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Background Of concern, are aging workforces, particularly agricultural, with more workers aged >55 years than all industries combined (23% vs 14%) and fatality rates 9 times greater (25.4 vs 2.8/100 000 workers). Understanding the impact of aging is critical for their health and safety.

Aims/Objectives/Purpose Analyse injuries among agricultural operation workers in five upper Midwestern states in the US.

Methods In 1999 and 2001, 16 000 operations, randomly selected (3200 per state) from the US Department of Agriculture's database, reported household injuries and demographics over 46 month periods. Following descriptive analyses, multivariable models, based on directed acyclic graphs and weighted for non-response and unknown eligibility, identified potential risk factors for agricultural injury, stratified by age group.

Results/Outcome Injury rates were four times higher among males aged 60–64 vs 20–24 years (194.1 vs 49.9 events/1000 persons/year). The highest rate for females was also among 60–64 years (75.5 events/1000 persons/year). Major injury sources were animals and falls; >35% of falls involved those 60+ years. Older workers were injured more severely: 43%, 39%, and 41% of those 55–59, 60–64, and 65+ years, respectively, had restricted activities >7 days; 19%, 25%, and 24%, lost >7 days of agricultural operation work. For those 65+ years, 18% sustained brain concussions, requiring treatment. Among workers aged 60–69 years working <20 h vs 80+ h/week, operation-related injuries were elevated with a relative risk of 4.2 (95% CI 0.9 to 19.3).

Significance/Contribution to the Field These results support establishing the study of aging effects as a priority in agricultural populations for injury prevention.