

Technologies and Safety: Making Farms Safer

Funded by Workers Compensation Board of Manitoba

FINAL REPORT

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Technology and Safety: Making Farms Safer

FINAL REPORT

PROJECT DESCRIPTION

The Centre for Education and Work (CEW) developed a digital resource that is available to farmers online and the information entered by farmers into that online tool can be accessible as a downloadable application on mobile devices, without Internet access. This project, funded by the Workers Compensation Board, made it easy for farmers to develop documentation and to provide guidance for farmers to be compliant with Occupational Health and Safety Requirements regulations. As a result of the project, farmers began to recognize how putting together Safe Work Procedure can help recognize job hazards and understand how risk management is linked to due diligence.

OBJECTIVE

The goal for the CEW was to create an online tool and mobile app that would not only help raise the importance of health and safety on the farm but fundamentally give farmers an easier way to build safe work procedures for tasks done on the farm, as well as help farmers recognize possible hazards related to those tasks on the farm and to help farmers track and maintain their safe work procedures.

OUTPUTS

The outputs for this project included:

- 1) An easy-to-use tool to create Safe Work procedures from any web browser
- 2) Printable job aids to post in key areas around the farm
- 3) A free app for iPhone and Android smart phones to access training and safety info from anywhere, even when farmers are outside of cell phone range
- 4) Sample safe work procedures to help farmers get started on their safe work plans
- 5) eNewsletters were created to inform farmers and community reps of the tool

SUMMARY OF ACTIVITIES

At the onset of this project, the CEW developed a work plan to guide them through the “Technology and Safety: Making Farms Safer” project. This work plan was developed using milestones from the proposal submitted by the CEW and in consultation with WCB representatives and an Advisory Committee. The milestones did change somewhat as the project progressed. It became apparent during the initial research phase that the target audience for this online tool and mobile app did not have the necessary documentation required for the CEW to proceed.

The intended target milestones for this project included; developing and meeting with an Advisory committee, creating a detailed work plan, consulting with subject matter experts in agriculture, conducting research and consulting with farmers, analyzing data, creating the safe work procedures on line tool, creating the app for iPhone and Android devices, pilots, demos and dissemination.

As with any project, the detailed work plan is a work in progress and things can change based on risks or barriers that may occur during the life of the project. With this project there were some adjustments made based on the additional research. We also had issues with getting the app up and running because of technical glitches with the App Store being shut down for an extended period.

Interviews and research were conducted with farmers in Manitoba to find out their depth of knowledge around technology, the level of health and safety practices on their farms and as to whether or not they were compliant to specific regulations pertaining to safety on the farm. After data was collected and analyzed from surveys and interviews conducted with farmers, it became evident that what could be most beneficial for farmers was a tool to help create a safe work procedure or standard operating procedure for their farm. The CEW team began to design an online tool wireframe that could be used for this purpose.

After consulting with farmers and advisory committee members, the template was altered to meet the needs of the farmers who would use the online tool. Testing was conducted to see how well the template was received. As the online tool was being developed and tested the design of the mobile app was being done. After some consultation with WCB and the Advisory Committee on the app it was submitted for approval from the Apple Store. Once that was approved, beta testing occurred on the mobile app and accessibility to the online tool in a real life situation.

For pilots and dissemination of the online tool and safe farms app, the CEW used email, print material, and face-to-face contacts to promote this project and raise awareness around health and safety on the farm.

The original project completion date was January 14, 2014, but to accommodate additional interest and dissemination of the Safe Farms Tool the end date was changed to February 28, 2014.

RESEARCH AND FINDINGS

When the **Technologies and Safety: Making Farms Safer** project began, the goals of the project were to create mobile learning approaches that would help farmers change their safety behaviours, develop a series of web based resources to address primary risk categories, create a risk management tool that helps farmers identify safety hazards in relation to various jobs and tasks in farming, and to develop learning resources for conducting a job hazard analysis, and to pilot these resources with at least 20 farm owners.

But as the CEW began to interview farmers and make inquiries within the agricultural industry - connecting with CASA, meeting with Jeff Shaw from Manitoba Agriculture - it was discovered that many farms did not have Safe Work Procedures (SWPs) or Standard Operating Procedures (SOPs) which from the CEW's experience with adult learning and previous Health and Safety research, should have been the first step to identifying safety hazards.

Instead of creating the Job Hazard Analysis, the CEW saw the need to develop a tool that would help farmers create SOPs or SWPs. This became evident in research conducted by Donna Youngdahl, CEW's researcher for this project. During consultations with Agricultural and Safety Professionals; Glen Blahey of CASA, Jeff Shaw, the provincial Farm Safety Coordinator, and reps from Manitoba Occupational Health and Safety, stated, "the educational tools for farmers should be simple, straightforward and align with mandatory provincial regulations." With that in mind, the CEW began collecting information around farm safety and the use of technology on the farm.

Before proceeding with development of the online tool, the CEW needed to know the extent of technology used in farming. Data for this project was collected using various methods. The CEW used an online survey with premeditated questions and interviewed farmers face to face to find out their usability of technology on the farm, their accessibility to the Internet, and their comfort zone around technology.

The CEW research, an avid young agriculture enthusiast, followed up with contacting other farms in the area and collected additional data to use in the research component of this project.

Based on the use of an online survey and face-to-face interviews, below are the responses from a total of a 112 individuals:

Question	Yes	No	N/A
Do you use the computer to manage your farm business?	81%	10%	9%
Do you use the Internet for business purposes?	87%	11%	4%
Are you comfortable using the internet?	97%	2%	1%
Do you have high speed Internet?	59%	20%	21%
Do you use a smart phones or and/or various applications for farm use?	55%	44%	1%
Would you be interested in learning to use new electronic applications to help you manager risk and safety on the farm?	63%	30%	7%
Would you used a hand held application to train employees or for implementing safe work procedures on your farm?	39%	36%	25%

In addition, research was collected again via online surveys and face-to-face interviews with farmers regarding their knowledge on health and safety, and to find farms that had health and safety plans in place. The CEW also asked if it was possible to use some SOP's or SWP's in order to build the online tool. Some farms were reluctant to share their information, as some had paid to have a health and safety audit done, while others were very cooperative and willing to share information.

With the information that was gathered, the CEW had a starting point for creating the online tool.

As part of collecting research, the CEW team visited farming facilities in order to observe, video record and photograph tasks performed on a farm (as well as conduct interviews with farm owners). This enabled the team to see how different farms operate and to think about what data to use and how to actually apply that data in the online tool.

The Advisory Committee and CEW team conducted a meeting at and toured the University of Manitoba, Department of Agriculture, Bruce D. Campbell Farm and Food Discovery Centre. Attendees were able to see various types of farming which included cattle farming, hog farming, feed production and horticulture. It was great to visit the teaching modules and see the different methods used by the U of M facility, and how maybe incorporating the safe farms online tool and app could be used.

The attached report (Appendix B) summarizes the results of the accumulated survey regarding health and safety on the farm.

ADVISORY COMMITTEE INPUT

The Advisory Committee consisted of representatives from the agricultural sector and health and safety communities. There were individuals from the Canadian Agricultural Safety Association (CASA), Workers Compensation Board, Rosser Holstein Inc., the Dairy Farmers Association, Manitoba Agriculture, Keystone Agricultural Producers, University of Manitoba, Department of Agriculture, as well as other representatives in the farm industry.

Four Advisory Committee meetings were held through out the project period to keep advisory committee members abreast of the project progress and for the CEW team members to obtain guidance and input in moving forward in the development of the online tool and the Safe Work Procedures.

At the initial meeting with the committee everyone had a chance to introduce themselves and learn about the project and what the CEW needed to do to accomplish the goals of this project. It was a great opportunity to get feedback from advisory committee members on their thoughts of using this type of technology for health and safety in farming, to make connections with other organizations outside of the committee, in order to move forward with this project.

During the research process, the committee was aware of the difficulty researchers were having in getting information from farmers so they were willing to offer some recommendations and guidance on how to go about gathering research.

Once the online template for the SWP was created, the Advisory Committee was asked to meet and provide their input. The committee began to work through developing an actual SWP (for a riding lawn mower). This was a very informative experience. In doing that, individuals also began to realize they were missing steps to this task. After some collaboration, some changes were necessary to the template (plain language) to make it easy to use but still contain the information required.

The Advisory Committee met again to discuss outcomes of testing the online template with the University of Manitoba students, as well as possible “marketing” options for the online tool and safe farms app. Individuals from the committee provided support in working through the prep of the online tool and its content. The Advisory Committee was invited to attend the final meeting and launch of the safe farms online tool and app in January 2014.

The Advisory Committee was a valuable asset to this project. There was a range of expertise on the panel. Each individual provided guidance and support in the development of the safe work procedures and online tool. Their assistance was greatly appreciated.

DEVELOPMENT OF THE APP AND RESOURCES

After evaluating the SOPs that the CEW team collected from various farms and other organizations, the CEW came up with a unified template, which we referred to as an SWP (Safe Work Procedure). On the web, the CEW built a login-based SWP creator for farmers to create and keep their SWPs up-to-date, and for them to print them for inclusion in their safety plans. Some of the fields that need to be filled in the SWP are; the Activity, who was it written by, the persons at risk, hazards present, protective equipment, etc. (See Appendix A) The SWP creator was constructed by using a combination of open source software and custom development written in the PHP programming language and the MySQL database engine.

From there, the CEW created the concept of a "Farm ID" which could be used by an app to securely pull the data down from the website into a mobile app. The app was initially developed for iPhone while the CEW tested user interface concepts, and because the approval process for iPhone apps is longer than the process for Android.

