Perceived Hazards and Safety Information Needs of Small Family Farms and Organic Farms in the Central States Region

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INTRODUCTION
The United States Department of Agriculture (USDA) defines small family farms as farms with gross sales ≤$250,000. These include residential farms (retired farmers, operators, and operators with major occupations other than farming) and intermediate farms (operators with farming as major occupation). Small family farms comprise 91% of all farms in the US and contribute to 57% of direct sales to the consumers\(^2,3\), whereas organic farms were estimated to generate $7.1 billion agriculture related income in 2007\(^4\). Despite growing proportion of small family and organic farms and their contribution to the US agriculture economy, there is limited literature on farm hazards and safety information needs of these farm groups.

Our study aims to identify perceived hazards, safety information needs, prevention practices, and communication preferences among small family farms and organic farms in the Central States region. We also intend to determine the effect of operator and farm level covariates on hazard perception and safety information needs.

METHODS

• National Agricultural Statistics Service (NASS) mailed pilot-tested, self-administered agricultural health and safety survey in Spring 2012 to a random sample of 1038 farms in Central States region (NE, IA, KS, MN, MO, SD, ND), and organic farms in the Central States region.

• The survey collected information on principal operator demographics, types of operations, topics for safety information, prevention practices and communication modes used on a daily basis, and media outlets preferred for receiving information. The survey response rate was 21.6% (N=224).

• NASS linked the health and safety survey to the 2007 USDA Agricultural Census with gross sales ≤$250,000.

• The survey captured data for principal operator demographics, types of operations, topics for safety information, prevention practices and communication modes used on a daily basis, and media outlets preferred for receiving information. The survey response rate was 21.6% (N=224).

RESULTS

• Primary occupation, land in operation (acres), total sales ($), and commodities such as cattle, hay & field crops significantly differed between survey participants from different farm types (Table 1).

• Use of dust mask and hearing protection was significantly lower in residential farms compared to intermediate and organic farms (Table 3).

• Overall mail (194; 86.6%) was the most commonly used mode for communication. Television (177; 79.2%) and radio (166; 74.1%) were most commonly used media outlets to receive information (Table 3).

• Among survey participants, perceived hazards were higher for male operators compared to female (Table 3).

• Multiple logistic regression showed that adjusting for age, primary occupation, income group, total land sales, and commodities produced, the odds of perceiving health concerns was 3.4 times higher for males on organic farms compared to males on intermediate farms (OR=3.4; 95% CI:1.06-11.04, p=0.03).

CONCLUSION

• Participants from residential farms perceived lower number of hazards. Use of preventive measures such as dust masks and hearing protection was significantly lower on residential farms. Overall, the use of helmet and roll-over protection structures on tractors was very low. There were significant differences for preferred media sources to receive farm safety and health information among different farm types.

• Future studies with larger populations comparing farm hazards, interventions and health promotion activities among different farm types will increase our understanding of specific farm needs and provide data for designing tailored interventions.

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REFERENCES


Table 1: Characteristics of NASS agricultural health and safety survey participants (N=224)

Table 2: Univariate predictors of hazard perception among survey participants

Table 3: Preventive measures used by survey participants

Table 4: Communication modes used on a daily basis & media outlets preferred for information by survey participants
