

Final Report

Assessing the Farm Safety Needs of Farmers & Farm Workers in Maine

Submitted to Northeast Center for Agricultural & Occupational Health (NEC)

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Objectives

This project will identify benchmarks for current farm safety issues and needs of farmers and farm workers. The safety needs will be determined and prioritized so as to better address these needs through educational programming.

Procedure

A survey was drafted by Principal Investigator, Richard J. Brzozowski in the fall of 2009 and reviewed by Dr. John May of the Bassett Hospital; Dr. Ron Jester retired Extension Farm Safety Specialist, University of Delaware; Cooperative Extension colleagues in Maine; Cooperative Extension colleagues outside of Maine (NY and Wisconsin); and Maine Department of Education (Vocational Agriculture state coordinator).

The survey instrument as well as the process was submitted for approval for use with human subjects at the University of Maine in Orono, Maine in November, 2009. The survey was adapted with the necessary statements and directions for the user. Due to policy requirements of the University of Maine, no one under the age of 18 was invited or allowed to complete this survey.

The survey was first used in a hard copy version with over 100 beef producers at the Maine Beef Producers Seminar held on Saturday, December 2, 2009 in Bangor, Maine. As an incentive, a pair of safety glasses was given to each individual who completed the written survey. It appeared that the participants understood the questions and the feedback after the survey was positive. It took approximately 15 minutes for each person to complete the questionnaire. Participants were asked not to provide their own identity or the identity of any person mentioned in their responses.

Following this statewide seminar, the survey was formatted electronically and prepared to be sent out to farmers throughout the state of Maine. Brzozowski acquired mailing lists from Extension colleagues all over the state. They included livestock producers, dairy producers, vegetable and small fruit producers, apple producers and potato producers from existing Extension mailing lists. These lists were merged so as to eliminate duplicate addresses. A listing of email addresses was separated. The survey was sent to the email mailing list initially.

Over the next few weeks several hundred were sent in hard copy form to others (where no email address was known). *See the cover letter that was sent with the survey in appendix.*

As incentive to complete the survey, a chance at one of five prizes was offered. After completing their survey, each person was asked to send an email message or a special post paid notification card to the investigator stating they completed the survey and they wished to be a part of a random drawing for a possibility of receiving one of five \$50 gift certificates. The certificates would be purchased from a local seed dealer, farm & feed store, agricultural supplier, equipment dealer or hardware store depending on the winner's choice.

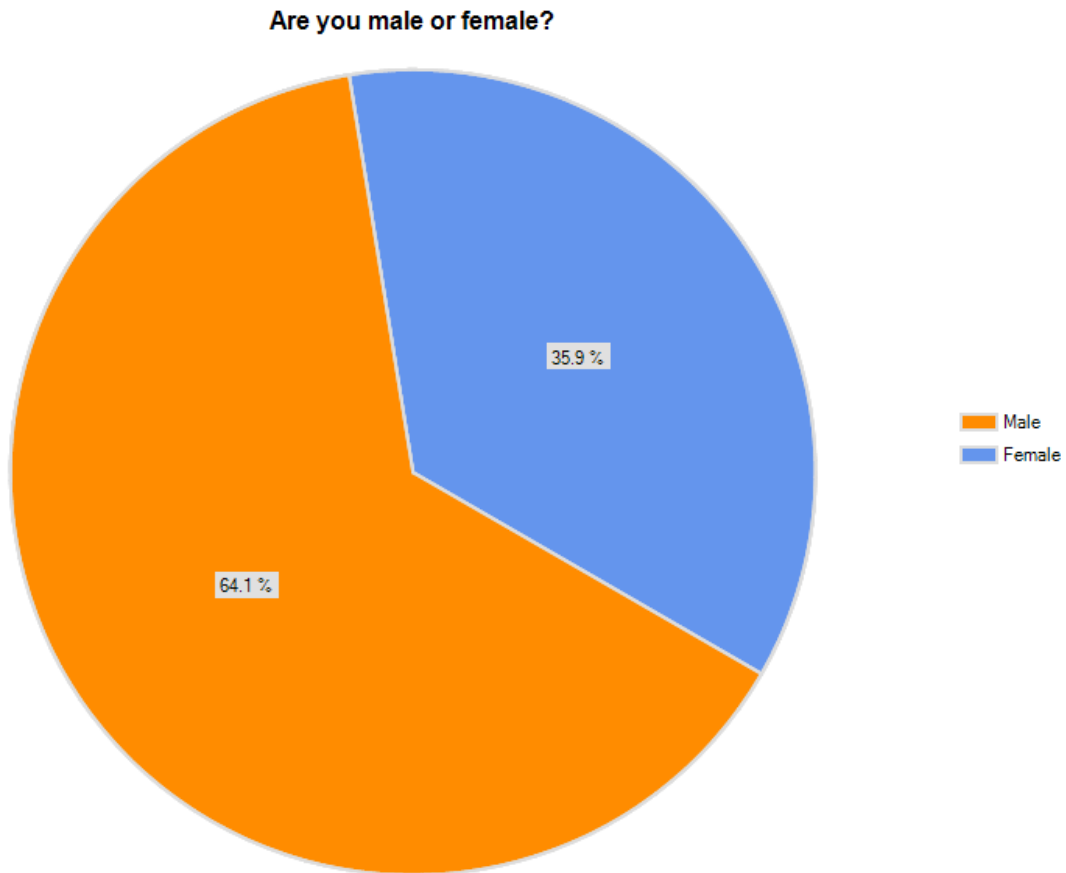
In addition, Brzozowski worked with the two statewide organizations; the Maine Farm Bureau (MFB) and the Maine Organic Farmers & Gardeners Association (MOFGA). MFB and MOFGA sent the survey electronically to their respective clientele.

We estimate that the survey reached more than 3,000 individuals across Maine. At least 864 individuals completed the survey.

Survey Results Summary

In the following pages, the results of the survey will be presented in graphic form with comments. The charts and graphs are presented in numerical order as they appeared in the survey.

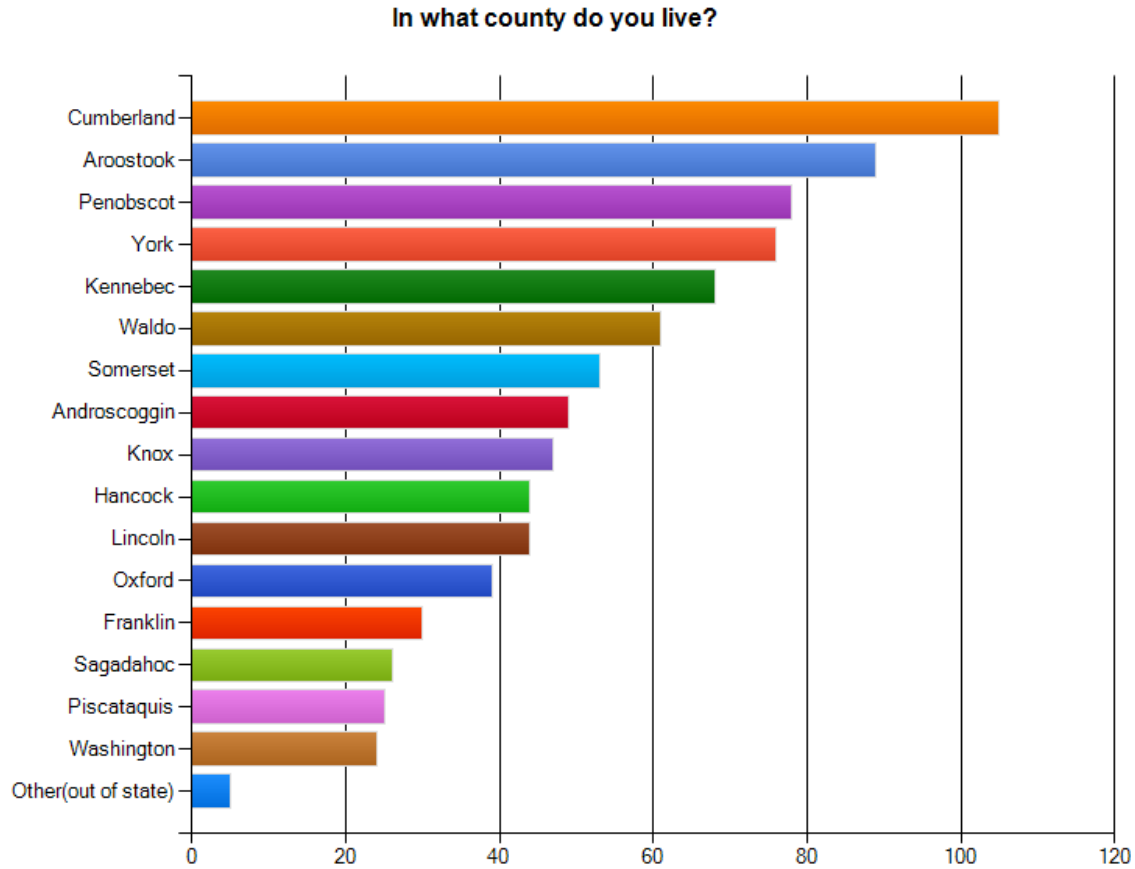
Question 1 Results



Comment:

This response from survey respondents is closely reflective of the 2007 US Agriculture Census data for Maine where men comprised a bit over 60% of farm operators in and women a bit less than 40% of farm operators. Following is the link to the appropriate page of the Ag Census.
<http://tinyurl.com/37h5n92>

Question 1 Results



Comment:

Individuals from every county in Maine participated in completing the farm health and safety survey. The results for this query reflect the availability of accurate mailing lists and not the farming population of Maine. However, the principal investigator was satisfied with the response rate statewide and the distribution of respondents throughout the state.

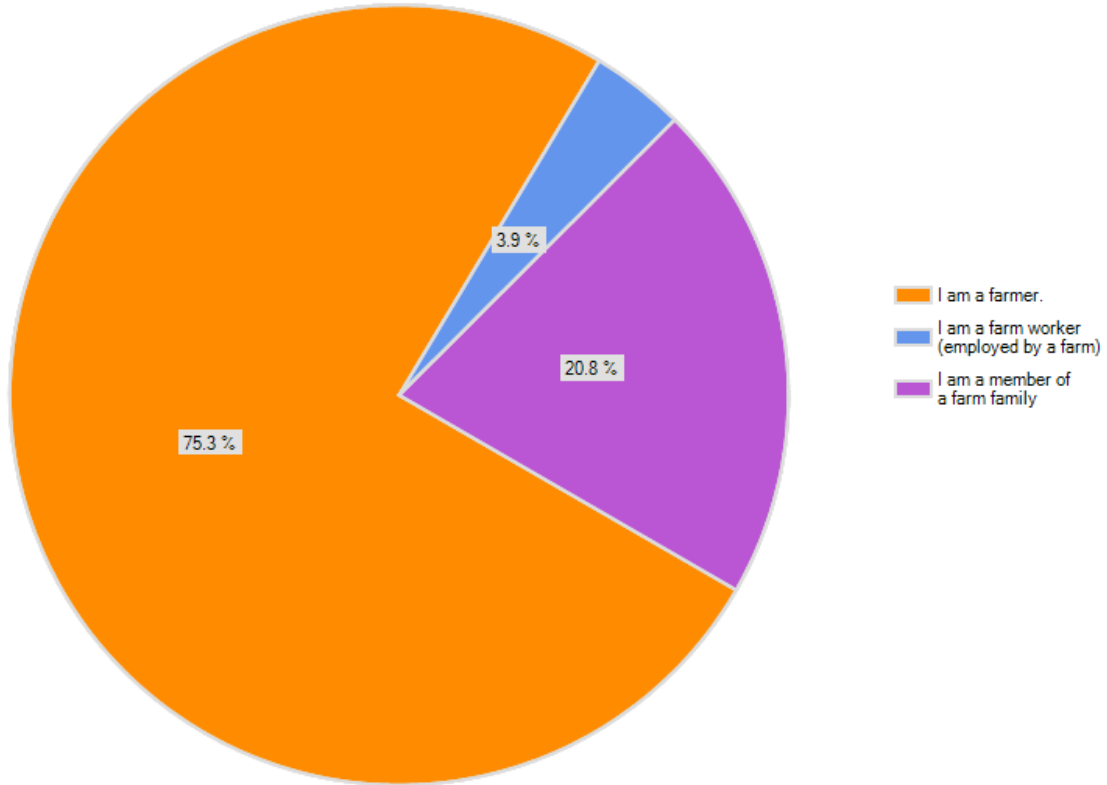
Percent of total farms in Maine by County 2007 US Agriculture Census. Total number of farms 8,136

Cumberland	7.7%
Aroostook	15.3%
Penobscot	8.6%
York	8.7%
Kennebec	7.9%
Waldo	5.2%
Somerset	6.9%
Androscoggin	4.6%
Knox	3.7%
Hancock	4.7%
Lincoln	4.4%
Oxford	6.7%
Franklin	4.7%
Sagadahoc	2.2%
Piscataquis	2.3%
Washington	5.8%

http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1_Chapter_2_County_Level/Maine/st23_2_001_001.pdf

Question 2 Results

Mark the box below that best describes you. Only one selection is able to be marked.