Once the template was created for the online tool, the CEW was able to test it with the Advisory Committee and a group of University of Manitoba Agriculture students. There were some changes made to the template based on the feedback received. Fields were added or removed in the template, terminology was changed slightly to be user friendly, and more instructions or “help” was added to floating text boxes. The students found this tool very useful in creating their SWP’s for a project they completed for their U of M studies. A few students said they shared the information about this online tool to their families to possibly use on the farms.

The CEW built what's called a REST API for the apps to talk to on the website, which allows them to fetch the data by providing their Farm ID. If a date and time are also provided, the website will send only the SWPs that have been updated since that time, to help with synchronization over limited bandwidth.

The iPhone app was written in the Ruby programming language using the RubyMotion framework for iPhone development, which helps save substantial development time without sacrificing the performance of the app. The app then underwent approval from Apple's app store review team before appearing in the store

The Android app was written in the Java programming language using the standard Android toolset. Android apps required no approval, so once we finished our own testing it was available immediately in the Google Play store.

The CEW team, in consultation with WCB decided to use the SAFE FARMS logo as the app to be used on the mobile devices.

Additional pages were also added to the site for help info, terms of use and privacy, contact info, and downloads for the mobile apps, including a form where farmers can enter their mobile number and the website will text them with the link to download the app from the appropriate app store for their device.

The CEW will host the SWP builder with a link from the WCB website.

PILOTING AND DISSEMINATION

As part of the project, the CEW disseminated the safe farms online tool and app to various organizations and individuals in Manitoba, Alberta, and British Columbia.

Our CEW researcher was able to assist with dissemination and piloting of the resources with 24 farmers in the Manitoba area. A survey was conducted with farmers during the dissemination period to ask their opinion of the resources. (See Appendix A)

CEW also promoted the Safe Farms tool to organizations in Alberta and British Columbia to raise awareness of health and safety on the farms. It was well received in both provinces and individuals who tried the online tool and app saw it as very resourceful and would like to see more. (See Appendix D)

The CEW team was excited to attend the Ag Days Conference in Brandon, Manitoba in January 2014. The team thought this would be a great opportunity to promote the Safe Farms Online Tool and App. With a previous attendance of approximately 30,000 plus at last year's event, we thought it would be a good place to try to disseminate the safe farms tool.

Prior to attending the event in Brandon preparations were made to ensure there was promo material available at the booth, including the Safe Farms Press Release and the Safe Farms info sheet with instructions on how to download the app. The CEW wanted to ensure that if people were not able to stop at the booth, at least they were able to take some reading material with them.

Over the three days of the Ag Days conference, it was estimated that the CEW team spoke with around 100-120 attendees, most of whom took a leaflet about the project with them. We registered 42 new accounts made by conference attendees. The first day was the most difficult to connect with passersby, who seemed reluctant to talk to informational booths, especially ones related to safety, which one farmer expressed was because they assume it will mean more paperwork or processes to follow. Holding a contest on the second day proved to be a much easier way to get farmers to our booth, especially younger farmers, and our numbers rose much quicker after that.

Overall, the impression was positive and a number of farmers could relate to the importance of improving safety on farms through their own experiences. One example was a woman coming back to her farm after working in a research lab where every activity is governed by a standard operating procedure. Coming back to the farm, she began to understand how lacking the safety practices are when her father asked her to do some welding with no training or SOP to follow. The conference also gave the CEW the opportunity to connect with people from WCB as well as Manitoba Farmers with Disabilities.

Email blasts and a media release announcing the Safe Farms website and launch of the online tool, were sent to agricultural associations, organizations, and farmers. The launch and announcement of the safe farms resources took place in January at the Winnipeg Technical College, Henlow Bay campus. Representatives from WCB, as well as members of the agricultural community attended the event. An interview to promote the Safe Farms App and health and safety on the farm aired on CBC radio. Marilyn Maki conducted the interview with Henry Holtmann, of Rosser Farms Inc. (click on link below)

<http://www.cbc.ca/player/Radio/Local+Shows/Manitoba/Radio+Noon+-+Manitoba/ID/2430350703/>

Articles about the project and resources were written in KAP's official publication, "Manitoba Farmers' Voice". Another article was written in an Alberta publication entitled, "ARDN Rural Connector" who continue to promote the online tool and app. (Appendix F)

The CEW also created eNewsletters and blogs to inform and update individuals who had participated in interviews and surveys during the project life. (Appendix G)

Dissemination of the safe farms resources also occurred when the CEW team, Mirja Cole and John Luxford presented at the U of M, Department of Agriculture once in January 2013 and again in February 2014.

The CEW have sent another email blast to organizations, associations and individuals to remind them to use this great tool for building Safe Work Procedures on their farms.

OUTCOMES/RESULTS

The CEW was very excited to take on this project and was surprised by some of the barriers that came up during the research portion and development of the online tool, but at the same time pleased with the outcomes and positive qualities that this project revealed.

With the number of farms in Manitoba, (19,054 based on 2009 census), the CEW thought we would have access to unlimited amounts of resources and documentation referencing health and safety on the farm. But to our surprise that became one of our biggest challenges in this project. Although some farms did have health and safety plans in place, they were not always willing to share their information. And because we originally had hoped to build a resource to help with Job Hazard Analysis, we had to take a step back to help develop the standard operating procedures for farmers, as many did not have those in place.

Some individuals were cooperative in sharing information, some even demonstrating their health and safety processes on their farms related to specific tasks. One of the issues that made farmers apprehensive was the fact that this project was being funded by WCB. There seemed to be an underlying fear of being “watched by Big Brother” if they were going to share any information. In doing the interviews and surveys, participants were told that we would not share their personal information, as this was only for research purposes.

Some farmers were very willing to adapt to using the mobile technology while others were not interested. Some farmers they felt that their farms were not big enough to warrant the use of a mobile device and creating SWP's, while few farmers either did not have access to the type of mobile device used in this project (some had Blackberry phones, some still had flip phones while others had nothing).

During an interview with Henry Holtmann, from Rosser Farms Inc., he stated that it's a great tool to bring young farmers back into farming and that his sons found using the online tool and app quite simple and realistic to their business.

In the demos that the CEW conducted with the University of Manitoba Department of Agriculture students, the class in 2013 found the SWPs to be very helpful in organizing the steps for various tasks on the farm, as well as recognizing the hazards associated with those tasks. Instructor, Lorrie Koroscil, promoted use of the online tool during her course outline. In February 2014, out of a class of 70 students, there was approximately 75% of the students who had access to an iPhone or Android device. And of those 75% approximately 35% said they would try the app and online tool.

LESSONS LEARNED – future plans

The Technology and Safety: Making Farms Safer project was a very informative and interesting learning experience for the CEW team. The CEW has worked previously on health and safety projects mostly in the manufacturing and trades sectors. In this project, the team was motivated to meet and work with subject matter experts in farming, specialists in health and safety, farmers in various types of agriculture and students in the U of M agricultural program. It was valuable to learn the different aspects of farming, health and safety plans used on the farm (if any) and the range of knowledge and accessibility with technology.

During this project, one of the challenges faced by the CEW team was obtaining information from farmers to use in developing the online tool and getting some general background information on farming. Some farmers were very protective of the information they had, while others had no written standard operating procedures. Those who did share resources gave us the opportunity to see what similarities and variances in processes there are in industry and agriculture. For those who provided SOP's or SWP's, it was evident that although the task being done was different, the information that goes into the fields of the SWP can be used in both sectors.

Through meeting with different farmers, it was great to see the moments where the farmer recognized the usefulness of the SWP and that yes, that although someone can do a task over and over again, sometimes steps can be missed, and yes, with that a hazard can be missed as well. Taking time to think, and work through the steps of a task was an important piece to putting together the SWP's, and the beauty of the online tool was showing farmers that one can also go back and make edits to the SWP's created.

It was interesting to see, the willingness of some farmers to try to new technology while others would have nothing to do with it. Some even didn't see the necessity for having SWP's in place. It is something that does not happen over night, but as one subject matter expert stated, there needs to be a shift towards a culture of safety.

In using the technology, some farmers also realized that with the mobile device, it is a great way to access and keep their files organized as well as being a useful tool for blended learning or stand alone learning method for new employees. This, combined with the possible next steps of adding photos to the tool, also allows the employees to be more accountable and possibly more aware of spotting hazards on the farm.

The CEW is committed to continue building on this valuable resource and tool. Through the research conducted by the CEW, there has been some ideas that have come about to include some add on features. Some of the recommendations that have been suggested include:

Photo attachments and uploads

Photos and diagrams would help to improve the utility of SWPs. Allowing images to be attached to a SWP in the online editor, as well as uploaded through the mobile app and attached to an SWP from there, would enable farmers to produce higher quality SWPs that provide visual information related to the SWP and specific to their farming operation.

Reusable SWP templates

As farmers create SWPs using the online editor, substantial duplication of effort is going to occur. We have collected a number of SWPs, and now we can continue to do so through the online editor itself, which could be made available as SWP templates for other farmers to use as a starting point which they would then customize for their particular operation. This would encourage use of the tool and save farmers time.

QR codes on related products

As more products include QR codes on them with safety information and user manuals, we can incorporate those QR codes into the mobile app, making it the go-to tool for accessing safety information not just in their own SWPs but also info provided by third parties. This is especially important since iPhones don't ship with a QR code scanner built-in, so the app will be a natural choice when they need to scan a QR code, regardless of its origin.

Show change histories

Show the history of changes made to each SWP with the ability to compare with the current version and even restore a previous version if something was mistakenly overwritten. The change histories are already being stored, but there's no way to access them in the user interface. This would also provide a buffer against accidentally deleted SWPs.

Canada Farm Safe document checklist

Show a list of documents that make up the Canada Farm Safe plan, with a sample for each, and allow farmers to upload their copy of each of these documents. When a document is uploaded (as a Word doc, for example), it will be checked off in the list so they can see how far along they are towards completing the Canada Farm Safe plan.

