.S. would be well below the 50% level it is at today. The agricultural safety and health community must accept the fact that the educational and incentive programs tried to date have not, in and of themselves, had a dramatic impact on this issue.

It is time for a change. The agricultural safety and health community is at a crossroads. We either take a major step forward by supporting an all-inclusive program to increase the use of ROPS on tractors, or we resign ourselves to letting the 1985 ASAE standard run its course. It is time to pool our collective resources, and come to a national consensus on solving this seemingly intractable problem. We need to look seriously at the full range of options available to us (including incentives to place ROPS on tractors,

voluntary standards to place ROPS on used tractors before resale, the use of proven educational programs to promote ROPS use, and even the possible use of regulation to require ROPS on tractors), and come to an agreement on a national plan. Finally, whatever the plan is, we must follow through with it.

It is time for a change. Either we solve this issue now, or we move on to a new rallying cry. I only hope we make the right decision.

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