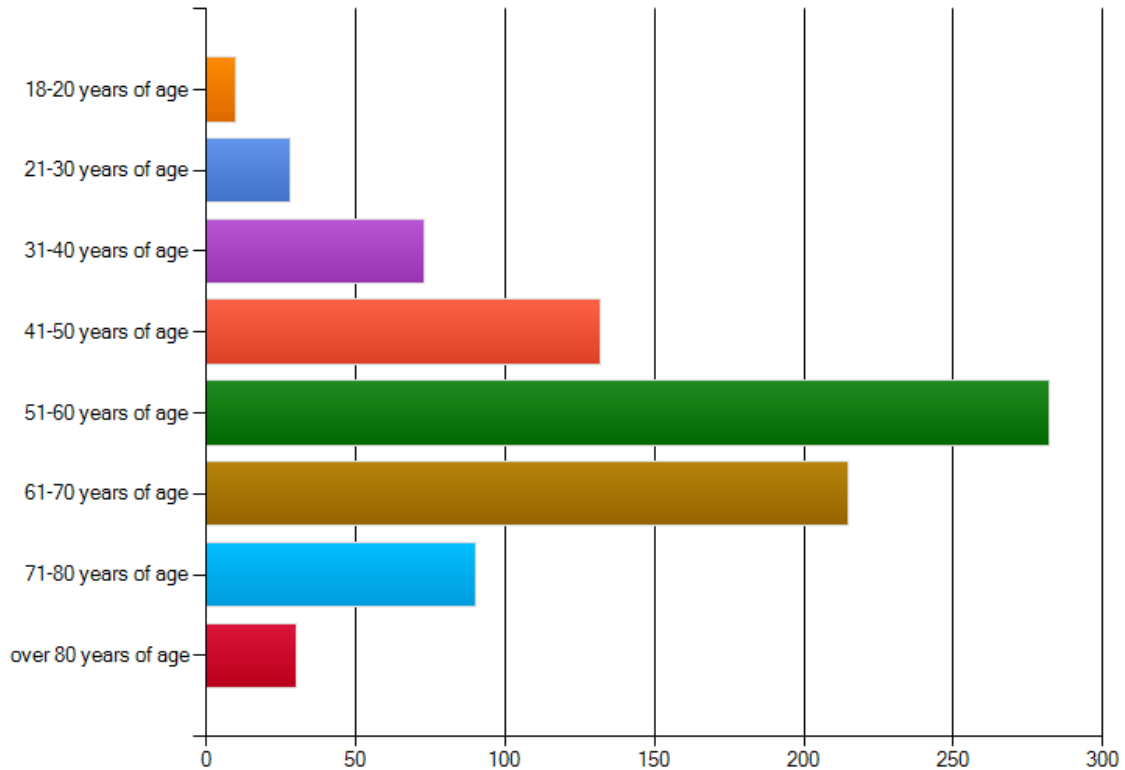


Comment:

As you can determine from the chart, most respondents to the survey considered them-selves farmers. Farm family members represent a fairly sizable portion of survey respondents. It was difficult to reach farm workers (those employed by farmers) as Extension and other organizations in Maine do not maintain farm worker data bases.

Question 4 Results

In which age bracket listed below do you fit? If under 18 years of age, do NOT complete this survey.



Comment:

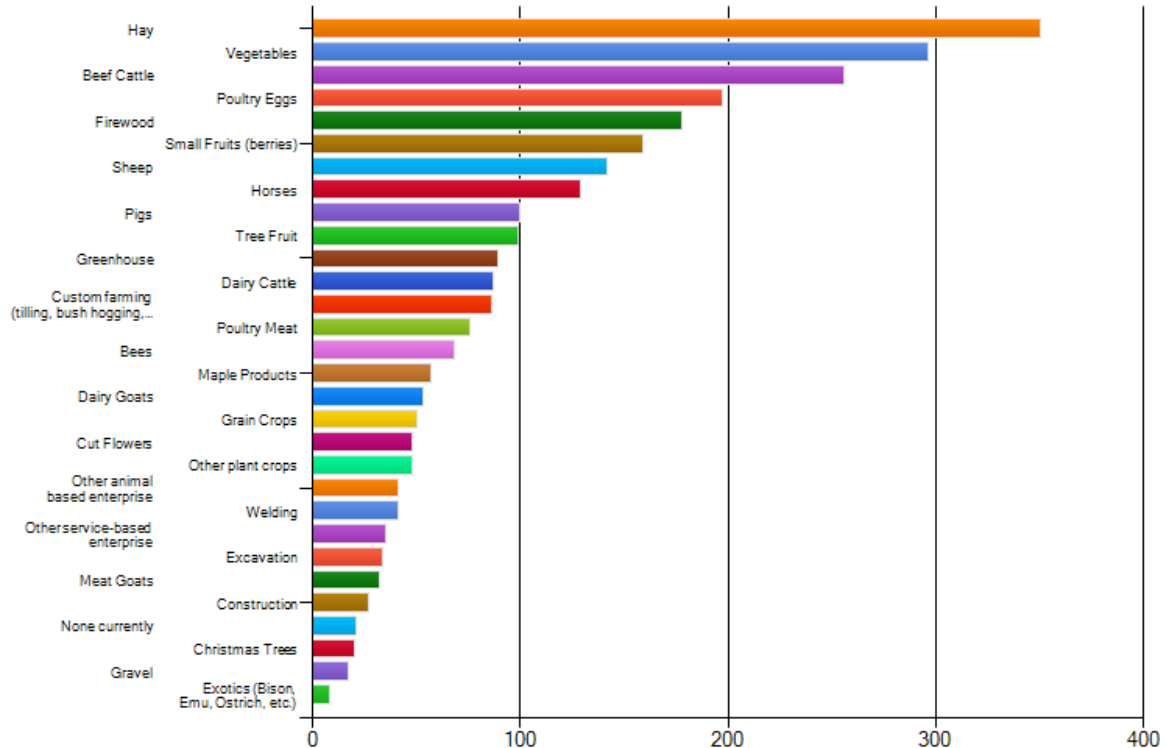
The age of Maine farmers who completed this survey closely reflects the age of farmers in the United States. The figures presented below from the 2007 US Agriculture Census for Maine compares closely with that of the respondents.

Age Group of All Farm Operators in Maine:

Under 25 years	221
25 to 34 years	792
35 to 44 years	1,838
45 to 54 years	3,662
55 to 64 years	3,542
65 to 74 years	1,851
75 years and over	937
Average Age	54.2

Question 5 Results

What are the primary products or services on your farm (or on the farm which you are a farm worker)? Check all that apply. If your product or service is not listed, please specify it in the last box provided.

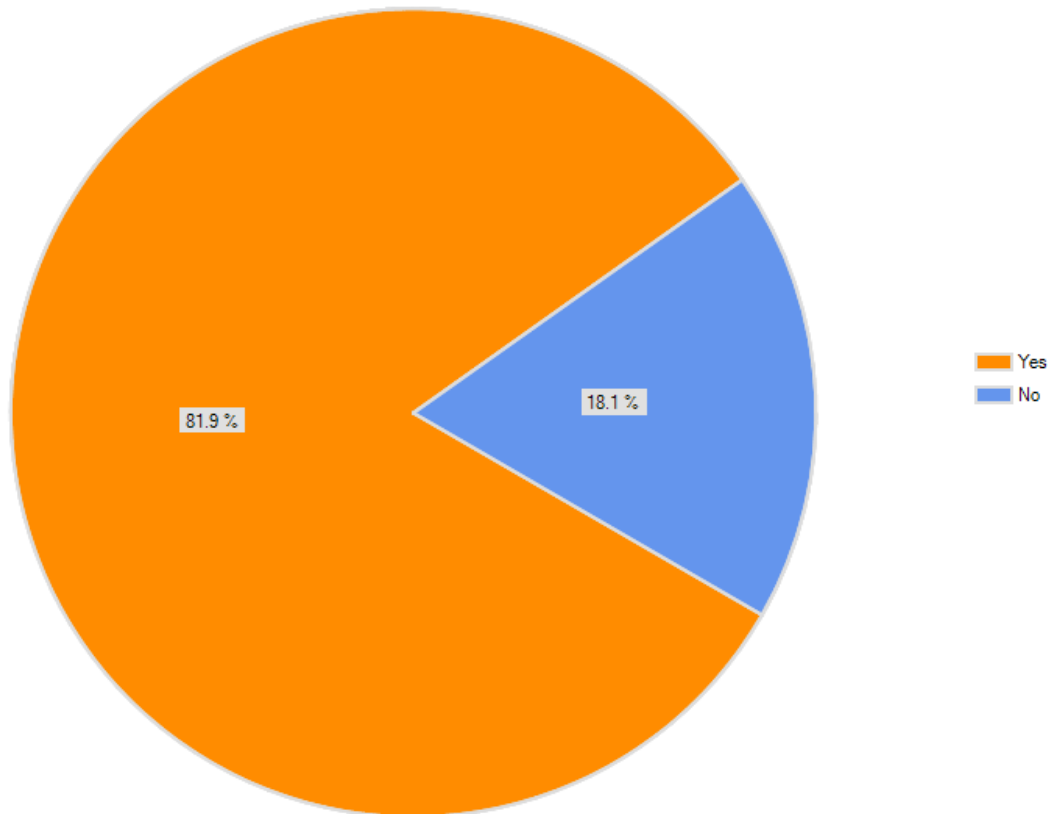


Comment:

The enterprises presented in this chart reflect those listed by respondents to the survey. It should be noted that the enterprises listed here in the top portion of the chart could determine the safety risks that are typical or common to these particular types of farming operations. For instance, tractors and other field implements are more apt to be used on farms with hay, vegetable and beef cattle enterprises. Chainsaws are more apt to be used with firewood enterprises.

Question 6 Results

Do you currently have health insurance?

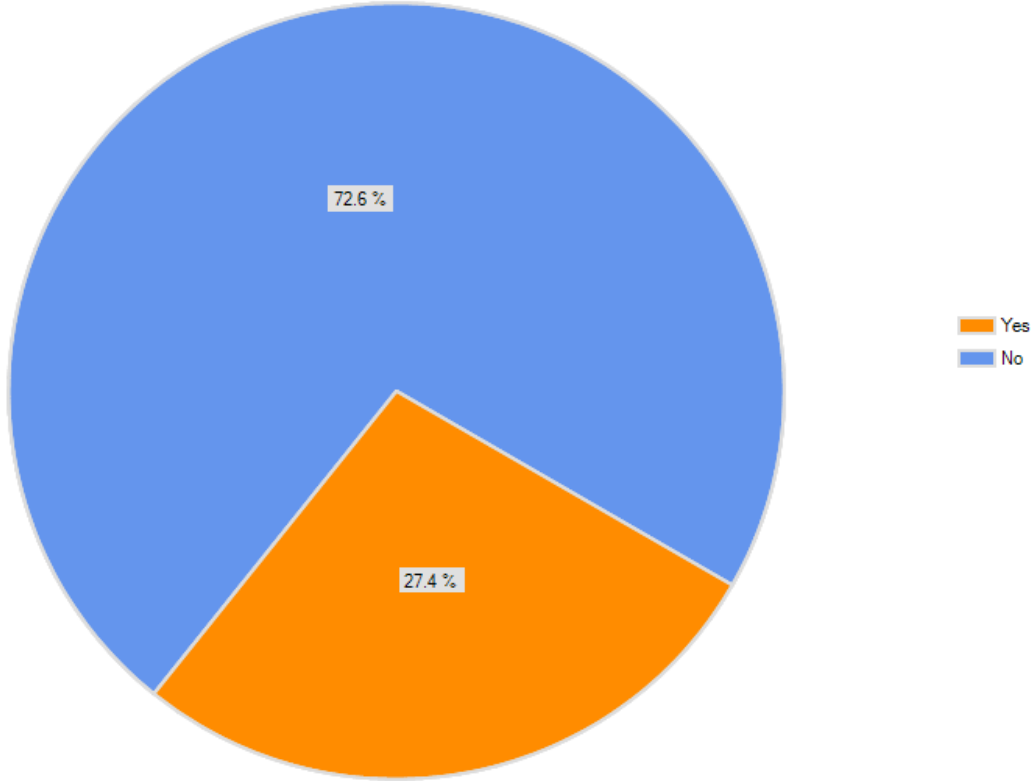


Comment:

This result of having health insurance was surprising to the principal investigator. I believe this data reflect that farm families may have family members working off the farm for health insurance purposes.