This way, the service would centralize and maintain all of their safety documentation and not just their SWPs, and making it available from anywhere. The documents could also be converted to PDF to be available in the mobile app.

Additional promotion/dissemination opportunities

As everyone in the farm safety community have repeated, safety on farms requires a cultural shift that will take years to occur. It would be very valuable to be able to continue to seek out new opportunities to disseminate the tools we've built to more farmers and more farming communities, through conferences and events, as well as through new partnerships. This only helps strengthen the tools for WCB, since the more support they have means more safety on farms here in Manitoba.

Job hazard analysis

Now that we have a way to create procedures with lists of hazards, we can add a job hazard analysis feature to the online tool that could have farmers analyze hazards in terms of frequency and severity and provide an output with insights that would help farmers prioritize their security

efforts to manage the most frequent and severe hazards first.

Make the apps multilingual

With the variety of languages being used on farms in Canada, it may increase the ease of accessing the information on mobile devices to have the interface work in a few languages such as English, French, Spanish, German and others (to be determined).

There could even be a facility for providing the SWPs in additional languages. And although the translations would be up to the farmer to produce, we could provide links to translation services they could use.

CLOSING

The Centre for Education and Work was pleased with the results of the product but certainly can see some additional improvements in the future based on feedback and observations captured during the project.

The CEW had the opportunity to share the online tool and app with farmers in Manitoba, Alberta and British Columbia through the piloting and dissemination process. The full success of this project will be seen in the future use of the resources that have been developed and the CEW hopes that it continues to gain popularity and hopefully find its place on farms across the country.

On behalf of the CEW, it was a pleasure working with WCB, the committees assisting and providing guidance and the individuals who contributed their time and knowledge to this project.

APPENDICES

APPENDIX A – Sample of SWP

SAFE WORK PROCEDURE			
Activity:	Sample: Riding Mower	Facility:	All
Written by:	Date created:	Approved by:	Last revised:
	October 15, 2013		October 15, 2013
Persons at risk:		Who supervises this activity:	
Self and bystanders		Self	
Hazards present:	Protective equipment:	Training requirements:	
<ul style="list-style-type: none"> - Awkward postures - sustained sitting with poor posture - Noise from machine - Rotating blades under mower could throw debris - Roll overs 	<ul style="list-style-type: none"> - Closed toe footwear - Eye protection if mowing by low branches such as shelter belts - Consider hearing protection esp. for long duration mowing, and high visibility vest in busy areas 	<ul style="list-style-type: none"> - In house training from experienced driver - Operating manual 	
Steps to complete the task safely:			
<ul style="list-style-type: none"> - Ensure all shields and guards including discharge deflector are in place and working properly. - Avoid unnecessary engine idling in enclosed spaces such as sheds or garages - Avoid mowing areas close to where people are present - Disengage blades if you must drive over very rough surfaces or dust producing surfaces such as gravel -Make best efforts to inspect / clear the area to be mowed of any debris which could be thrown from the blades. Check for hidden hazards such as holes, roots, drain pipes, toys, insect nests or other farm implements. Stay aware and use caution around low hanging branches and shrubs - Drive up and down slopes steep slopes rather than across them to reduce the risk for tipping - Only reach under the machine or deck when the tractor is turned off and the key is removed. Wear work gloves if reaching under to pull debris from deck - Do not touch hot motor parts or spray cold water on a hot engine - Do not make wheel height adjustments, unclog, remove grass catcher, or refuel while the engine is running - Do not leave a running mower unattended - Refuel in a well ventilated area 			
When leaving the machine:			
<ul style="list-style-type: none"> - Disengage power to the blade - Stop the engine - Set park brake if equipped - Remove key and return it to the designated area 			
Additional ways to reduce risk:			
<ul style="list-style-type: none"> - No passengers permitted - Never make modifications to disconnect any manufacturer safety features - See operation manual for schedule of mower maintenance - Inform employee of roll over hazard spots during training 			
Additional info:		Definitions:	
See operating manual			

APPENDIX B – Research Findings



CENTRE FOR EDUCATION AND WORK

Technologies and Safety: Making Farms Safer
Compilation of Findings
May 2013

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1. Introduction, Objectives and Overview of Research Undertaken

Introduction:

The Centre for Education and Work (CEW) received funding from the Workers' Compensation Board (WCB) for the project, "Technologies and Safety: Making Farms Safer". The objective of the project is to evaluate the potential usefulness of web-based and mobile electronic applications in assisting farmers in the development of safe farm plans, and training workers in safety procedures.

Objectives of the research to support this project:

- To determine the extent to which farms have Safe Work Procedures (SWP) in place
- To establish the respondents' awareness and compliance with specific regulations pertaining to safety on the farm.
- To determine farmers familiarity with technology and their comfort level when working with new applications.

Overview of Research Undertaken:

A multifaceted approach was taken to uncover current information on the topic and to assess the interest for this type of initiative. This approach involved the following strategies:

- Conducted an online literature review to uncover the current information on Safe Work Procedures (SWP).
- Conducted an online survey with farmers to document their current SWP practices and their reaction to CEW's initiative.
- Conducted an in-person survey with students at the School of Agriculture to document their current SWP practices and their reaction to CEW's initiative.
- Conducted interviews with farmers in various agricultural sectors to document their current SWP practices and their reaction to CEW's initiative.
- Documented accessibility for farmers to high speed and cellular phone access.

This report documents the outcomes of these activities in the same sequence.

2. Literature Review

An on-line literature review on the topic of Farm Safety was conducted mid 2012. The objective of this review was to uncover materials related to this topic and, where possible, to identify Safe Work Procedures (SWP) that might be adapted to Manitoba's Agricultural sector. The initial search uncovered the work of the Canadian Agricultural Safety Association (CASA). On this website's so called "Safety Shop", seven different topics specifically animals, back safety, crop protection product, electrical safety, ergonomics, farming with disabilities and First Aid linked to specific information on safety on the farm. Another initiative, coordinated by Health and Safety in Ontario, linked to Occupational Health and Safety Training within this sector was also found. There were other Canadian initiatives mentioned on CASA website and these included for example The Agricultural Health and Safety Network located at the University of Saskatchewan, The Prairie Agricultural Machinery Institute (PAMI) and The Canadian Agriculture Injury Reporting (CAIR). The Government of Manitoba had an array of materials on various farm safety issues including the use of Personal Protective Equipment (PPE), the proper disposal of chemical containers and how to avoid spray drift. It became apparent that the research needed to be expanded to include the US, the EU, Australia and New Zealand. Further research was carried out to document the information in these countries. It quickly became evident that there is a vast array of information available, some of in the form of SWP that could be adapted to meet the needs of agricultural sector in Manitoba. The working committee of this initiative decided to highlight four specific areas: Grain, Equipment, Pesticides and Firearms. The following information documents the outcomes of all of the research undertaken with the key information in these specific four areas highlighted.

Summary of Websites on Farm Safety, by Country
Key Information* (Equipment/machinery, Pesticide/herbicide use,
Firearms and Grain dust) is highlighted.

AUSTRALIA

Name	Website	Key Information
Australian Centre for Agricultural Health and Safety	http://www.aghealth.org.au	<p>Farmer Resource: Online Risk Assessment Tool http://www.aghealth.org.au/index.php?id=4</p> <ol style="list-style-type: none"> 1. Introduction – describes the key principals of farm safety programs. 2. Hazard Checklist with Action plans – helps to find the common safety hazards for all farm types, with plans for making the farm safer. 3. Induction Templates - provides guidelines for safety induction for new workers and contractors who provide services on the farm. 4. Register of Training - helps to keep records of training of workers. 5. Injury Register – helps people learn from injuries that occur and put in place the necessary improvements. 6. Guidelines – there are a number of guidelines to help find the right solution to most of the common safety risks on farms. <p>MFS™ - Managing Farm Safety Training Program</p> <p>The MFS™ - Managing Farm Safety Training Program was developed by the Australian Centre for Agricultural Health and Safety and is delivered Australia wide by accredited instructors within the Farmsafe Australia network.</p>
FarmSafe Australia	http://www.farmsafe.org.au	<p>FarmSafe Australia Inc is an association of national agencies that share a common interest in Australian farm safety.</p> <p>Grain Auger Safety: http://www.farmsafe.org.au/index.php?article=content/for-farmers/tractor-and-machinery-safety</p>

CANADA

Name	Website	Key Information
Canadian Agriculture Injury Reporting (CAIR)	http://cair-sbac.ca/welcome-english.html	Canadian Agricultural Injury Reporting (CAIR) - formerly the Canadian Agricultural Injury Surveillance Program (CAISP) - is an integrated national surveillance project of the Canadian Agricultural Safety Association that guides and informs the national agricultural health and safety agenda.
Canadian Agricultural Safety Association	www.casa-acsa.ca	<p>There are seven different topics presented in the topic section specifically:</p> <ul style="list-style-type: none"> -Animals -Back Safety -Child Safety -Crop Protection Products -Electrical Safety -Ergonomics -Farming with Disabilities -First Aid <p>Crop Protection Products:</p> <ul style="list-style-type: none"> -Safe Handling of Agrochemical Factsheets. http://casa-acsa.ca/content/safe-handling-agrochemicals-factsheets -Working Safely with Organo-Phosphate (OP) Insecticides http://casa-acsa.ca/content/working-safely-ops-organo-phosphate-insecticides
Canadian Centre for Health and Safety in Agriculture	www.cchsa-ccssma.usask.ca	The Canadian Centre focuses its resources on addressing public health issues related to the agricultural rural ecosystem and bridge gaps that occur between the spectra of basic research, applied research, the community and policy.
Farm Safety Association (FSA)	www.farmsafety.ca	<p>FSA supports industry and government in developing standards, procedures and regulations to improve health and safety for the Agriculture Industrial Sector.</p> <p>Information on all key areas: http://www.farmsafety.ca/public/pages/factsheets_english.html</p>
Farm and Ranch Safety Association (FARSHA)	www.farsha.bc.ca	<p>FARSHA's mandate is the development and provision of health and safety services to BC agriculture. Reference Listing with details in all four key areas from many sources: http://www.farsha.bc.ca/pdfs/Reference_Material.pdf</p>

