

May Update from the Field 2021: PTO Shields

Understanding Trends in PTO Shielding Using Kelman's Processes of Change

Tinc, Pamela J., Megan M. Goodspeed, and Julie A. Sorensen. "Understanding Trends in PTO Shielding Using Kelman's Processes of Change." *Journal of Agromedicine* (2020): 1-6.

Kelman's Processes of Change suggest that individuals participate in behaviors for one of three reasons: because it is required (compliance), because the behavior allows them to maintain a particular social status (identification), or because the behavior aligns with the individuals core beliefs (internalization). This study aims to assess the utility of this model in understanding farmers' attitudes and behaviors regarding power take-off (PTO) shielding to prevent entanglements.

Marketing Farm Safety: Using Principles of Influence to Increase PTO Shielding

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Despite much work to reduce the frequency and severity of agricultural injuries, these events still occur. Power take-off entanglements are one example of agricultural events that can lead to death or permanent disability. This manuscript considers the use of marketing techniques to reduce agricultural injuries. Specifically, the "principles of influence" (liking, social proof, authority, consistency, reciprocity, and scarcity) are explored as methods of promoting power take-off shielding among New York farmers.

Safety Vision of Agricultural Tractors: An Engineering Perspective Based on Recent Studies (2009–2019)

Fagnoli, Mario, and Mara Lombardi. "Safety Vision of Agricultural tractors: An engineering perspective based on recent studies (2009–2019)." *Safety* 6, no. 1 (2020): 1.

The high rate of injuries occurring in agricultural activities is of major concern in most countries, despite the ever-increasing efforts made at normative levels. In particular, the use of agricultural tractors is recognized as the most hazardous activity for farmers due to the large number of fatalities occurring every year. The aim of the present study was to investigate the recent developments in research activities dealing with tractor safety. For this purpose, a systematic literature review was carried out, taking into account engineering journal papers appearing in Scopus in the 2009–2019 period and focusing on tractor safety. As a result, 79 documents were

selected and analyzed based on both their type (e.g., conceptual or empirical studies) and specific targets. They were then classified and discussed in accordance with a reference framework representing the main issues of agricultural tractor safety: mechanical hazards, protective devices, command and control, other hazards, ergonomics, information, conformity, and user behavior. The results of this analysis brought to light the need for a more human-centered approach when dealing with tractor safety. In addition, the lack of a reliable framework of technical standards was also stressed. Overall, despite the limitations due to the selection criteria, this study represents the first systematic literature review depicting the status of tractor safety in the engineering field, providing a basis for further research on the emerging themes outlined.