Question 7 Results

Are there typically children 12 years old or younger on and about the farm on which you work?

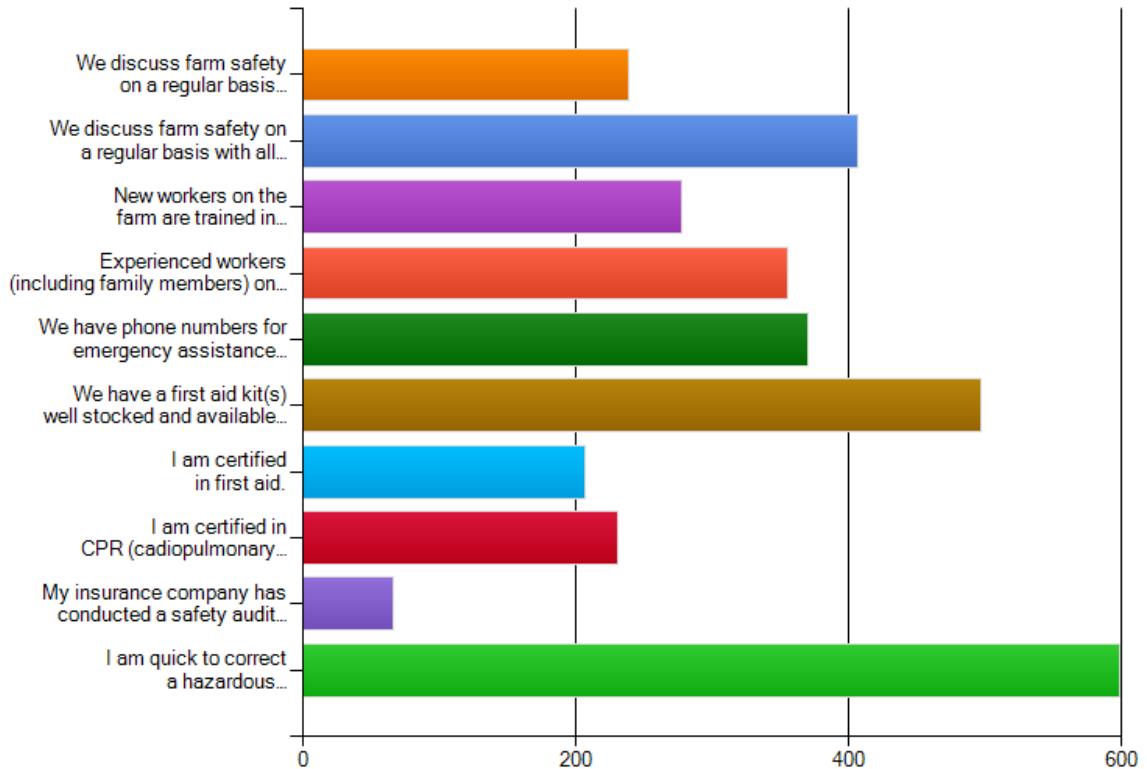


Comments:

It is evident that a little over 27% of the farms responding to the survey typically have children 12 years old or younger on their farm. I believe children on farms are at risk of injury or death because of their size, immaturity and inquisitiveness.

Question 8 Results

Check any of the following safety-related points that apply to you and your situation on and around the farm.

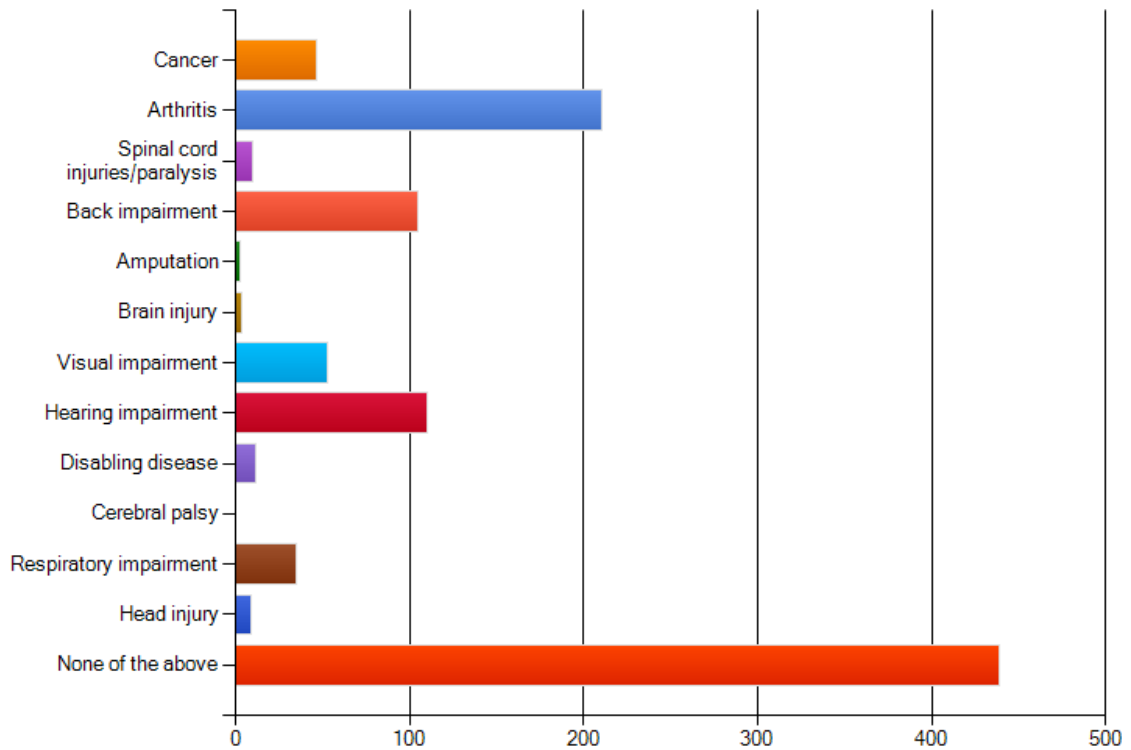


Comment:

The information presented in this chart is encouraging and shows that farmers and their family members take the time and energy necessary to address safety concerns on a fairly regular basis. Everyone (farmers, family members and farm workers) benefits when safety is discussed. The chart also shows that some farmers make an extra effort in preparation for possible accidents as presented in the data related to first aid and CPR training. Note that 599 of the 803 respondents (74.6%) were quick to correct a hazardous situation.

Question 9 Results

How is your physical health? Please check any of the following conditions that you may have. If none, please check none of the above. If you have a condition not listed, please specify it in the section for "other".

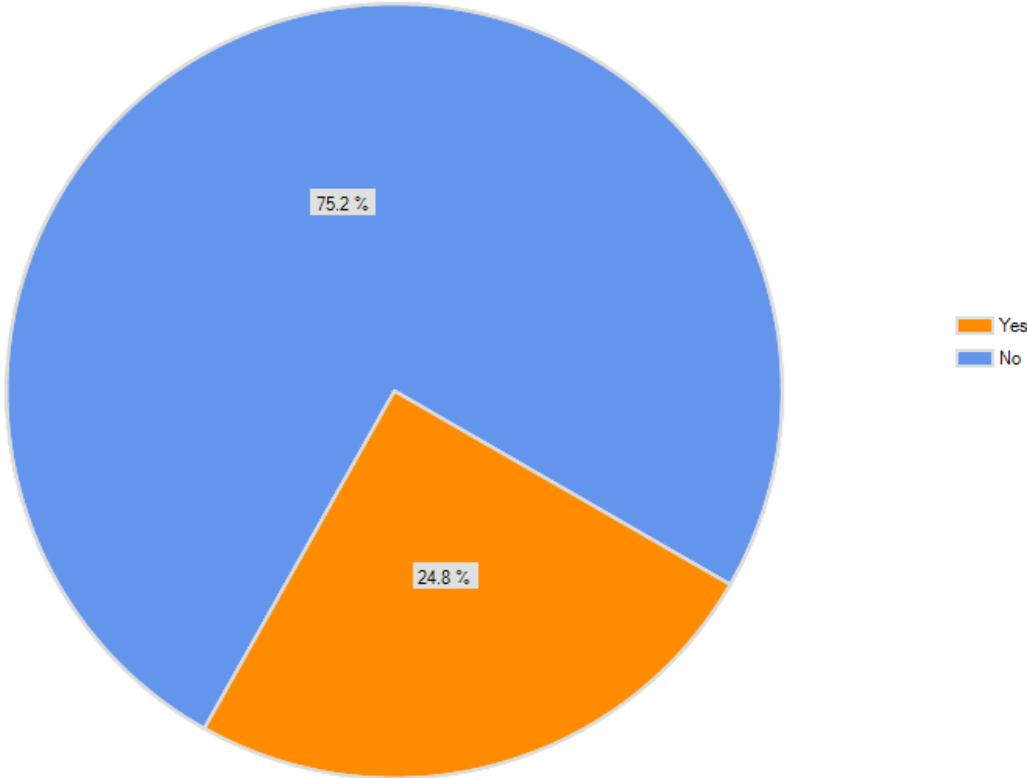


Comment:

This chart portrays that many respondents felt they were in good health. However, it should be noted that the top health conditions of respondents included: arthritis, back impairment and hearing impairment. These conditions might be typical for the ages of responding individuals. These particular health conditions ought to be the focus of future farm health programming in Maine.

Question 10 Results

Has your hearing been affected due to exposure to noise from farm machinery or other farm work?

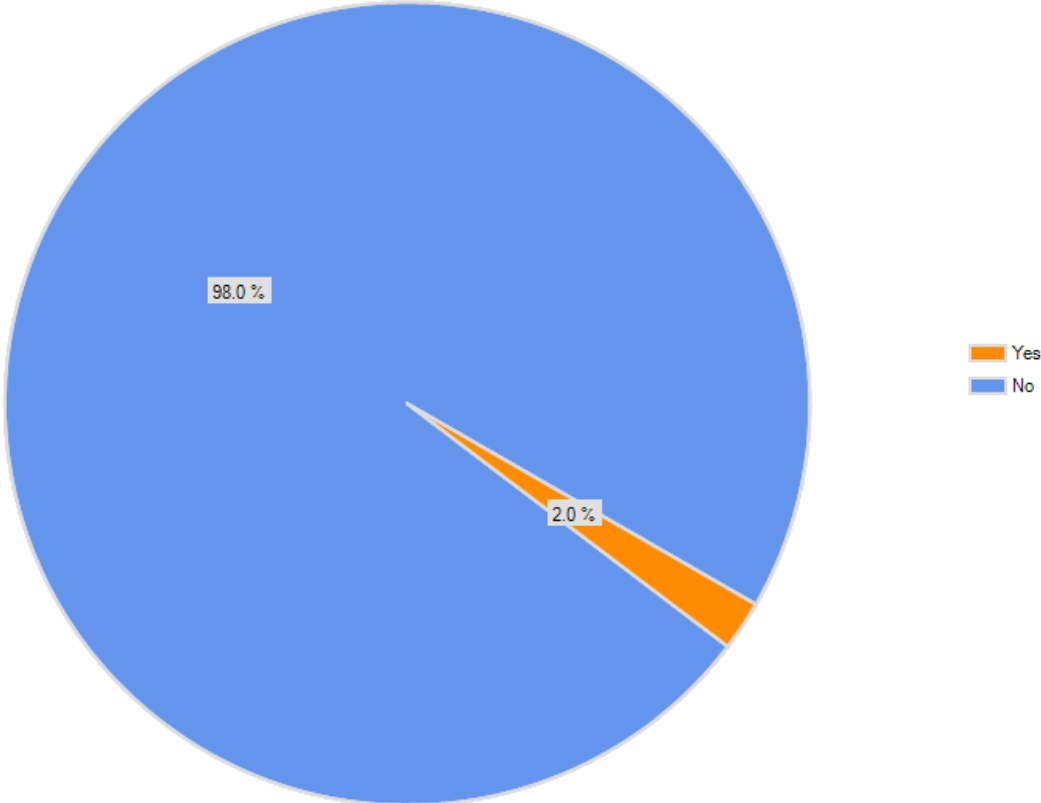


Comment:

This chart portrays that hearing impairment is a significant condition of survey respondents. This might be reflective of the age of the respondents.