Name	Website	Key Information
Health and Safety Ontario	www.healthandsafetyontario.ca	<p>Ontario's Prevention System is made up of the Ministry of Labour (MOL), Workplace Safety and Insurance Board (WSIB), Workers Health & Safety Centre, Occupational Health Clinics for Ontario Works Inc. and 12 Health and Safety Associations (HSAs).</p> <p>Listing with details in all four key areas; filter by agriculture http://www.healthandsafetyontario.ca/Resources/Downloads.aspx</p>
Manitoba Government	http://www.gov.mb.ca/agriculture/	<p>Links to other provincial agricultural departments: http://www.gov.mb.ca/agriculture/links/index.html</p> <p>Firearms Regulations: http://www.gov.mb.ca/conservation/wildlife/hunting/general/fedfaregs.html</p> <p>Pesticide Safety: http://www.gov.mb.ca/agriculture/crops/fruit/fbc01s00.html</p> <ul style="list-style-type: none"> -Protecting yourself -10 rules for Safe Application -Protective Clothing -Protecting your eyes, face and lungs -Avoiding spray drift -Laundering pesticide soiled clothing -Container disposal -Rinsing -Disposal of containers -Pesticide formulation & compatibilities
Manitoba Hydro	www.hydro.mb.ca	Under Safety and Education tab, there is a section on Farm Safety.
Prairie Agricultural Machinery Institute	www.pami.ca	<p>Since 2004, research has determined engineering safety support for older farm machinery</p> <p>Equipment/Machinery http://pami.ca/resources/safety-publicationslinks/ -On Guard/PTO Guarding/ROP/Auger Guard/Devices/Lighting and Marking/Hitching</p>
Safe Manitoba	www.safemanitoba.com	<p>Farm Safety Checklist http://safemanitoba.com/uploads/farm_family_safety_checklist.pdf</p>

EUROPEAN UNION

Name	Website	Key Information
European Agency for Health and Safety at Work	http://osha.europa.eu/en/	<p>The European Agency for Safety and Health at Work (EU-OSHA) is committed to making Europe a safer, healthier and more productive place to work. We promote a culture of risk prevention to improve working conditions in Europe.</p> <p>Risk Assessment Tool Database: http://osha.europa.eu/en/practical-solutions/risk-assessment-tools/index_html</p> <p>Tractor: http://osha.europa.eu/en/sector/agriculture/index_html/workplace</p> <p>Pesticides/Chemicals: http://osha.europa.eu/en/sector/agriculture/index_html/ds</p>

IRELAND

Name	Website	Key Information
Health and Safety Authority	http://www.hsa.ie/eng/	<p>Works to create a national culture where all commit to safe and healthy workplaces and the safe and sustainable management of chemicals.</p> <p>Farm Safety Code of Practice: Online Risk Assessment Tool http://www.eazysafelc.com/LearningCentre/farmers/00_login.htm</p> <p>Also accessed through: www.farmsafely.com</p> <p>Tractor Safety: http://www.hsa.ie/eng/Publications_and_Forms/Publications/Agriculture_and_Forestry/Tractor_Safety_and_You.pdf</p> <p>Vehicles, Equipment and Chemicals http://www.hsa.ie/eng/Your_Industry/Agriculture/</p>

NEW ZEALAND

Name	Website	Key Information
Accident Compensation Corporation of New Zealand	www.acc.co.nz	<p>Equipment/Machinery http://www.acc.co.nz/preventing-injuries/on-the-farm/PI00061</p>

UNITED KINGDOM

Name	Website	Key Information
Health and Safety Executive	http://www.hse.gov.uk/	<p>HSE is the national independent watchdog for work-related health, safety and illness. It is an independent regulator and acts in the public interest to reduce work-related death and serious injury across Great Britain's workplaces.</p> <p>Firearms: http://www.hse.gov.uk/pubns/as7.pdf</p> <p>Equipment: Agricultural Machinery-Design, Manufacture and Supply: http://www.hse.gov.uk/agriculture/topics/machinery/index.htm</p> <p>Resource: No Second Chances: A Farm Machinery Step-by-Step Guide: http://www.hse.gov.uk/pubns/indg241.pdf</p> <p>Power Take Offs and Power Take Off Drive Shafts: http://www.hse.gov.uk/pubns/as24.pdf</p> <p>Pesticides: Code of Practice for Using Plant Protection Products inc. Training and Certification modules: http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/using-pesticides/codes-of-practice/code-of-practice-for-using-plant-protection-products</p> <p>Grain dust: http://www.hse.gov.uk/pubns/priced/eh66.pdf</p>

UNITED STATES OF AMERICA

Name	Website	Key Information
Agricultural Safety and Health Council of America	www.ashca.org	Its mandate is to guide the development of effective delivery systems for safety and health through communications involving leaders representing producers, agribusiness, insurance, safety associations and others.
Agricultural Health and Safety (Iowa State)	http://www-archive.abe.iastate.edu/safety	<p>Equipment: Tractor and Machinery Certification: http://www-archive.abe.iastate.edu/safety/tractor-and-machinery-certification.html</p> <p>Virtual Classroom: http://www.tmvc.iastate.edu/</p> <p>Grain http://www3.abe.iastate.edu/TugofWar/EDC_116_Promotion2008.htm</p>
American Society of Safety Engineers	http://www.asse.org/	<p>The Agricultural Branch provides a forum for SH&E professionals in the agriculture industry to network and to gain knowledge regarding best practices, current trends and regulations. There is an extensive array of topics covered.</p> <p>Under the section of 'Practice Specialties', Agriculture is listed. In this section there is a link to the National Ag Safety Database http://nasdonline.org/</p> <p>There is an extensive array of materials available for all areas identified in the key areas.</p>
Body of Knowledge	www.safetybok.org	Since 1911, the Body of Knowledge project is dedicated to creating a living reference that represents the collective knowledge of the Safety, Health and Environmental profession.
Center for Disease Control/ National Institute for Occupational Health and Safety (NIOSH)	http://www2a.cdc.gov/nioshtic-2/error.ASP?ErrorCode=1&ErrorDesc=&SearchString=	<p>NIOSH is a searchable bibliographic database of occupational safety and health publications, documents, grant reports, and journal articles supported in whole or in part by NIOSH.</p> <p>Within NIOSH there are seven research centres focusing on Agriculture OH&S issues. The centres with relevant information are highlighted.</p> <p>High Plains Intermountain Center for Agricultural Health and Safety (HICAHS)</p> <ol style="list-style-type: none"> 1. Chemical Safety: http://www.hicahs.colostate.edu/Documents/Factsheets/ChemicalSafety.pdf 2. Farm Tractor Safety: http://www.hicahs.colostate.edu/Documents/Factsheets/farmtractorsafety.pdf 3. Grain Storage Bins: http://www.hicahs.colostate.edu/Documents/Factsheets/grainbin.pdf 4. Power Take-Off Safety:

		<p>http://www.hicaahs.colostate.edu/Documents/Factsheets/PTO.pdf</p> <p>5. Safe Pesticide Handling: http://www.hicaahs.colostate.edu/Documents/Factsheets/safepesticide.pdf</p> <p>6. Wheat Dust: http://www.hicaahs.colostate.edu/Documents/Factsheets/wheatdust.pdf</p> <p>7. Non-HICAHS Resources: Links to information from other sources on Equipment, Chemicals and Grain. http://www.hicaahs.colostate.edu/health_and_safety_links.htm</p> <p>Southeast Center for Ag. Health and Injury Prevention (based at the University of Kentucky).</p> <p>1. The Roll-Over Protection System (ROPS) Guide. It enables users to quickly determine what ROPS are available for which tractor, which companies supply retrofit ROPS, and how and when to obtain these ROPS. http://warehouse.ca.uky.edu/rops/ropshome.asp</p> <p>Great Lakes Center For Agricultural Safety and Health</p> <p>1. Chemicals: http://hostedweb.cfaes.ohio-state.edu/agsafety/glc/publications_and_resources/chemical.html</p> <p>2. Equipment: http://hostedweb.cfaes.ohio-state.edu/agsafety/glc/publications_and_resources/equipment.html</p> <p>Northeast Center for Agricultural and Occupational Health</p> <p>1. Under brochures: Tractor Safety and PTO Safety</p> <p>2. Under posters: Dust Masks, Safe Tractor Operating, Safe Tractor Starting and Tractor Safety.</p> <p>3. Under Farm Safety Articles: Chemicals and Pesticides and Tractors/Machinery/Shop.</p> <p>Western Centre for Agricultural Health and Safety:</p> <p>1. Under Community Outreach, there are Health and Safety Links to resources on Tractors and Transportation and Pesticide Safety and Training http://agcenter.ucdavis.edu/Training/Outreach_resources.php</p>
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3. Analysis of On-Line Survey

An on-line survey was completed, over a seven-month period, by farmers and also included students at the School of Agriculture at the University of Manitoba. There were three objectives to the survey:

- To determine the extent to which farms have Safe Work Procedures (SWP) in place
- To establish the respondents' awareness and compliance with specific regulations pertaining to safety on the farm.
- To establish farmers' accessibility and comfortable level when using technology.

