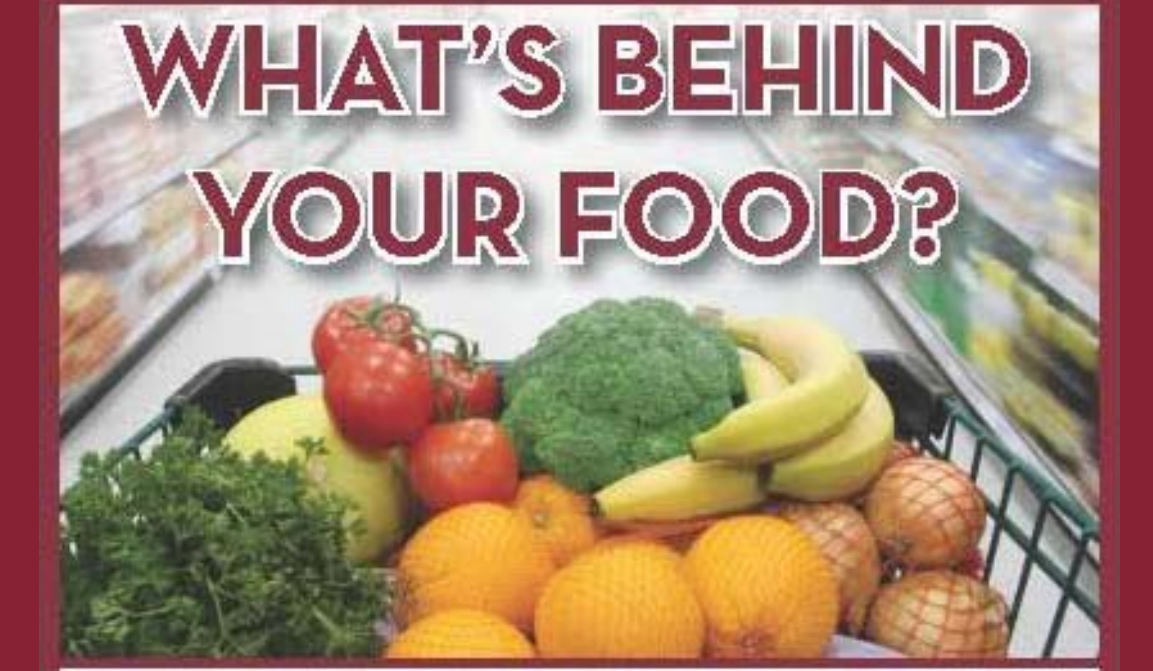




# PUBLIC PERCEPTIONS OF AGRICULTURAL WORKER SAFETY RESULTS FROM THE 'WHAT'S BEHIND YOUR FOOD?' SURVEY

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## INTRODUCTION

Agriculture is one of the largest industries in the United States (US), employing over two million people annually (US Department of Labor, 2014). Long hours, demanding work, adverse weather conditions, equipment failures, and labor shortages can impact worker safety. Agriculture has consistently been identified as one of the most hazardous industries with mortality and morbidity rates similar only to the industries of mining and construction (NIOSH, 2012). In 2012, the rate of fatal occupational injuries was eight times greater for agriculture than for all industries combined (20.8 versus 2.7 per 100,000 full-time equivalent workers). Additionally, there were 120,000 medically consulted injuries related to agricultural work, versus 4.9 million for all industries combined in the US, accounting for a rate 1.5 times greater, based on hours worked (National Safety Council [NSC], 2014).

Little information is available about the general public's knowledge of agricultural worker safety. The Upper Midwest Agricultural Safety and Health (UMASH) Center developed an electronic survey to help measure the public perception of agricultural safety and the hazards faced by workers in the industry.

## OBJECTIVES

- Understand what factors people think about when making food purchasing choices for self or family
- Assess public knowledge of agricultural worker health and safety



## METHODS

An electronic survey entitled 'What's behind your food?' was developed and administered using REDCap, a web-based application. The survey contained questions about food purchasing decisions, safety and health risks faced by agricultural workers, and demographic characteristics of the responders, including whether or not they ever lived or worked on a farm.