Question 11 Results

Have you been ill due to exposure to pesticides?

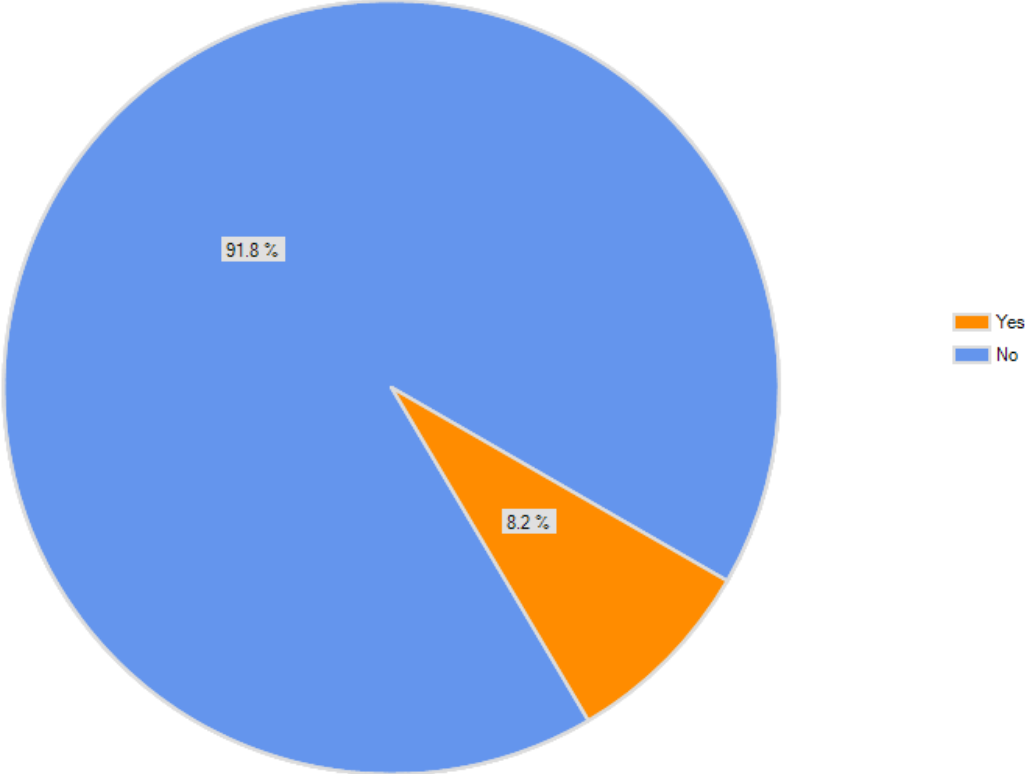


Comment:

Pesticides have an effect on the health of a small percentage of farmers and farm workers.

Question 12 Results

Has your health been negatively affected by exposure to dust, pesticides or gases?

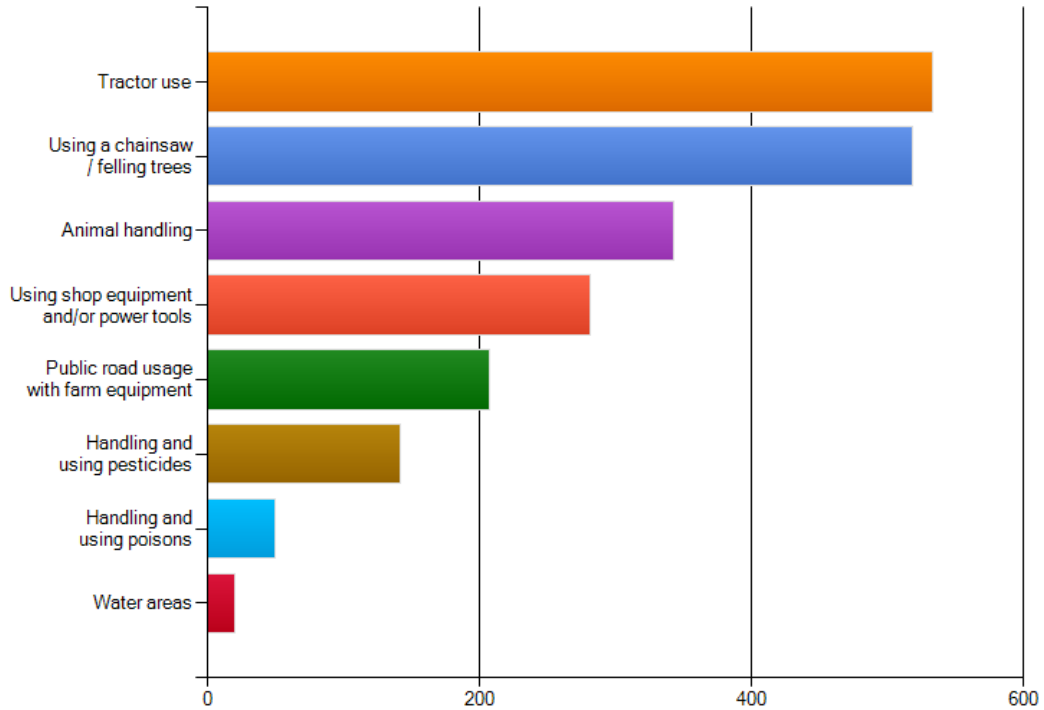


Comment:

When dusts and gases are added to pesticides as how these materials have negatively affected the health of farmers and workers, the percent of effected individuals increase over 4 times (from 2.0 to 8.2%).

Question 13 Results

What part of the farm do you see as most dangerous for you, your family or workers?
Check all that apply.

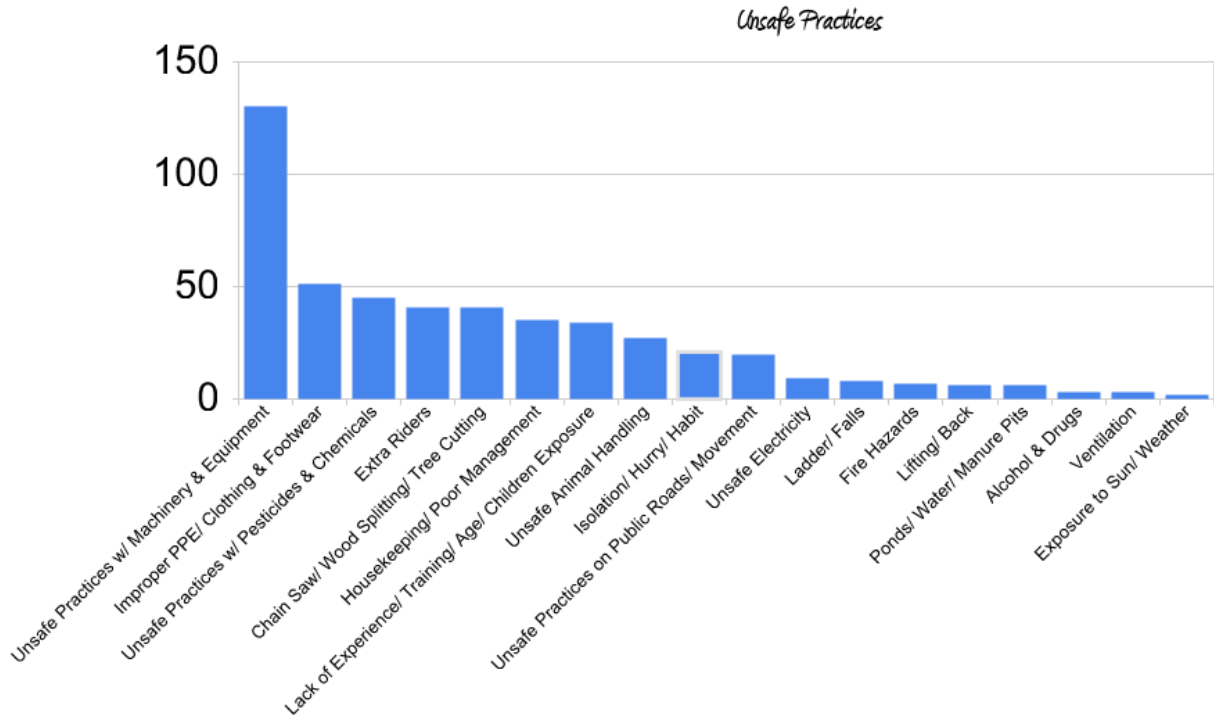


Comment:

These results show that tractors, chainsaws and animal handling are seen by respondents as the most dangerous aspects to farming.

Question 14 Results

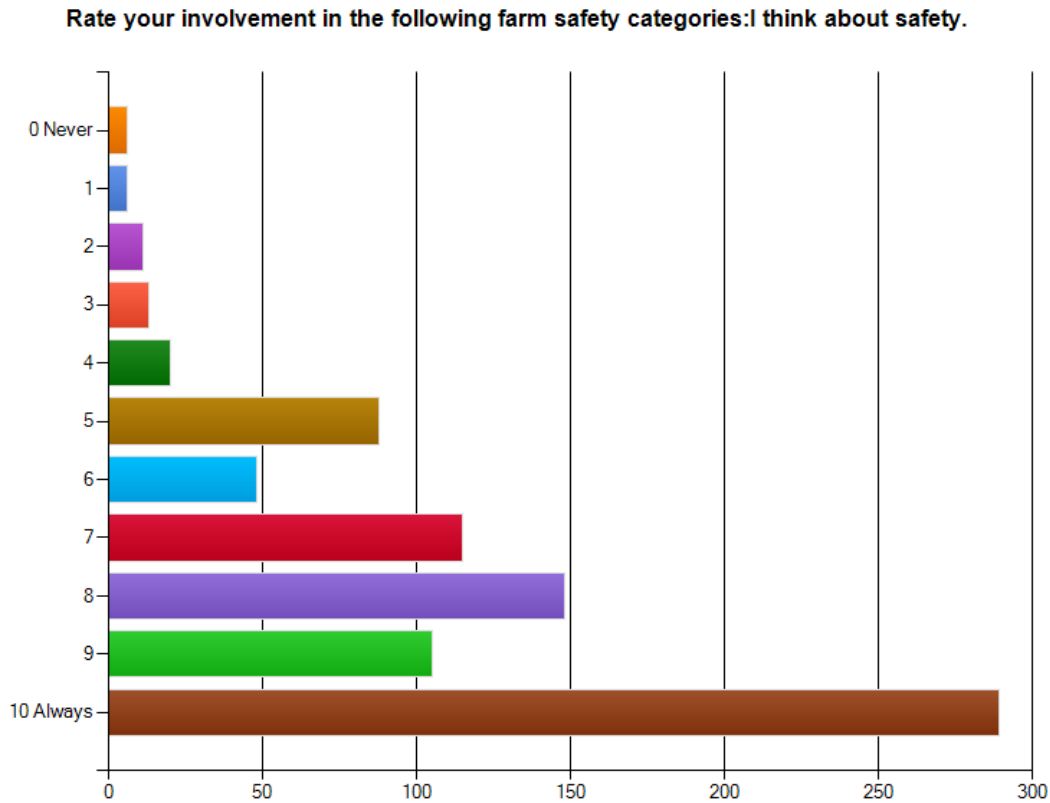
What unsafe practices have you noticed on other farms or by other farmers?