By February 28, 2013, one hundred and twelve (112) respondents had answered the following fourteen questions:

1. Do you have a documented Farm Safe Plan or Farm Risk Assessment? If so, did you follow a specific program? What was the program?
2. Do you have documented Safe Work Procedures for specific jobs on the farm? If yes, which tasks or jobs?
3. Do you have employees on the farm? How many? Comment on farm employees. How do you usually train employees or family members on farm safety?
4. Do you have any job aids or other safety reminder devices? What are these?
5. Are you familiar with Manitoba's Workplace Health and Safety laws and regulations applicable to farms?
6. Have you ever had an inspection?
7. Are you aware of your farm's performance with respect to compliance with regulations?
8. Do you use the computer to manage your farm business?
9. Do you use the Internet for business purposes?
10. Are you comfortable using the Internet?
11. Do you have high speed Internet?
12. Do you use smart phones and various applications for farm use?
13. Would you be interested in learning to use new electronic applications to help you manage risk and safety on the farm?
14. Would you use a hand held application to train employees or for implementing SWP on your farm?

NOTE:

The answers to the survey were 'yes', 'no' and 'not applicable', and whenever appropriate, respondents were also asked to provide additional comments. Many answered 'not applicable'. Since it was not possible to determine whether these answers could be inferred as being a 'no' answer, in the interest of accuracy, this analysis will only report on the number of 'yes' or 'no' answers.

Analysis of Responses

1. Do you have a documented Farm Safe Plan or Farm Risk Assessment? If so, did you follow a specific program? What was the program?
- Sixty-nine (69) respondents did not have a Farm Safe Plan or Farm Risk Assessment in place. In contrast, there were 16 respondents who had a documented Farm Safe Plan or Farm Risk Assessment in place. Of these 16 respondents, nine had followed specific programs and provided the following details on which program was followed:
- ✓ Safe Farms Check by MAFRI, and then added to it. Started in 2009 with MB Ag workshop.
 - ✓ Working with Glen Blahey, Morag, and the other potato growers. Safe Farm check program for handling pesticides. Pesticide Applicator's training.
 - ✓ Chicken Hatching Egg Quality program, C.H.E.Q. The farm is inspected several times per year by vets, MAFRI, the Chicken Board, and the Hatchery.
 - ✓ Safety Services Manitoba. This farm is customizing their manual to their farm.
 - ✓ They developed their own program based on HACCP, and chose five areas to focus on.
 - ✓ Level 1 Workplace Health and Safety with Morag. Started with seasonal worker training.
 - ✓ Health and Safety Management System they wrote based on the MB Act and regulations. They follow the requirements. They have a safety policy statement.
 - ✓ Occupational Health and Safety
 - ✓ Safe Farm Check Program

The remaining seven respondents did not provide details on their plans.

2. Do you have documented SWP for specific jobs on the farm? If yes, which tasks or jobs?

Sixty-three (63) respondents did not have documented SWP in place.

Twenty-three (23) respondents detailed the tasks and jobs that have SWP in place. Twenty-nine (29) different jobs/tasks were identified by respondents:

NOTE: The number in brackets indicates how many times this task was listed by respondents.

- ✓ Bin-piling-loading and unloading (6)
- ✓ Dealing with emergencies (1)
- ✓ Delivering vaccinations (3)
- ✓ Ergonomics (1)
- ✓ Falling (1)
- ✓ Grading produce (1)
- ✓ Guiding traffic in yards (1)
- ✓ Handling of animals (7)
- ✓ Harvesting (1)
- ✓ Having safety equipment in place (1)
- ✓ Lifting heavy objects (1)
- ✓ Mixing chemicals (1)
- ✓ Moving parts-mowers for example (1)
- ✓ Operating a skid steer (4)
- ✓ Operating hand tools (1)
- ✓ Operating on tractors (6)
- ✓ Operating power tools (1)
- ✓ Operating specialized equipment e.g. forestry (1)
- ✓ Performing lockout procedures inc. pictures (1)
- ✓ Performing shop jobs (2)
- ✓ Protecting eyes, ears and skin (2)
- ✓ Pulling pits (3)
- ✓ Sanitizing milk house (2)
- ✓ Sorting/picking potatoes (3)
- ✓ Welding (1)
- ✓ Working alone (1)
- ✓ Working in confined spaces (1)
- ✓ Working in grain dust (1)
- ✓ Working on machinery (5)

Additional Comment:

The 23 respondents reported that their methods of training differed significantly. Ten of the respondents cited that their farms have formal, training guides prepared and used. In contrast, 10 respondents cited the importance of On The Job (OTJ) training, working on an informal basis with new workers and a few mentioned the importance of mentoring. No formal documentation appears to be used in these more informal OTJ training situations.

3. Do you have employees on the farm? How many? Comment on farm employees. How do you usually train employees or family members on farm safety?

Fifty-one (51) respondents indicated that there were employees on the farm. There was a significant range in the number of employees on farms.

- ✓ Six farms had one and three employees respectively
- ✓ Fourteen farms had two employees
- ✓ Three farms had four and five employees
- ✓ Two farms had 12 employees
- ✓ Three farms had 350 employees

There were several notes that many employees are hired on a part-time basis and on a seasonal basis.

Additional Comment:

On most farms, many family members work on the farm. However, from a legal perspective, a family member employed on a farm is not considered to be an employee. All workers employed on the farm are Workers' Compensation Board (WCB) covered, with the exception of family members of the farm owner(s). Although coverage for them is not required, optional WCB coverage for farm owner(s) and their family members is available. A family member, from WCB's perspective is very extensive and includes immediate and extended family including any other person whom the farmer considers to be like a close relative, whether or not they are related by blood, adoption, marriage or common-law relationship.

(www.wcb.mb.ca/definition-of-family-members).

As a result of this definition of employee, there was a degree of ambiguity when respondents answered this question as many counted family members as employees.

Fifty-three responses were recorded on 'how do you usually train employees or family members on farm safety?' The answers were as follows:

Informal Training	Formal Training	Other Comments
OTJ (3)	Formal training (7)	No (4)
Vocal explanation (18)		Yes (2)
Follow experienced employee (10)		New initiative (1)
Signs on machinery/buildings (2)		Not needed-long term employee (1)
Rely on common sense (1)		
Review each job (4)		

4. Do you have any job aids or other safety reminder devices?

Fifty-eight (58) of the 112 respondents responded that neither job aids nor other safety device reminders are in place at their farms. There were 30 respondents who indicated that job aids or other safety reminder devices are used on their farms. Nineteen (19) indicated that the most common device was signs/labels/stickers either on machinery or at appropriate locations in buildings. The following aids were also reported to be used on the farm:

- ✓ 'Buddy' system for safety i.e. nobody works alone
- ✓ Fire extinguishers
- ✓ Handbooks with safety reminders
- ✓ Hydrogen sulphide monitoring devices
- ✓ Personal Protection Equipment (PPE)
- ✓ Procedure followed: walk around check at the beginning of all work
- ✓ Regular maintenance checks on machinery
- ✓ Safety guards on equipment
- ✓ Safety procedures adhered directly to the machinery
- ✓ Some equipment has built-in safety mechanisms i.e. the engine switches off when there is no longer a person sitting in the tractor.
- ✓ Straps and chains to tie down loads
- ✓ SWP are posted
- ✓ Tailboard meetings in the morning

5. Are you familiar with Manitoba's Workplace Health and Safety laws and regulations applicable to farms?

Forty-six (46) respondents indicated that they were not familiar with these regulations whereas 39 respondents indicated that they were familiar with the regulations. No comments were recorded.

6. Have you ever had an inspection?

Sixty-six (66) of the respondents have never had an inspection; in contrast, 17 of the respondents have been inspected. No comments were recorded.

7. Are you aware of your farm's performance with respect to compliance with regulations?

Fifty-six (56) of the respondents indicated that they were not aware of the farm's performance with respect to compliance with regulations. In contrast, 30 respondents indicated that they are aware how well their farm complies with the regulations and there were 23 comments recorded. The comments ranged from 'the safety standards on the farm are above Code and they ensure their program exceeds requirements' to 'some areas of the farm are compliant, whereas others need work'. Others mentioned that 'they have a copy of the regulations but haven't read it entirely and they know they aren't fully compliant in some areas where they don't have documentation yet. Still others' attitude was 'they have not had a single injury in 25 years' and why do they need to be regulated?

8. Do you use the computer to manage your farm business?

Ninety-one (91) respondents said yes; 11 said no.
There were no comments recorded.

9. Do you use the Internet for business purposes?

Ninety-seven (97) respondents said yes; 11 said no.
There were no comments recorded.

10. Are you comfortable using the Internet?

One hundred and nine (109) respondents said yes; two said no.
There were no comments recorded.

11. Do you have high speed Internet?

Sixty-six (66) respondents said yes; 22 said no.
There were no comments recorded.

12. Do you use smart phones and various applications for farm use?

Sixty-two (62) respondents said yes; 49 said no.

There were comments provided by 47 respondents.

NOTE: The number in brackets indicates the number of times the task was recorded.

Technology is used in a wide variety of tasks. The most common use is commodity marketing (13), then communication (11) and, finally finances (9).

The following tasks were also identified as used on the farm:

- ✓ Auto-steer (2)
- ✓ Barn status (2)
- ✓ Electronic cattle tracking devices (2)
- ✓ Email (4)
- ✓ Food safety (1)
- ✓ GPS (3)
- ✓ Land mapping (2)
- ✓ Machinery (3)
- ✓ Monitor irrigation systems (1)
- ✓ News (5)
- ✓ Precision Ag (4)
- ✓ Promotion (1)
- ✓ Research (4)
- ✓ Soil testing (1)
- ✓ Track operations (5)
- ✓ Training (1)
- ✓ Walkie-talkie (1)
- ✓ Weather (4)

13. Would you be interested in learning to use new electronic applications to help you manage risk and safety on the farm?

Seventy-one (71) respondents said yes; 33 said no.

There were no comments recorded.