The survey was administered to passersby using portable electronic tablets at two locations:

- Minnesota State Fair (August/September 2014)
- University of Minnesota Farmers Market (Summer 2014)

In addition, invitations to complete the survey on the UMASH website were sent out during the National Farm Safety Week in September, 2014.

Survey data were combined from all sources and frequencies of responses were calculated and stratified by responders with and without farming background (ever lived or worked on farm versus never).

## RESULTS

A total of 318 responders completed surveys:

- 91 Lived/worked on a farm (farmers)
- 217 No farm background (non-farmers)
- 10 Unknown

More females than males responded to the survey and this difference was greater among non-farmers than among farmers (Table 1). In addition, a higher percentage of farmers were in the oldest age group (> 50) compared to non-farmers.

Table 1. Responder Characteristics

|                   |                      | Farmers |      | Non-Farmers |      |
|-------------------|----------------------|---------|------|-------------|------|
|                   |                      | N       | %    | N           | %    |
| Gender            | Male                 | 40      | 44.0 | 54          | 24.9 |
|                   | Female               | 50      | 55.0 | 159         | 73.3 |
| Age (years)       | less than 30         | 19      | 20.9 | 61          | 28.1 |
|                   | 30 to 49             | 22      | 24.2 | 64          | 29.5 |
|                   | 50 and older         | 50      | 55.0 | 90          | 41.5 |
| Highest Education | College (2 years)    | 34      | 35.1 | 83          | 37.9 |
|                   | College (4 years)    | 25      | 25.8 | 72          | 32.9 |
|                   | Graduate School      | 36      | 37.1 | 63          | 28.8 |
| Household Income  | less than \$50,000   | 22      | 22.7 | 70          | 32.0 |
|                   | \$50,000 to \$99,999 | 28      | 28.9 | 66          | 30.1 |
|                   | \$100,000 and over   | 38      | 39.2 | 74          | 33.8 |

Eighty percent of farmers and 68% of non-farmers correctly estimated that the average age of farmers is increasing (data not shown).

Taste and nutritional value were reported most frequently as very important factors when purchasing food among farmers and non-farmers, while cost appeared to be more important to non-farmers and locally produced food to farmers (Figure 1). Among non-farmers, 17% admitted that they never thought about agricultural worker safety when purchasing food, compared to 12% among farmers (Figure 1). Among non-farmers with a household income less than \$50,000 per year, 20% reported that they never thought about worker safety when purchasing food and only 33% said it was a very important factor while 60% of farmers with graduate school education or higher said agricultural worker safety was very important (data not shown).

Farmers and ranchers were ranked as the profession with the highest fatality rate most frequently among farmers while mining was ranked the highest most frequently among non-farmers (Figure 2). Farmers with graduate school education ranked farmers and ranchers with the highest fatality rates more frequently (54%) than those with two years of college experience or less (28%) (data not shown).

More than 60% of all respondents correctly identified health conditions for which agricultural workers are at high risk, with the exception of lung cancer which was identified as high risk by 62% of farmers but only 50% of non-farmers (Figure 3). Among farmers with a graduate school education or higher the frequency of high risk identification was >80% for all listed health conditions other than lung cancer (data not shown).

Figure 1. When purchasing food for you or your family, how important are the following factors?