Comment:

Many farmers are very good at noticing safety concerns on other farming operations. Unsafe practices with machinery and equipment is by far the most common category of unsafe practices noted. This might be as they are easier to notice while traveling by a farm. The farming community ought to be involved in drawing attention to unsafe practices by neighboring farms and encourage these farmers to practice safety. A quick stop and comment could save someone's life. Farmers ought to think safety, practice safety and teach safety (on their own operations and with family members and employees).

Question 15 Results

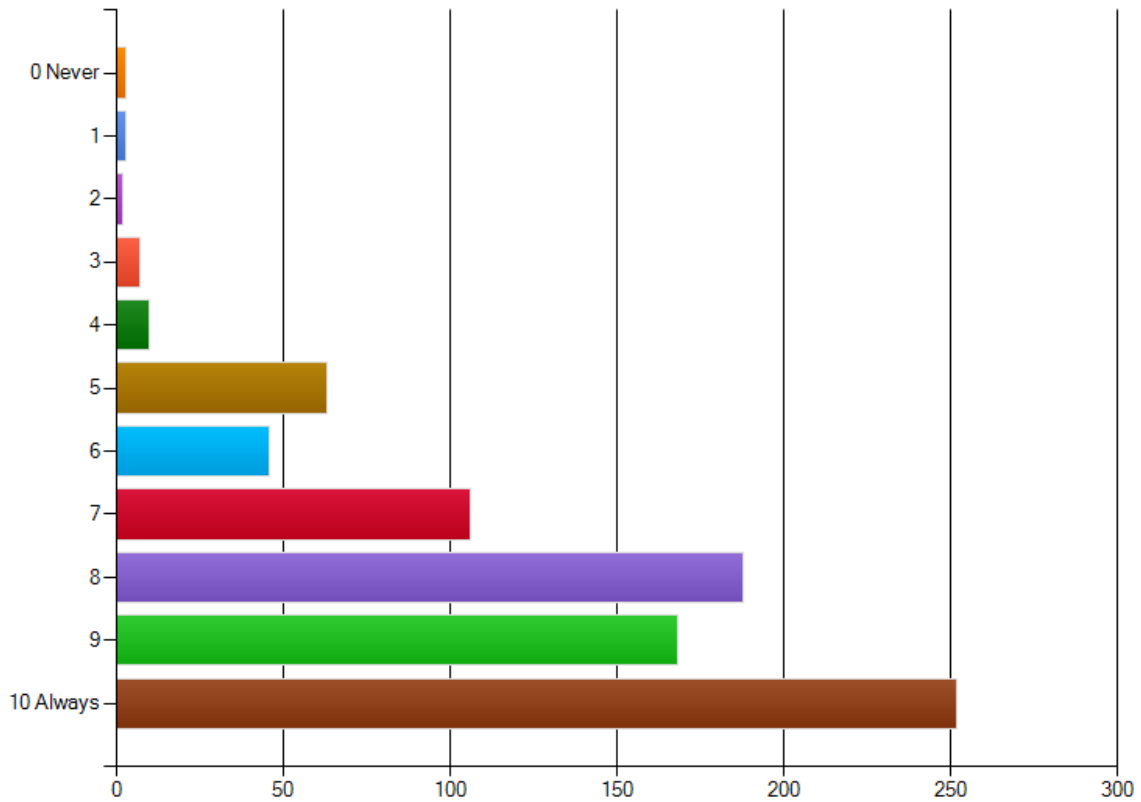


Comment:

The results of this chart are positive and encouraging. However, this is a self evaluation. Note how the percentages change in the practicing and teaching aspects of safety in the following two questions. In this question, 34% of the respondents say they always think about safety.

Question 16 Results

Rate your involvement in the following farm safety categories: I practice being safe.

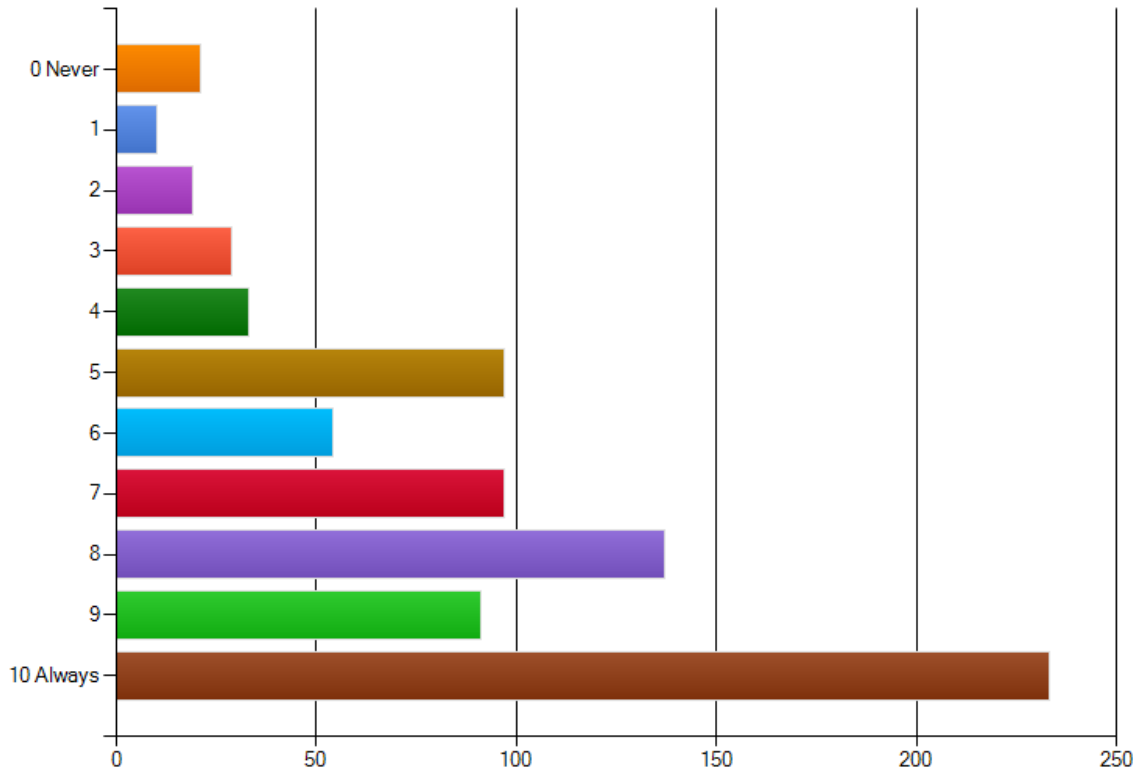


Comment:

29.7% of the respondents say they always practice safety. However, the results of this chart are still positive and encouraging.

Question 17 Results

Rate your involvement in the following farm safety categories: I teach others about safety.

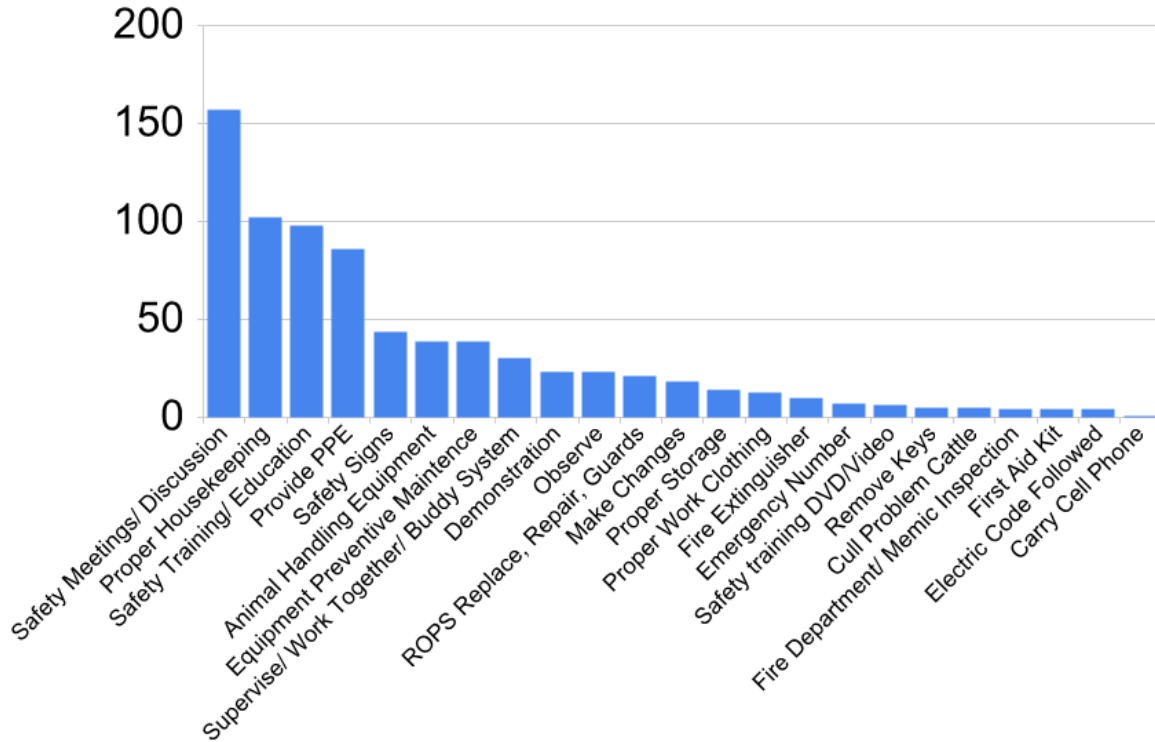


Comment:

28.4% of the respondents say they always teach safety. The results of this chart are positive and encouraging.

Question 18 Results

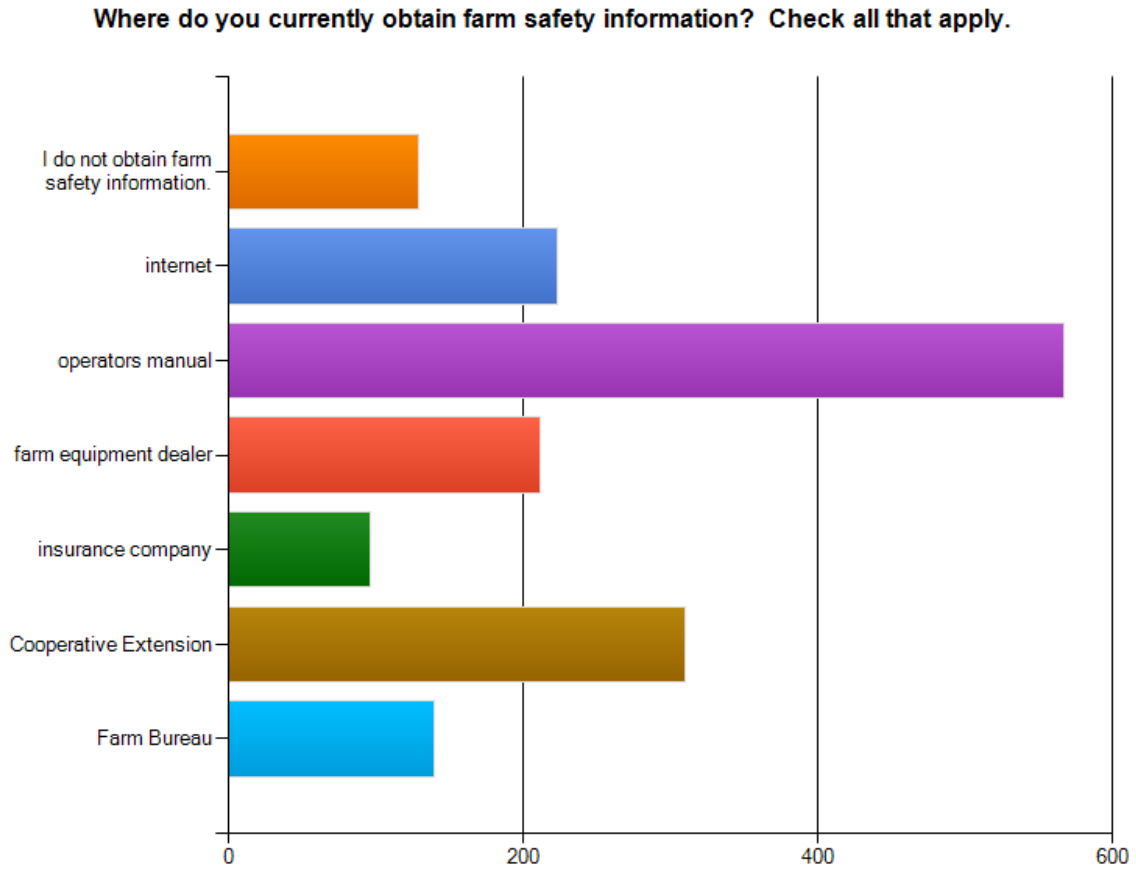
What steps do you take (or have taken) to make your farm and the people (yourself, your family, farm workers, visitors, etc.) on it safer



Comment:

This bar chart portrays that a variety of actions have been taken by farmers and families to make their operations safer. It is evident from this chart that having informal safety meetings and discussions are popular methods used by farmers to promote safe work. Proper housekeeping about the farm, involvement in special safety trainings and providing the necessary Personal Protective Equipment (PPE) were also common responses.