14. Would you use a hand-held application to train employees or for implementing safe work procedures on your farm?

Forty-four (44) respondents said yes; 40 said no.

There were 26 comments recorded. Seven respondents were definitive in their support; 14 indicated a more reluctant support of the idea citing practical issues such as lack of cell coverage, and use of cell phones in buildings with metal roofing as issues. Three respondents would not use a hand-held application to train employees or for implementing safe work procedures on their farms.

4. Analysis of Survey with University of Manitoba School of Agriculture Participants

In March of 2012, a survey was carried out, in person, with 27 students attending the School of Agriculture at the University of Manitoba. Although this survey is more qualitative in nature, its purpose reflected the objectives of the on-line survey and were as follows:

- To determine the extent to which farms have Safe Work Procedures (SWP) in place
- To establish the respondents' awareness and compliance with specific regulations pertaining to safety on the farm.
- To determine farmers familiarity with technology and their comfort level when working with new applications.

Twenty-seven students participated in the survey and answered the following questions:

1. Describe the current safety practices used on the farm.
2. What safety practices are working and are not working well?
3. What changes to the plan, if any, do you hope to make in the future?
4. What are some of the barriers to working safely on the farm?
5. What do you think it will take to get farmers to work more safely?
6. Are you familiar with doing a job hazard analysis/business risk management plan?
7. Are you comfortable using the Internet, iPhone and tablets?
8. For what purpose do you use technology?
9. How is technology used on the farm?
10. Are you interested in using a digital media device (iPhone) to develop a business risk management plan on the farm?

Analysis of Results

1. Describe the current safety practices used on the farm

The results given divided into two specific categories specifically tangible and intangible. Tangible infers the use of equipment or a process, whereas intangible refers to an attitude towards safety. The results were as follows:

NOTE: The number in brackets indicates the number of times the information was recorded.

Tangible	Intangible
<ul style="list-style-type: none"> ✓ Aware of peoples' presence (2) ✓ Chemical hazards (1) ✓ Chemicals are secured (1) ✓ Farm machines has proper signage (2) ✓ Fire extinguisher (1) ✓ Hold the ladder when needed (1) ✓ Keep shields on equipment (7) ✓ Personal Protection Equipment (17) ✓ Pre-trip checks (3) ✓ Proper maintenance (2) ✓ Safety jacks when changing oil (1) ✓ Training for employees (2) ✓ Turn machine off before repairs (1) ✓ Use appropriate tools for the job (1) ✓ Use your mirrors (1) ✓ Verbal training for employees (1) ✓ Watch for hydro lines (1) 	<ul style="list-style-type: none"> ✓ CAUTION (1) ✓ Common sense (5) ✓ Do once, check twice (1) ✓ Don't be an idiot (1) ✓ Don't rush (1) ✓ Don't stick your hand in the auger (1) ✓ Education (2) ✓ Hours worked are limited so accidents are few (1) ✓ Insurance (WCB) (1) ✓ Learn by working (1) ✓ Specialized work by us (1) ✓ We have no employees and having grown up on a farm, we know how to do things safely (1)

2. What safety practices are working and are not working well?

NOTE: The number in brackets indicates the number of times the information was recorded.

Practices - working	Practices - not working
<ul style="list-style-type: none"> ✓ They all are (11) ✓ PPE/awareness helps (1) ✓ Accidents happen when people don't know (1) ✓ Aware of surroundings (1) ✓ Double checks (1) ✓ Technology (1) 	<ul style="list-style-type: none"> ✓ Being lazy-not doing pretrips (1) ✓ Hours during seeding/harvest are very long so, time and labour management is really important at this time (1). ✓ Not always wearing eye protection (1) ✓ Removing the safety shield on equipment so it's easier to service (1) ✓ Safety harnesses (1) ✓ Some safety practices are not feasible for implementation e.g. double seats in tractors, safety belts (1) ✓ Time management (1)

3. What changes to the plan, if any, do you hope to make in the future?

Answer	No. of Respondents	Comments
Yes	10	<ul style="list-style-type: none"> ✓ Be smarter; be safer ✓ Changes in production changes the plan; marketing can change the plan ✓ Coming up with a manual ✓ Develop a plan ✓ Have safety devices ✓ More training awareness ✓ Proper maintenance ✓ Put safety shields back on ✓ Slow down and think ✓ Underground power cable
No	7	<ul style="list-style-type: none"> ✓ None. We don't plan on having employees so we don't think it's necessary. ✓ None until it becomes necessary for safety for people
No response	7	
N/A	2	
Don't know	1	

4. What are some of the barriers to working safely on the farm?

Barriers	No. of Respondents
✓ Shortage of time	13
✓ Cost	4
✓ Dangerous products	2
✓ Efficiency	5
✓ Fatigue	3
✓ Lack of awareness	1
✓ Lack of employee co-operation	2
✓ Lack of time for proper training	1
✓ Long hours	3
✓ Not enough programs	1
✓ Safety equipment is expensive	2
✓ Safety equipment is time consuming to use	2
✓ Safety equipment is uncomfortable	1
✓ Short season	3
✓ Stress & pressure	3
✓ Work very close to dangerous equipment	2
✓ Working alone sets limits on what can be done	1

5. What do you think it will take to get farmers to work more safely?

Suggestions	No. of Respondents
✓ Incentives/rewards/money	11
✓ Serious accident/close call	7
✓ A lot	1
✓ Awareness/education	3
✓ Financial payment for proper training	1
✓ Just do the right thing!	1
✓ Less red tape/regulations	1
✓ Plastic covered sheds	1
✓ Relate risk to the cost of injury	1
✓ Safety courses	2
✓ Safety decals	1
✓ Safety meetings	2
✓ Time	2

6. Are you familiar with doing a job hazard analysis/business risk management plan?

Answer	No. of Respondents
Yes	6
No	18
Somewhat	2
No response	1

There were no comments given by the respondents.

7. Are you comfortable using the Internet, iPhone and tablets?

Answer	No. of Respondents
Yes	26
No	2*
No response	1

*The respondents indicated that they were not comfortable using iPhone and tablets but were very comfortable with the Internet.

A complete job description was presented.

8. For what purpose do you use technology?

Purpose	No. of Answers
✓ Auto steer	1
✓ Business meeting	1
✓ Calling	6
✓ Communication-SMS	7
✓ Easing of workload	2
✓ Efficiency	3
✓ Email	2
✓ Entertainment	5
✓ Everything	3
✓ GPS	3
✓ Information	2
✓ Keeping updated	1
✓ Market grain	1
✓ Market updates	4
✓ Paperless farm	1
✓ Personal Use	1
✓ Recordkeeping	3

✓ Research	3
✓ Safety	1
✓ School	1
✓ Social media	1
✓ Time management	1
✓ Training	2
✓ Weather	1

9. How is technology used on the farm?	
Use	No. of Answers
✓ Auto steer	2
✓ Communicate with others	5
✓ Email	1
✓ Financial recordkeeping	10
✓ GPS	3
✓ Information	2
✓ Management	2
✓ Mapping fields	1
✓ Markets	9
✓ Regulation of barns	1
✓ Research	3
✓ Soil testing	1
✓ Training	1
✓ Variable rate precision agriculture	3
✓ Weather updates	2

10. Are you interested in using a digital media device (iPhone) to develop a business risk management plan on the farm?

Answer	No. of Respondents
Yes	9
No	7
Maybe	7
No response	4

The following comments were also recorded:

- *The app may cover owner in use of worker operator, what happens on the case that the list of hazards and uses are not complete and worker follows it and accident happens? Is it then owner liable? Seems like this just passes liability between farm owner and farm worker. Plus safety plan needs to be CONSTANTLY upgraded.*
- *Make available for blackberry as it is still leader in "business" technology*
- *Reconsider approach, iPhone might not be the best angle.*

5. Analysis of On-Farm and Industry Research: Technologies and Safety-Making Farms Safer Final Report-October 2012

Introduction:

In this report, there was an overview given on the background to the project and the difficulties encountered when this initiative started. The first issue was that there is no standardized procedure in place to document tasks on the farm and secondly, there is a vast array of tasks to be documented.

An overview of the Safe Farm initiatives that have taken place in the past several years was documented. The Canadian Agricultural Safety Association (CASA), Manitoba Agriculture, Food and Rural Initiatives (MAFRI) and Occupational Health and Safety (OHS) have spearheaded these programs.

A summary of the outcomes of interviews conducted with farmers who work in six different commodities and considerations for this initiative was presented:

Commodity	Outcomes	Consideration for CEW
Beef	-Little/no interest as most training is OTJ and delivered orally.	
Dairy	-Preloaded SWP with the ability to customize is attractive. -High rate of turnover of employees; App used in training.	-Mobile technology considered a distraction
Grain	-Identify hazards rather than SWP.	Hand held app accesses safety checklists from various equipment

Commodity	Outcomes	Consideration for CEW
		manufacturers.
Hogs	- Safe work procedures already in place in large farms.	-Metal roofs on barns have difficulty with wireless reception -Practical challenges carrying and operating a handheld device in a barn. -Cell phone reception unpredictable
Potato	-Safe work procedures already in place in large farms. -Bureaucratic interference may curtail the evolution of SWP.	-Concise information -Languages other than English -Hand held app has basic steps whereas more details are online.
Poultry	-Food safety documentation already in place; hence, it appears logical to combine with SWP.	-Pictures of hazards -Limited text - Hand held app outline basic steps whereas more detailed information is online.

The following Safe Work Procedures (SWP) was presented in numerical order in the report.