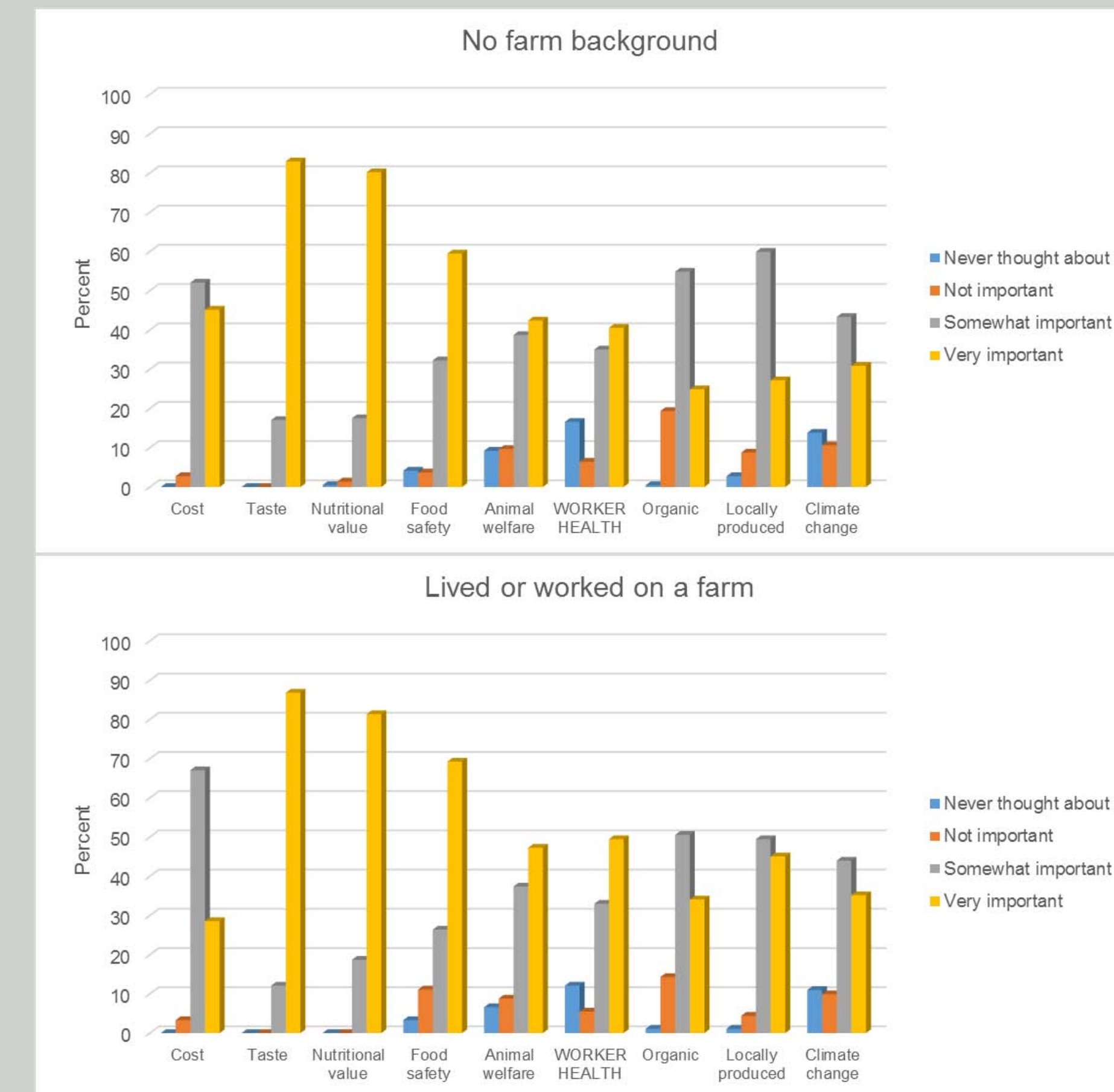


Figure 2. Ranking of Professions with Highest Fatality Rates among Respondents

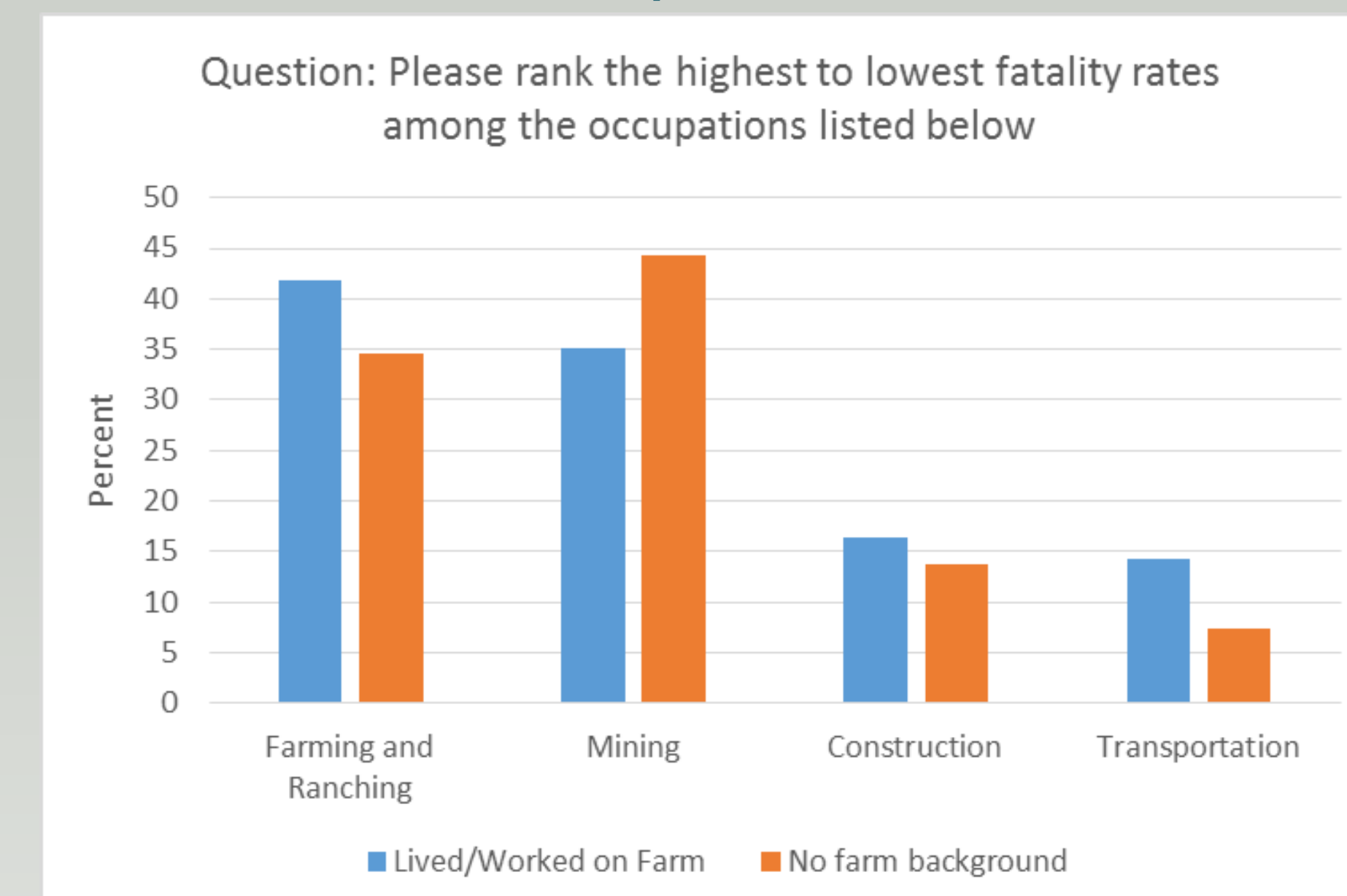
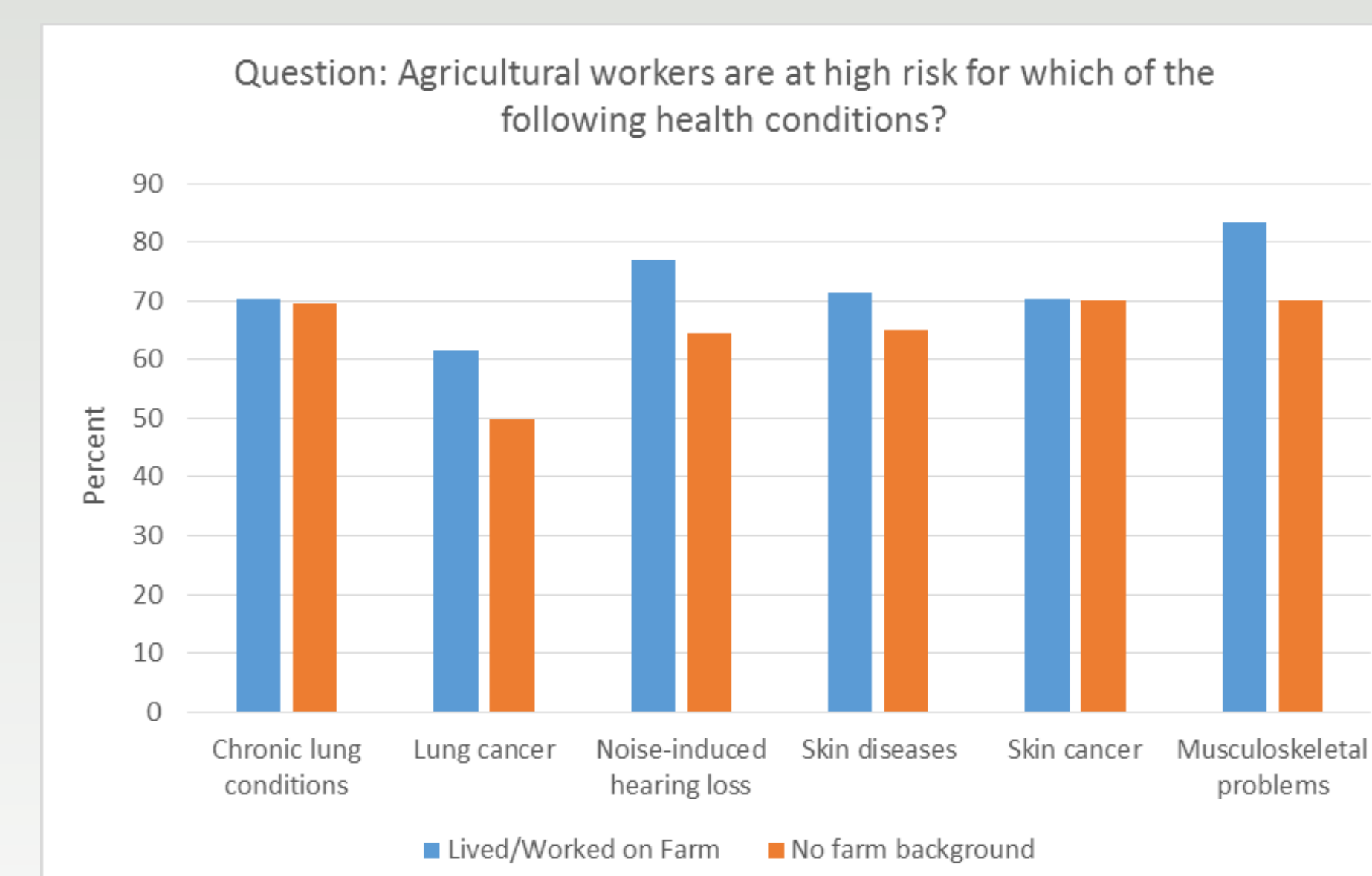
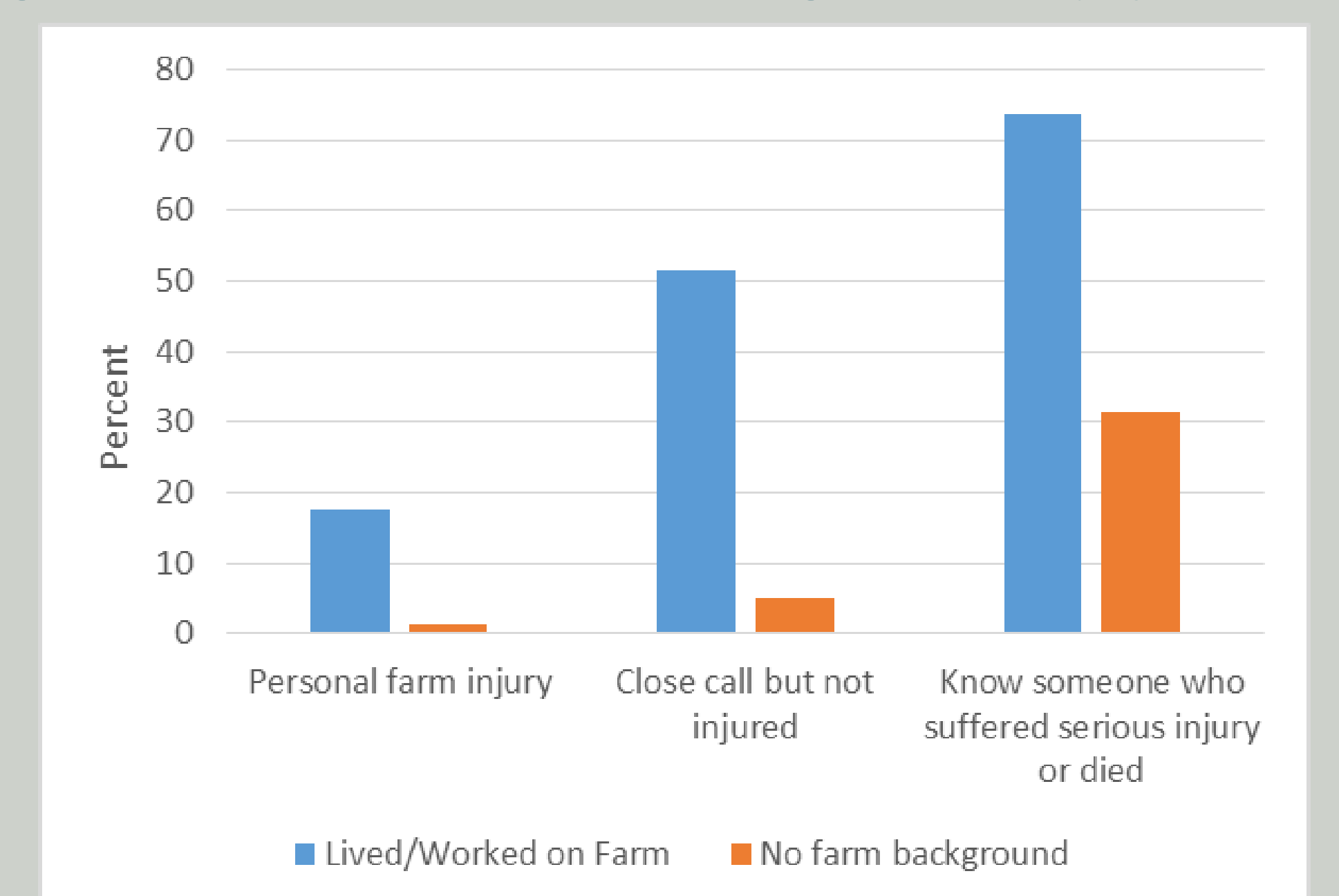


Figure 3. Identification of High Risk Health Conditions for Agricultural Workers



Among farmers, 18% reported being injured as a result of farm-related work, 52% reported a close call, and 74% reported knowing someone who was seriously injured or died as a result of farm-related work or activities (Figure 4).

Figure 4. Personal Experience/Knowledge of Farm Injury or Fatality



## CONCLUSIONS

While the importance attached to food purchasing factors such as taste and nutritional value were anticipated, it was surprising that more than 1 in 10 responders reported that they never thought about worker health when purchasing food. In addition, responders in the lowest education and income groups demonstrated less consideration and knowledge of agricultural worker safety than those in the highest groups. These findings suggest that there are opportunities to increase public awareness of the injury risks and hazards that agricultural workers are exposed to on a daily basis. Workplace injuries hurt not only the worker but also their families and communities. Lost work time can result in higher production costs on the farm and higher prices in the grocery store. Increasing public knowledge may lead to improved efforts to protect agricultural workers in these hazardous work environments.

## ACKNOWLEDGEMENTS

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