Question 19 Results

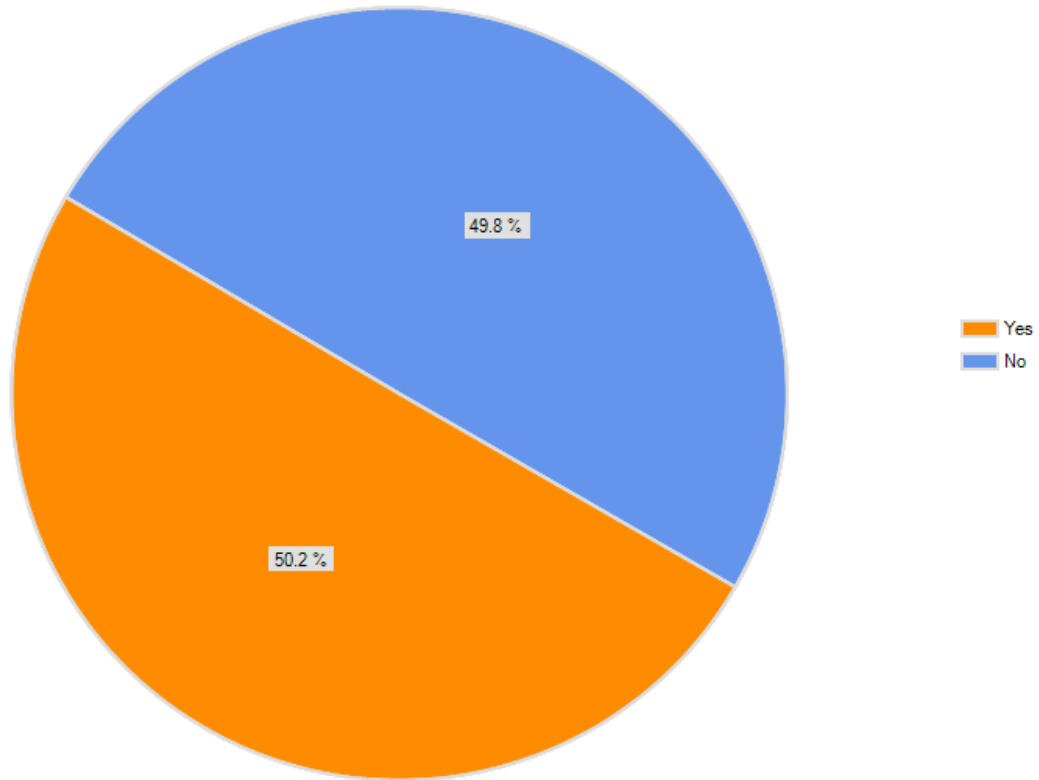


Comment:

The operator manual is by far the primary source of safety information to farmers. It should be noted that almost 16% of the respondents do not obtain farm safety information.

Question 20 Results

Are you aware of farm safety related resources available from the University of Maine Cooperative Extension?

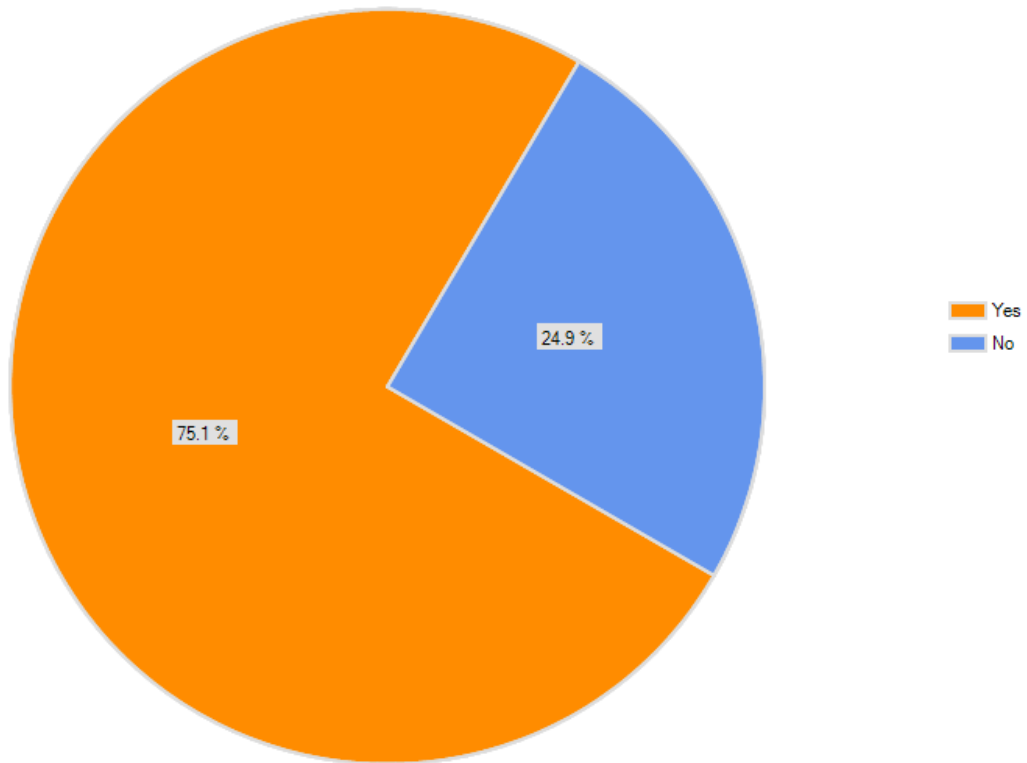


Comment:

This pie chart shows that about 50% of the respondents did not know that Cooperative Extension was involved in farm safety programming. The principal investigator feels that farm safety is an important part of sustainable agriculture. If farmers and farm workers are not safe (dead or injured), a farming business can not sustain itself into the future.

Question 21 Results

Would you be interested in receiving a free quarterly newsletter with a focus on farm safety and covering topics such as training resources, safety tips, equipment safety, shop safety, farm safety events, etc.

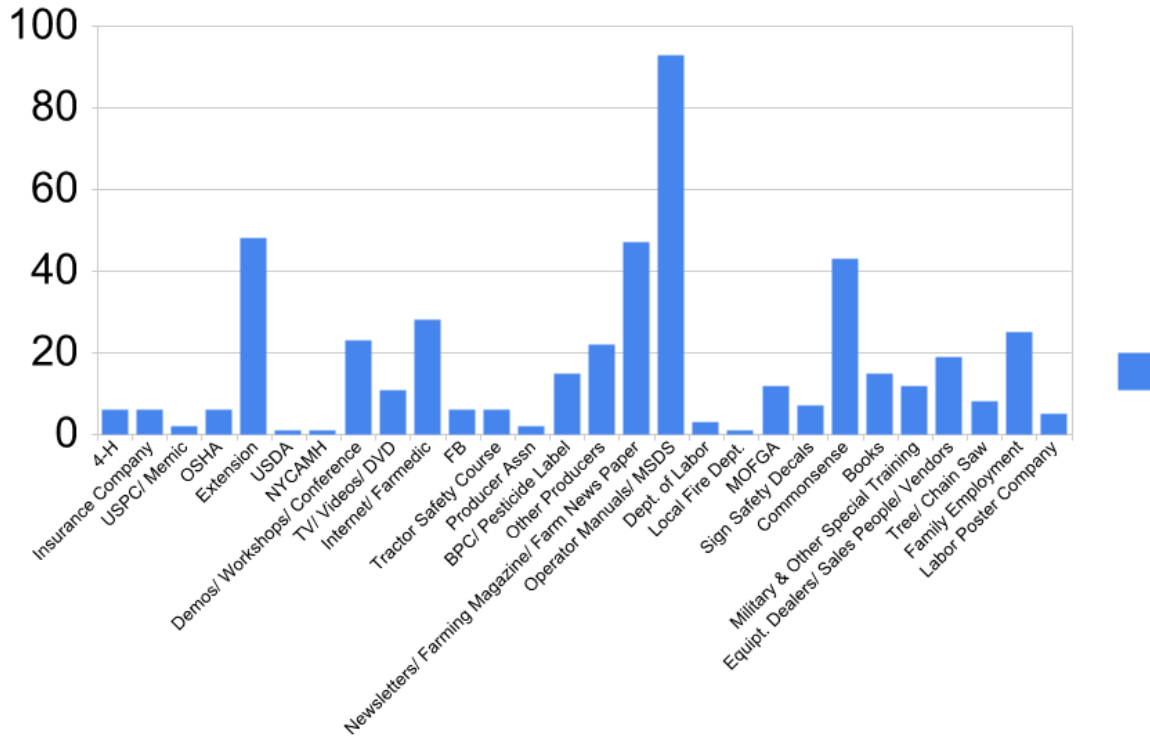


Comment:

The results of this question are encouraging and show that over 75% of the respondents want and would use more useful information related to farm safety. It appears that the farming community is hungry for useful information related to farm safety.

Question 22 Results

Identify some of the sources for farm safety information you have used to help you keep your farm and the people on it safer.

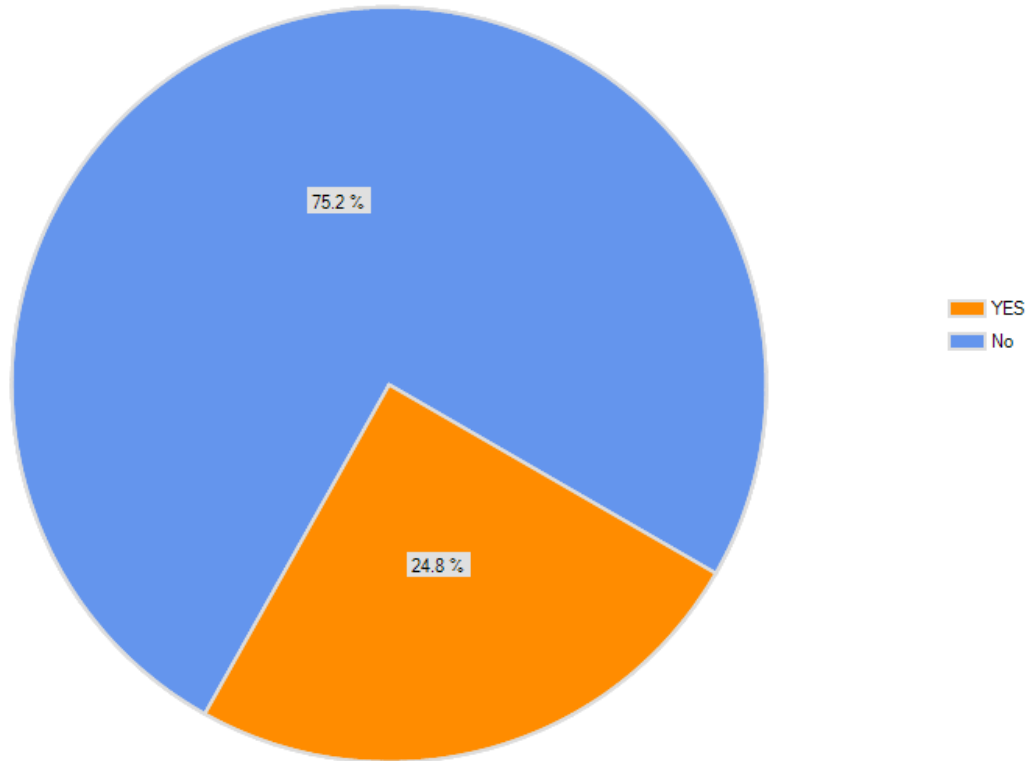


Comment:

These results show that farmers have used newsletters, farming magazines, farm newspapers, operator manuals and Extension as sources of practical safety information

Question 23 Results

Do you know of anyone who has experienced a farm injury in the past 12 months?
Please consider an injury as one in which the individual had to seek medical attention or had to visit the hospital.

