

## **September: Farm safety walk-through/hazard assessment**

Chattha, H. S., Corscadden, K. W., & Zaman, Q. U. (2017). Hazard Identification and Risk Assessment for Improving Farm Safety on Canadian Farms. *Journal of agricultural safety and health*, 23(3), 155–174. <https://doi.org/10.13031/jash.11959>

Agriculture is one of the most hazardous industries worldwide. The number of serious accidents on farms, despite sophisticated technology, development of effective prevention methods, and high-quality training and improved skill levels of farmers, is still very high. The purpose of this study was to develop and apply a generic farm safety protocol to hazards that have been identified in previously published literature and demonstrate the potential benefits of such a protocol with a view to raising awareness of farm safety. Hazards in agriculture were categorized, and literature highlighting the risks associated with hazards was collated. A protocol was developed and applied to establish the likelihood of a hazard causing injury and the consequence of that injury should adverse effects of hazards be realized. The results indicated farm ownership, farm being used as a primary residence, and missing rollover protective structures as the greatest farm risks with expected likelihood and extreme consequence such as death or permanent disablement. Other hazards that require immediate attention while developing mitigation strategies include accident history and existing medical conditions of the farmer, working environment (i.e., alone and isolated), water bodies in the proximity of the farm, lack of periodic machine maintenance, uncovered power take-off and other rotating parts of the tractor, missing safety decals, auger entanglements, and unprotected use of pesticides. Intervention strategies may be guided by considering the results presented in this study. Moreover, farm safety specialists should increase their efforts to promote effective injury prevention methods and enforce safe work environments. The developed protocol addresses almost all common aspects of farming hazards and can be used to mitigate risks associated with hazards in any farm setting.

Rautiainen, R. H., Grafft, L. J., Kline, A. K., Madsen, M. D., Lange, J. L., & Donham, K. J. (2010). Certified safe farm: identifying and removing hazards on the farm. *Journal of agricultural safety and health*, 16(2), 75–86. <https://doi.org/10.13031/2013.29592>

This article describes the development of the Certified Safe Farm (CSF) on-farm safety review tools, characterizes the safety improvements among participating farms during the study period, and evaluates differences in background variables between low and high scoring farms. Average farm review scores on 185 study farms improved from 82 to 96 during the five-year study (0-100 scale, 85 required for CSF certification). A total of 1292 safety improvements were reported at an estimated cost of \$650 per farm. A wide range of improvements were made, including adding 9 rollover protective structures (ROPS), 59 power take-off (PTO) master shields, and 207 slow-moving vehicle (SMV) emblems; improving lighting on 72 machines: placing 171 warning decals on machinery; shielding 77 moving parts; locking up 17 chemical storage areas, adding 83 lockout/tagout improvements; and making general housekeeping upgrades in 62 farm buildings. The local, trained farm reviewers and the CSF review process overall were well received by participating farmers. In addition to our earlier findings where higher farm review scores were associated with lower self-reported health outcome costs, we found that those with higher farm work hours, younger age, pork production in confinement, beef production, poultry production, and reported exposure to agrichemicals had higher farm review scores than those who did not have these characteristics. Overall, the farm review

process functioned as expected. encouraging physical improvements in the farm environment, and contributing to the multi-faceted CSF intervention program.

Norman, P. A., Dosman, J. A., Voaklander, D. C., Koehncke, N., Pickett, W., & Saskatchewan Farm Injury Cohort Study Team (2022). Intergenerational transfer of occupational risks on family farms. *The Journal of rural health : official journal of the American Rural Health Association and the National Rural Health Care Association*, 38(3), 527–536.

<https://doi.org/10.1111/jrh.12602>

**Background:** Cultures of safety in farm work settings are under the authority of a responsible owner-operator, who establishes rules, attitudes, and behaviors for farm work practices. This novel analysis provides new evidence to show that risks that can lead to injury and are commonly practiced on Canadian farms are indeed transferred between generations.

**Methods:** Baseline data were provided by representatives from eligible and consenting farms (n = 589) in the province of Saskatchewan, Canada, during the first quarter of 2013. Mailed questionnaires were sent to participating farms and completed by a single respondent. Questionnaires included scaled assessments of hazards and safety practices by farm operators, and young workers on each farm. Descriptive and multiple regression analyses were used to examine relationships between farm owner-operator risks and safety practices and those reported for the young workers.

**Findings:** Graphical descriptive analyses showed that as farm owner-operator risks increased, so did those reported for children and young workers. Similarly, as farm owner-operator safe work practices increased, young worker hazards decreased, albeit more modestly. The young worker hazard scale increased by 0.20 (95% CI: 0.10-0.30) points, and decreased by 0.08 (95% CI: -0.016 to -0.000) points for each one-point increase in the owner-operator hazard and safe work practices scales, respectively.

**Conclusions:** Occupational health and safety risks and protections experienced on farms appear to be transferred between generations. This suggests the need to target farm owner-operators, the responsible authority on the farm, as a focus of primary prevention strategies aimed at injury risks to children and young workers.