Task	Source	Page location
1. Cleaning barn before receiving chicks	Springhill Colony	21
2. Unloading grain	Ash Haven Farm	22
3. Handling out-of-condition grain	Ash Haven Farm	23
4. Recovering stuck vehicles or equipment	Kroeker Farms	24,25
5. Using a conveyor to unload potatoes/onions into storage unit into large pile	Kroeker Farms	26, 27
6. Sweeping out grain bin as grain is loaded onto truck	Dan Mazier	28
7. Tractor operation	Kroeker Farms	29,30
8. Grading potatoes	Kroeker Farms	31

The following information was included in the report in the following order:

1. The Safe Farms Check Program documented for Kroeker Farms is presented in 57 double-sided pages.
2. Course Spray Vaccination Information (1 page)
3. Water Vaccination (1 page)
4. Self-Injection (1 page)
5. Injection of Inactivated Vaccines (1 page)
6. High Risk Jobs for Hog Barns-from Interview with Farm Manager (1 page)
7. Barn Policy on Pulling Pit Plugs (1 page)
8. Manitoba Pork Producers-Developing SWP (3 pages)
9. Manitoba Pork Producers-SWP: Vaccinations (3 pages)
10. Manitoba Pork Producers-SWP: Working alone (1 page)
11. Manitoba Pork Producers-SWP: Animal handling (3 pages)
12. Safe Operating Procedure: Air Compressor Maintenance (1 page)
13. Safe Work Bulletin-Grain/Crop Dusts: Respiratory Protection (1 page)
14. Safe Work Bulletin-Agricultural Confined Spaces Can Kill You (1 page)
15. Safe Work Bulletin-Worker Health and Bio-Security in Livestock (2 pages)
16. Good Farming is No Accident: Agricultural Hand Signals (2 pages)
17. Good Farming is No Accident: Safe Tractor Operation (4 pages, one page missing)
18. Good Farming is No Accident: Respiratory Hazards (4 pages)
19. Safe Work Bulletin-Agricultural Confined Spaces Can Kill You-Assessment (3 pages)
20. Verwey Potatoes Ltd-Sign off on Training Document (1 page)
21. Verwey Potatoes Ltd-Safety Training Record (1 page)
22. Verwey Potatoes Ltd-Seasonal Worker Orientation Checklist (1 page)
23. Verwey Potatoes Ltd-Training Policy (1 page)
24. Verwey Potatoes Ltd-SWP-Loading Silage Bales (1 page)
25. Verwey Potatoes Ltd-SWP-Bedding Free Stall Area (1 page)
26. Verwey Potatoes Ltd-SWP-Cleaning Feed area with Skid Steer (1 page)
27. Verwey Potatoes Ltd-SWP-Feeding Calves (1 page)
28. Verwey Potatoes Ltd-SWP-Daily Milking (1 page)
29. SWP Template (1 page)
30. Verwey Potatoes Ltd-SWP-Backing Truck Up To Stinger (1 page)
31. Verwey Potatoes Ltd-SWP-Skid Steer Operation (1 page)
32. Verwey Potatoes Ltd-SWP-Operating Harvester (1 page)
33. Verwey Potatoes Ltd-SWP-Truck Driving-Hauling from Field (1 page)
34. Verwey Potatoes Ltd-SWP-Moving The Line (1 page)
35. Verwey Potatoes Ltd-SWP-Shoveling Dirt (1 page)
36. Verwey Potatoes Ltd-SWP-Bin Piling in Shed (1 page)
37. Verwey Potatoes Ltd-SWP-Sampling (1 page)
38. Verwey Potatoes Ltd-SWP-Grading (1 page)
39. Safety and Health Management System Binder – Maple Leaf (1 page)
40. SWP-Pit Plug Pulling inc. flowcharts (3 pages).
41. Daily Production Schedule – Flowchart (1 page)
42. Regular Cleaning (Monday & Thursday) Flowchart (1 page)
43. Pallet Set-Up-Flowchart (1 page)
44. SWP-Template: Shoveling Dirt (1 page)*

- 45. SWP-Template: Operating Harvester (1 page)*
- 46. SWP-Template: Bin Piling in Shed (1 page)*
- 47. SWP-Template: Backing Truck Up to Stinger (1 page)*
- 48. SWP-Template: Truck Driving-Hauling from Field (1 page)*
- 49. SWP-Template: Skid Steer Operation (1 page)*
- *NOTE: These templates were used at Verwey Potatoes Ltd.
- 50. SWP-Pulling Pits (1 page)
- 51. SWP-Grain Auger (1 page)
- 52. SWP-Tractor Operation (2 pages)
- 53. SWP- Template: Sampling (1 page)*
- 54. SWP-Pulling Stuck Equipment (1 page)
- 55. SWP-Operating Potato Harvester (1 page)
- 56. SWP-Hooking Up Potato Planter (1 page)
- 57. SWP-Wash/Disinfect Potato Storage (1 page)
- 58. Rosser Holsteins Farm Safety Manual-Table of Contents (1 page)
- 59. Rosser Holsteins –Safety Mission Statement (1 page)
- 60. Rosser Holsteins – Checklist for new employees & employees in new positions (1 page)
- 61. Rosser Holsteins –Safe Handling of Animals (2 pages)
- 62. Rosser Holsteins –Chemical Hazards (1 page)
- 63. Rosser Holsteins –Pesticide Storage and Transportation (2 pages)
- 64. Rosser Holsteins –Safety While Cleaning and Sanitizing Equipment (2 pages)
- 65. Rosser Holsteins –WHMIS Information (1 page)
- 66. Rosser Holsteins- General Farm Hazards and Preventing Needle Stick Injuries (1 page)
- 67. Rosser Holsteins- Safe Handling of Injectables and Medications (1 page)
- 68. Rosser Holsteins – Safety with Tractors (3 pages)
- 69. Rosser Holsteins – Skid Steer Loader Safety (6 pages)
- 70. Rosser Holsteins – Agricultural Machinery Hazards (6 pages)
- 71. Rosser Holsteins – Lockout Procedures (6 pages)
- 72. Rosser Holsteins – Take Extra Care Around Machinery (1 page)
- 73. Rosser Holsteins – Ergonomic Hazards (1 page)
- 74. Rosser Holsteins – Safe Lifting and carrying Techniques (3 pages)
- 75. Rosser Holsteins – Preventing Slips and Falls (2 pages)
- 76. Rosser Holsteins – Now Hear This! Hearing loss on the Farm can be prevented (1 page)
- 77. Rosser Holsteins – Ergonomics and Driving Your Tractor (1 page)
- 78. Rosser Holsteins – Biological Hazards (2 pages)
- 79. Rosser Holsteins – Manure Gas Dangers (2 pages)

6. Technology Access in Farming Communities in Manitoba-August 2012

a. Cellular Phone Coverage:

Five different companies were identified specifically Bell, MTS, Rogers, Telus and Wind. There are other networks available including Fido and Virgin but their coverage is limited to the city of Winnipeg

The following links provide details on the coverage in Manitoba (current as of August 2012).

- ✓ Bell: Currently, there is minimal coverage around the city of Winnipeg and there are plans for expansion.
- ✓ MTS Mobility:
<http://www.mts.ca/mts/personal/support/wireless/coverage+and+roaming/wireless+coverage+map>
- ✓ Rogers:
[http://www.rogers.com/web/content/wireless_network?setLanguage=en&cm_mmc=Redirects--Consumer Wireless Eng--Network 0909--coverage](http://www.rogers.com/web/content/wireless_network?setLanguage=en&cm_mmc=Redirects--Consumer+Wireless+Eng--Network+0909--coverage)
- ✓ Telus: http://www.telusmobility.com/en/MB/canada_travel/index.shtml
Manitoba's 4G coverage is now available in Steinbach, Selkirk, Sainte Anne, Lockport, Victoria Beach and Portage La Prairie.
- ✓ Wind: Currently, there is no coverage in Manitoba although there are plans for expansion.

b. Internet Accessibility:

A comparison between 2006 and 2011 detailing the increased use of computers on the farm in addition to the use of the internet in the business

<http://www29.statcan.gc.ca/ceag-web/eng/community-agriculture-profile-profil-agricole?geoId=460000000&selectedVarIds=285%2C284%2C283%2C>

NOTE: High-speed Internet access was reported by 43.1% of all farms in Manitoba compared to the national average of 44.8%.

c. Equipment:

-Details on all farming equipment on farms 2006-2011

<http://www29.statcan.gc.ca/ceag-web/eng/community-agriculture-profile-profil-agricole?geoId=460000000&selectedVarIds=323%2C312%2C313%2C285%2C284%2C283%2C>

-More detailed information on the different types of equipment on farms 2006-2011

<http://www29.statcan.gc.ca/ceag-web/eng/community-agriculture-profile-profil-agricole?geoId=460000000&selectedVarIds=318%2C319%2C316%2C317%2C314%2C315%2C308%2C285%2C310%2C320%2C284%2C309%2C311%2C321%2C283%2C>

7. Concluding Remarks

The Centre for Education and Work (CEW) received funding from the Workers' Compensation Board (WCB) for the project, "Technologies and Safety: Making Farms Safer". The objective of the project is to evaluate the potential usefulness of web-based and mobile electronic applications in assisting farmers in the development of safe farm plans, and training workers in safety procedures.

As detailed in this report, there is a need to encourage farmers to become more familiar with SWP. Despite the implementation of WCB regulations for employees and the need to pay premiums in January 2009, many have not complied with these regulations. Many were vaguely familiar with the requirements and frankly, didn't see the need to comply. However, to achieve change, a 'cultural' shift in attitude with respect to safety is needed. As seen in the surveys, from many farmers' perspectives, bad luck and lack of common sense is frequently cited as the reason for accidents. Many farmers react to tragic accidents in one of two extremes; the situation is either ignored and considered as 'bad luck' whereas in another case the family implemented SWP throughout the farm and is now fully compliant with all regulations.