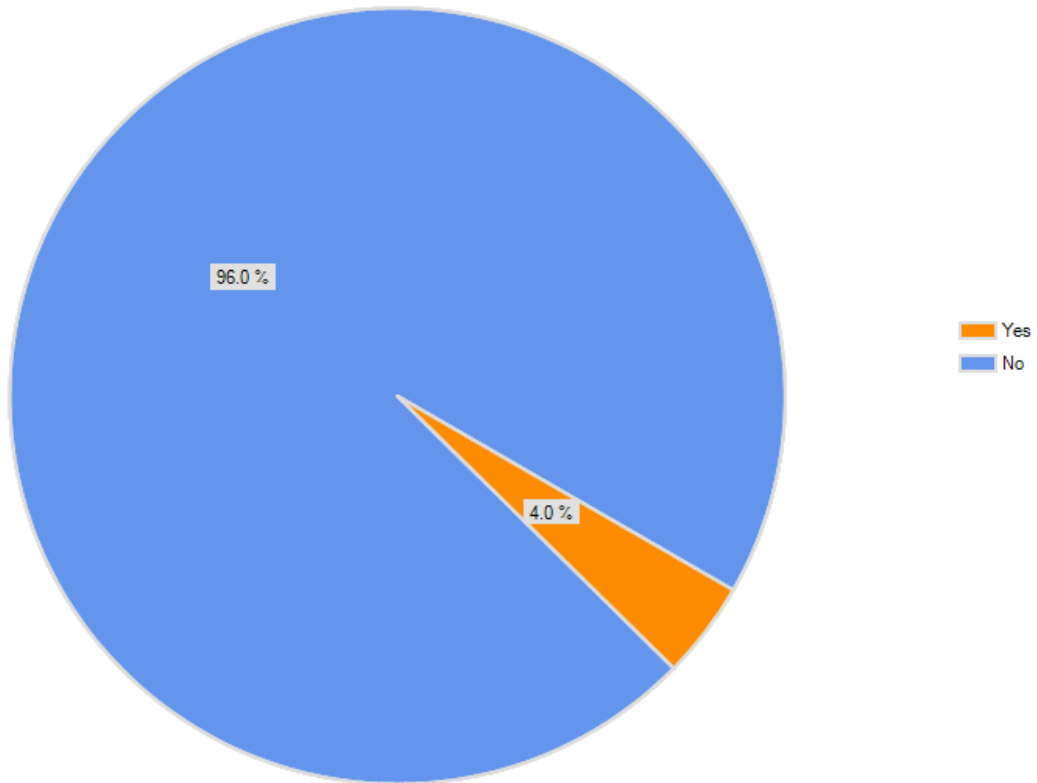


Comment:

Although farm injuries are common, a farm injury is not typically talked about among the farming community unless the injury was serious (hospitalization, loss of limb or eye). Even still, nearly 25% of the respondents knew of someone that was hurt in a farm accident in the past 12 months.

Question 24 Results

Do you know of anyone who was killed in a farm related accident in the past 12 months?

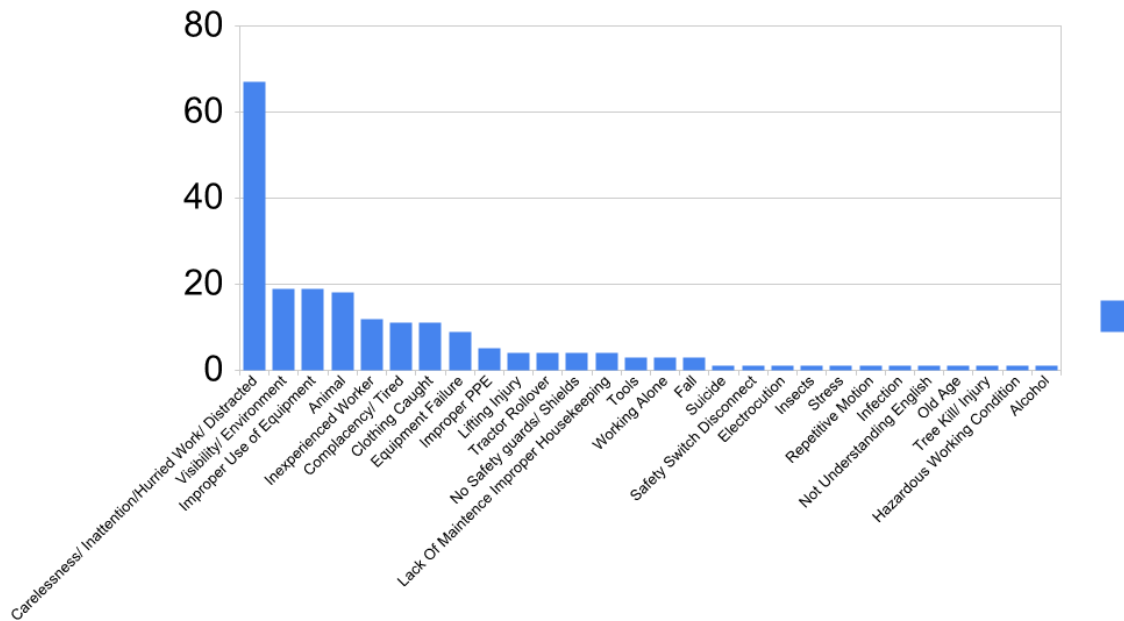


Comment:

Thankfully, farm fatalities are not that common in Maine. However, farm fatalities do occur and are tragic to the victim and the families involved. It should be noted that the question asked about fatalities over the past 12 months

Question 25 Results

What do you think was the cause of the accident(s) you identified in the previous questions?

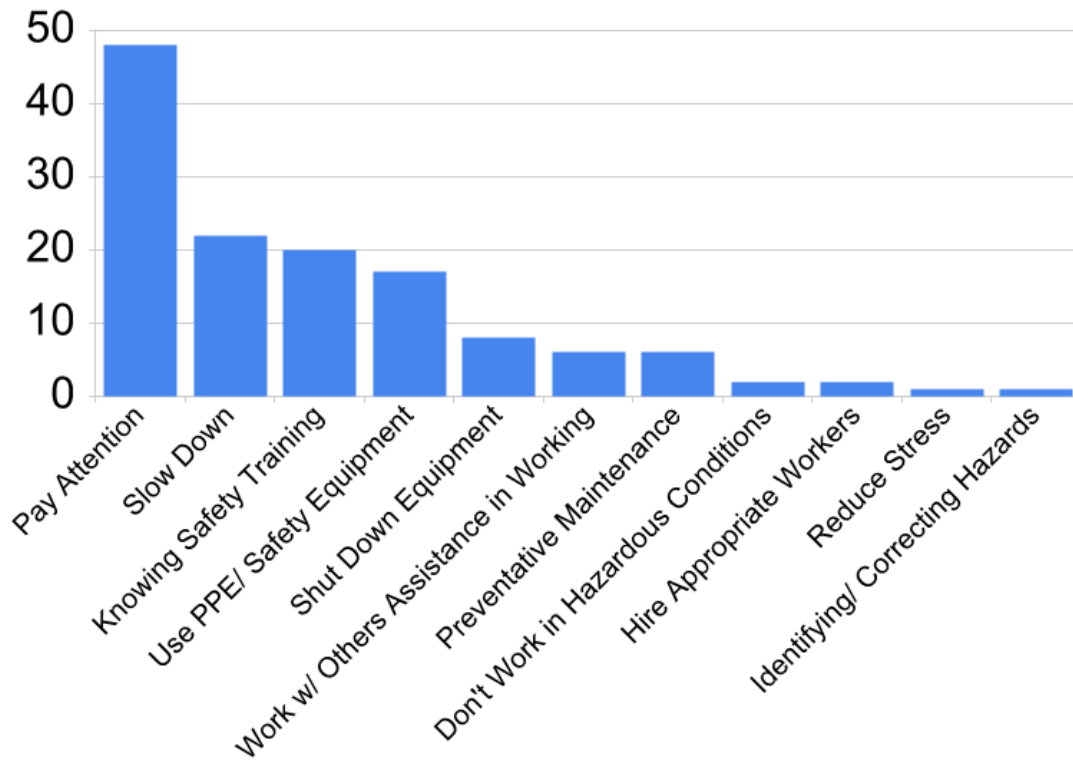


Comment:

Carelessness, inattention, distractions and being in a hurry appear to be the main reason for farm injuries and fatalities as identified by the respondents. These are difficult deficiencies to eliminate or reduce as every situation is different. These characteristics of accident victims may be attitudinal in nature. Please note that several other causes were identified. Many of these causes could be addressed and corrected (such as replacing/repairing guards, not working alone, or learning English) so that accidents do not occur.

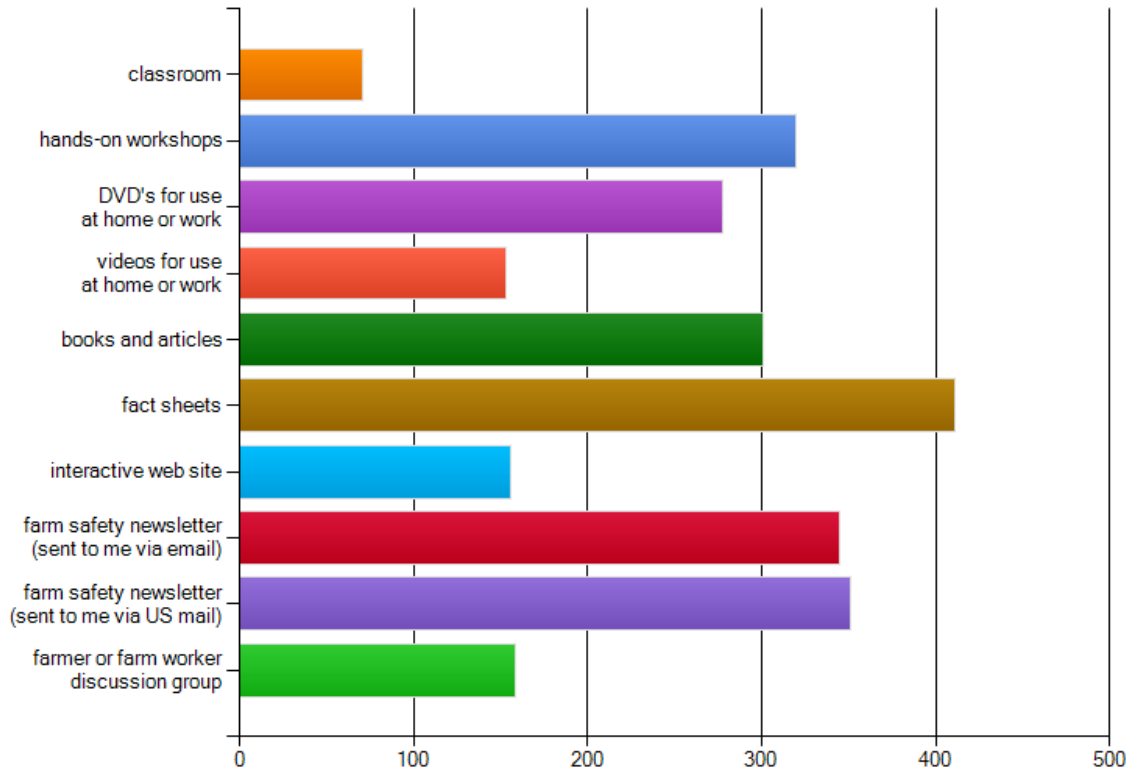
Question 26 Results

How best could the accident you identified in the previous question be avoided?



Question 27 Results

In what way(s) would you be more apt to learn about safety on the farm? Mark as many as you deem useful.

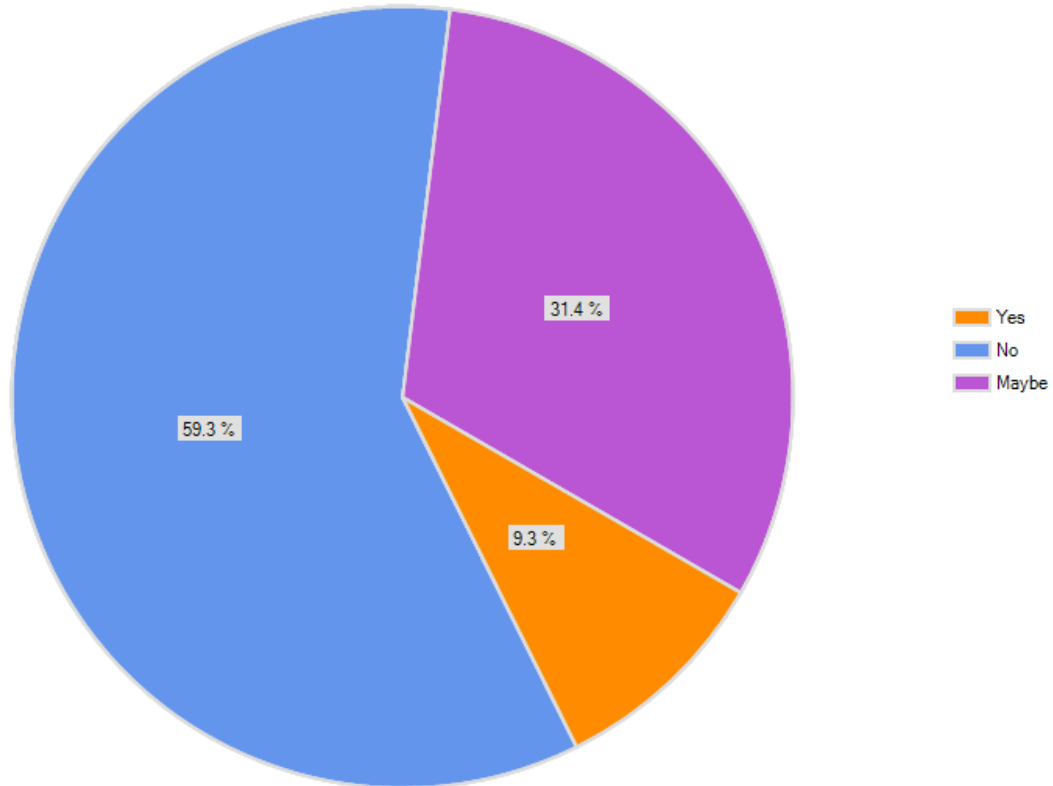


Comment:

The ways that farmers prefer to obtain farm safety related information varies. It appears that farmers prefer reading (fact sheets, books, articles, newsletters); hands-on workshops and viewing DVD's at home or at work.

Question 28 Results

Would you be willing to serve on an Extension Farm Safety Advisory Team to help design and implement an effective farm safety program in Maine?

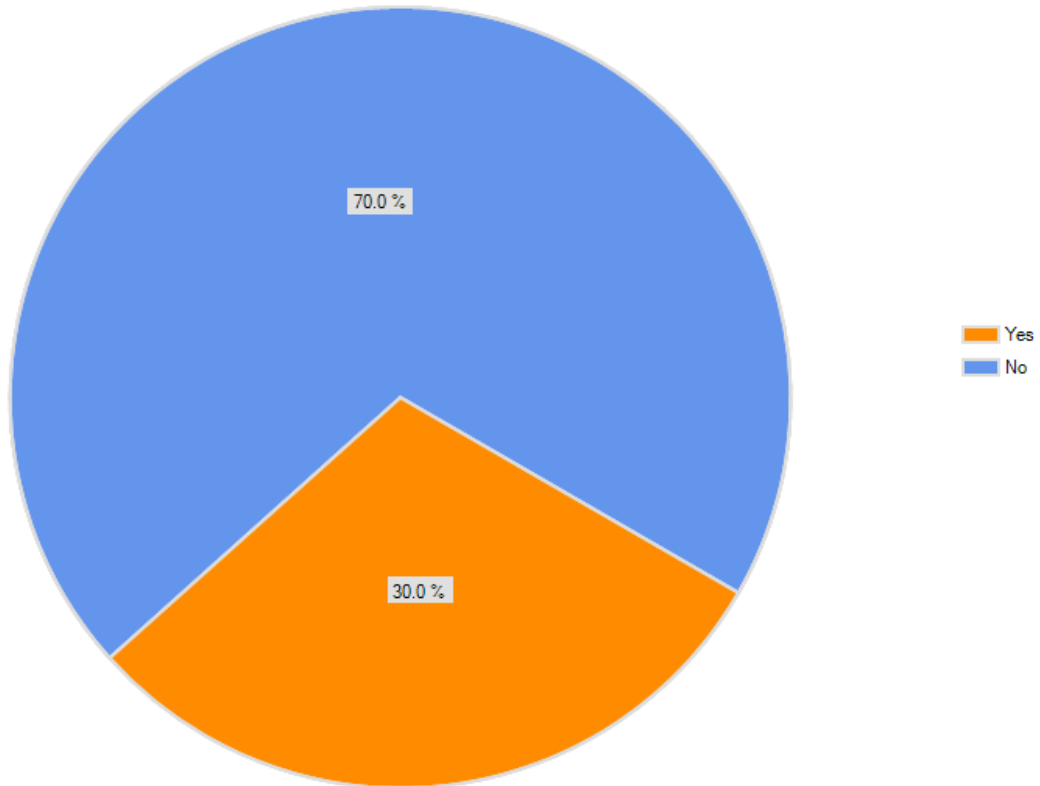


Comment:

Nearly 40% of the respondents said "Yes" or "Maybe" to their willingness to serve on a farm safety advisory board. Such an advisory board does not currently exist in Maine. This response suggests that farmers and farm families really care about farm safety and want to play a role in its promotion

Question 29 Results

Would you find it useful to have an Extension person come to your farm for a confidential farm safety assessment of your facilities and equipment?



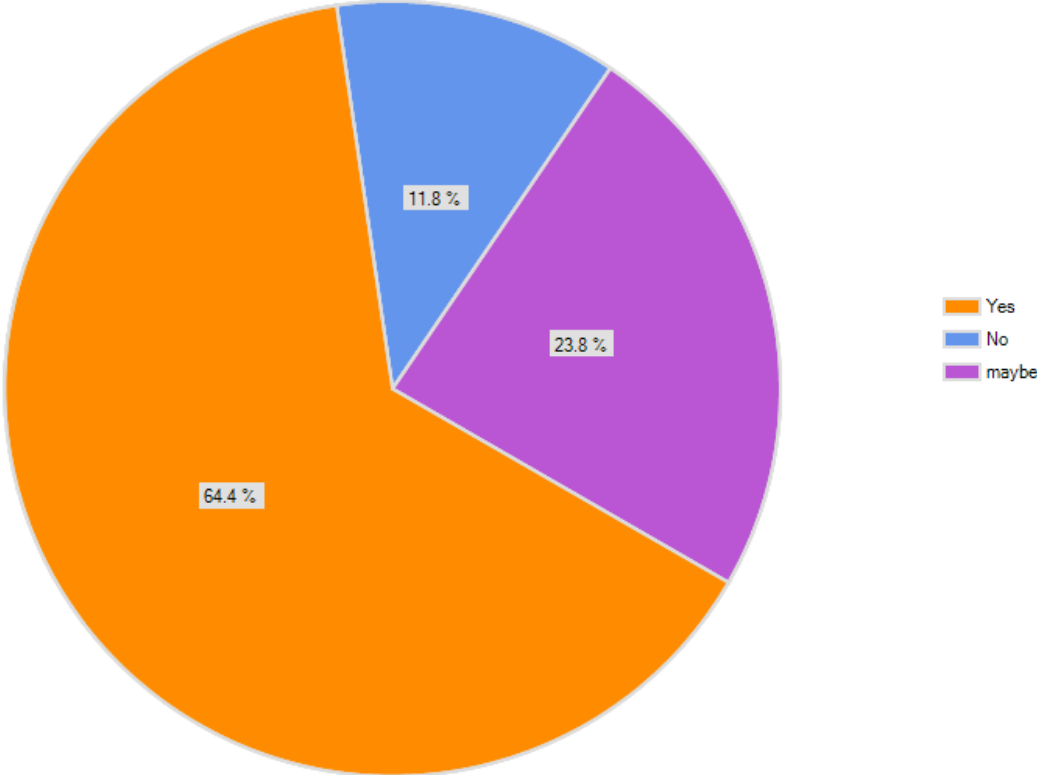
Comment:

Farm safety assessments are not common in Maine. This question was asked to determine the level of need for such assessments. It appears that almost 1/3 of the respondents would like a confidential farm safety assessment.

Question 30 Results

Comment:

Would you be willing to assess farm safety aspects of your farm using a do-it-yourself checklist?



It appears that farmers would prefer to do the farm safety assessment on their own. If one added the positive responses (yes and maybe) for this question, the total would be over 88%. This percentage is significant.

Conclusions:

- The University of Maine Cooperative Extension might consider establishing a data base for farm workers on Maine farms (those individuals who are employed by farmers). In doing so, specially designed educational programs could be developed for such an audience. Farm workers have different needs than farmers. Farmers might appreciate their employees gaining safety related knowledge and skills for use on their operations.
- Arthritis, back impairments and hearing impairments ought to be the focus of future farm health programming in Maine. These conditions will probably be addressed in the newly established Maine AgrAbility Project.
- Safety educational programming should continue to focus on safe operation of tractors and chainsaws and in the proper handling of livestock as these areas are seen by survey respondents as the most dangerous aspects to farming.
- Farmers and farm families care about safety. It is evident, that farmers make a strong effort to have informal safety meetings and discussions with personnel. In addition, proper housekeeping about the farm, involvement in special safety trainings and providing PPE were also common actions taken by farmers to promote safe work. These steps require very little extra effort or resources to accomplish.
- Because farmers prefer reading (fact sheets, books, articles, newsletters); hands-on workshops; and viewing DVD's at home or at work for safety information; farm safety educators should design information and programs around these methods.
- The University of Maine Cooperative Extension should consider publishing a farm safety quarterly newsletter for the farming community. Over 74% of the respondents would like a free newsletter with a focus on farm safety and covering topics such as training resources, safety tips, equipment safety, shop safety, farm safety events, etc.
- The University of Maine Cooperative Extension might consider establishing a farm safety advisory board so as to improve its effectiveness with the farm safety message and programming with the farming community.
- A farm safety assessment tool should be designed for use by Maine farmers as a self-applied assessment.

For a review of the raw data from this Farm Health & Safety Survey, see <http://tinyurl.com/24ugg8c>

Appendix A.

January 2010

Dear Friend,

The University of Maine Cooperative Extension would like your input to a statewide survey about **farm health and safety for Maine farmers and farm workers**. The survey will take about 10 minutes to complete. The survey is designed for an individual farmer, farm family member or farm worker. If more than one person is involved in farming or if you have employees on your operation, please have them request additional surveys. To request additional surveys, call UMaine Extension at 1-800-287-1471 or 207-780-4205.

As an incentive to complete the survey, each participant will have a chance at winning one of five \$50.00 gift certificates. The prizes will include certificates from your local farm equipment dealer, feed store, seed supplier, hardware store, or agriculture supplier. Here's how to participate:

1. Complete and submit the survey by **Sunday, January 31, 2010** using the postage paid envelope provided **OR** complete the online survey at: <http://www.surveymonkey.com/s/2GRV666>
2. To have a chance at one of the five \$50.00 gift certificates, complete the blue postage paid post card with your contact information and send it separately from your survey. *Your post card will not be connected in any way to the survey.*
3. Wait for notification if you are a winner.

All data provided by you in the survey is confidential. Do NOT use any names in your responses.

You may see this invitation to participate in the survey in several places as you may be on additional mailing lists – **just complete the survey once (one survey per person)**.

Please feel free to contact me should you have any questions.

Thank You,

Richard J. Brzozowski
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