Coupled with this attitude towards safety is the situation that many employees are frequently seasonal, transient and/or work on a part-time basis and therefore, farmers consider the investment in training in this group of employees as a waste of money. Several in the survey also cited second language issues as a problem and poor literacy skills amongst its workers. Added to this scenario is the very short growing season in Manitoba and the added time pressure when safety checks need to be undertaken, and farmers quickly dismisses the importance of safety. Several mentioned that 'time is money'. There is an air of skepticism amongst farmers, and as cited by one respondent,

"Because farming as a lifestyle seems so inextricably linked with farming as an occupation, and I'm doing things on a scale much smaller than those of most of my neighbours, I seldom stop to think about how my practices line up with those on more regulation-oriented farms with employees and bigger machinery. Because I grew up on a farm that was large enough in scale to be under the thumb of a governing body (though one not strictly related to farm safety), and have worked on other 'industrial-scale' farms, I have a general attitude of resentment towards those bodies that try to regulate on-farm activity, as I feel that operators tend to be more competent and knowledgeable in these matters than bureaucrats and researchers".

Several farmers also expressed concern about liability as follows...*"The app may cover owner in use of worker operator, what happens on the case that the list of hazards and uses are not complete and worker follows it and accident happens? Is it then owner liable? Seems like this just passes liability between farm owner and farm worker. Plus safety plan needs to be CONSTANTLY upgraded".*

In order to implement CEW's initiative a number of practical considerations also need to be considered. One farmer suggested to 'make [it] available for Blackberry as it is still [the] leader in "business" technology and another suggested to 'reconsider [the] approach, [as the] iPhone might not be the best angle'.

Other aspects are that high-speed Internet access is not readily available throughout the province and many facilities have metal roofs that cause problems with Internet conductivity. There is also the aspect of dexterity when wearing winter gloves and small mobile devices.

In conclusion, to implement a wide sweeping initiative as proposed by CEW will require a significant cultural shift in farmers' perception of safety. To further encourage compliance, many cited financial incentives as a means to cultivate this shift. These financial incentives could be in the form of either training subsidies for employees or rebates on premiums as a farm becomes more compliant with the regulations. Several cited the need to have the training materials in plain language and that pictures or access to materials that documented the process be readily available. While many expressed a sense of reluctance to implement this initiative on safety, there is a willingness to consider the approach and therefore, the attitude towards safety will shift from one of luck to one of a learned and practiced skill.

8. Bibliography

Websites

1. Accident Compensation Corporation of New Zealand: www.acc.co.nz
2. Agricultural Health and Safety (Iowa State): www.archive.abe.iastate.edu/safety
3. Agricultural Safety and Health Council of America: www.ashca.org
4. American Society of Safety Engineers: www.asse.org
5. Australian Centre for Agricultural Health and Safety: www.aghealth.org.au
6. Body of Knowledge: www.safetybok.org
7. Canadian Agricultural Safety Association: www.casa-acsa.ca
8. Canadian Agriculture Injury Reporting (CAIR):
www.cair-sbac.ca/welcome-english.html
9. Canadian Centre for Health and Safety in Agriculture:
www.cchsa-ccssma.usask.ca
10. Center for Disease Control/National Institute for Occupational Health and Safety (NIOSH): <http://www2a.cdc.gov/nioshtic-2/error.ASP?ErrorCode=1&ErrorDesc=&SearchString=>
11. European Agency for Health and Safety at Work: www.osha.europa.eu/en/
12. Farm and Ranch Safety Association (FARSHA) www.farsha.bc.ca
13. Farm Safety Association (FSA) www.farmsafety.ca
14. FarmSafe Australia: www.farmsafe.org.au
15. Health and Safety Authority: www.hsa.ie/eng/
16. Health and Safety Executive: www.hse.gov.uk/
17. Health and Safety Ontario: www.healthandsafetyontario.ca
18. Manitoba Government: www.gov.mb.ca/agriculture/
19. Manitoba Hydro: www.hydro.mb.ca
20. Prairie Agricultural Machinery Institute: www.pami.ca
21. Safe Manitoba: www.safemanitoba.com

Report

1. Youngdahl, D. (2012) Technologies and Safety: Making Farms Safer. On-Farm and Industry Research-Final Report. Submitted to Centre for Education and Work on October 12, 2012.

9. Appendices

1. On-Line Survey:

<https://cewca.wufoo.eu/forms/technologies-and-safety-making-farms-safer/>

2. In-person survey conducted with School of Agriculture Participants:

- Describe the current safety practices used on the farm.
- What safety practices are working and are not working well?
- What changes to the plan, if any, do you hope to make in the future?
- What are some of the barriers to working safely on the farm?
- What do you think it will take to get farmers to work more safely?
- Are you familiar with doing a job hazard analysis/business risk management plan?
- Are you comfortable using the Internet, iPhone and tablets?
- For what purpose do you use technology?
- How is technology used on the farm?
- Are you interested in using a digital media device (iPhone) to develop a business risk management plan on the farm?

APPENDIX C – Results from Manitoba Pilots

Survey Results

Question	Yes	No	Notes
Did you have enough information to complete the Safe Work Procedure form?	24		
Did you find the mobile app easy to use?	22	2	
Please let us know what additional information you might find helpful.			<p>I'm wondering if there is some way to sync the App to two different phones. Rather than keep all of the procedures on my phone, I would like to give my employees access to my account - what is the limit for number of phones that can be synced to one account? I'm also wondering why the safe work procedure is not able to be edited. I would like to create my own procedures based on the work we do here, so having this option would be helpful.</p> <p>Letting us know about how the Workers Compensation Board is involved would be helpful. As farmers, we are always trying to understand who knows what about our businesses - we don't like secrets</p>
Would you use the Safe Farms website and mobile app on your farm?	16	8	<p>Not enough employees coming on a regular basis on the farm to make it worth my time</p> <p>I would never hire someone who did not know these simple procedures. All of my employees are familiar with how to be safe before they are hired and so re-training them on these procedures is never necessary.</p> <p>I am concerned about the level of regulations being put on farmers, particularly small farms.</p>
Does the Safe Farms website and mobile app fit in with your farm's safety plan?	17	7	My employees are trained by me on a seasonal basis - each of them stay on the job for long enough to learn each of the activities over time

Question	Yes	No	Notes
Please let us know what we can improve on.			<p>It would be awesome to have some "ready to use" procedures so that each farmers doesn't have to create too many procedures. I'll use them if they are available, i'm not sure we'll use them if we have to write them. Plus we'll use them most on new machinery/situations, where we haven't got a good plan yet.</p> <p>The app should be able to be viewed horizontally on my iPhone so that the writing becomes bigger, similar to texting - this makes it easier to read.</p>
Which part and how can we improve?			<p>If would be a very nice feature if there was a way for us to upload our existing Safe Work Procedures onto the app in order to avoid a duplication of labor.</p> <p>It would be nice to be able to control the order of the way my employee views each of the procedures. The most important or hazardous procedures should be at the top because they might not want to read through all of them.</p> <p>the addition of pictures do changes to work procedures show automatically or does each mobile user need to be notified separately? will there an app for iPad to match iPhone?</p> <p>on the form in the field with the steps, it could be more structured to have "before", "during", and "after" sections with numbered points already set up; can a oversight organization create a library of SWPs that all farms can access and download?</p> <p>extra field titled regulations with built in link to drop down of provincial WCB/WorkSafe regulations (when farm ID is created, province gets selected) transferability of SWPs btwn orgs is key</p>

APPENDIX D – Results from BC

Safe Farms Project Report
14 Feb 14
Amy Campbell – Amethyst Campbell Consulting

The initial activity for my portion of the project was to research which organizations would be the best to contact to see if they would be interested in a demonstration of the SafeFarms app. Several were identified.

In early December, I contacted the [Farm and Ranch Safety and Health Association](#) (FARSHA) which is headquartered in Langley, and spoke with [Wendy Bennett](#), the Director of Programs. She was very interested in hearing about the app and recommended that I meet with their staff in January rather than before the Christmas break when everyone would be looking forward to holidays and possibly not as receptive to something new which might be forgotten by the time they returned to work in the new year. This was a good idea as it allowed for combining that meeting with a visit to the [University of the Fraser Valley \(UFV\) Agriculture department](#) during the winter term. I emailed Wendy the SafeFarms brochure and links to the video, and websites for SafeFarms and CEW. We agreed to set the meeting date once I contacted UFV.

In early January I contacted the UFV Agriculture department administrator and was given the email address for [Paul Gumphrich](#), the instructor for this term's Farm and Equipment Safety course. Paul was very excited to hear about the app and arrangements were made for me to come to the course on 21 Jan 14 and present the app to the students. The FARSHA meeting was then planned for the next day.

In the meantime, I contacted the Vancouver Island FARSHA field staff person, [Ken Lacroix](#), with contact information provided by Wendy Bennett. Ken and I had a lengthy telephone conversation, as he is located mid-Island in Nanaimo. He was very interested in the use of technology to meet such a need and was willing to contact one of the farmers he knew would be interested. He noted that he has two distinct groups of clientele – those farmers

who are very comfortable with technology and those who stay far away from it. He set up a meeting with one of his tech savvy farmers, [Ryan Vantreight](#) of [Vantreight Farms](#), a family farm that has been in operation since 1884 and which aims to be a leader in quality and innovation in the agriculture industry. As well as being the FARSHA field rep for the Island, Ken also teaches at Malaspina University and North Island College and he may share the app with his students.

Ryan, Ken and I met in Ryan's office on 15 Jan 14. I had forwarded to Ryan the email with the brochure and links in advance of the meeting and found that he had already created his account and put the app on his iPhone before I arrived. I provided background information on CEW and the creation of the SafeFarms app. We then spent a profitable time going through the creation of a Safe Work Procedure (SWP) relevant to his operation and then syncing it to his phone. He raised a lot of good questions while we went along, some of which we discovered the answers to as we worked through the process. Afterwards, I asked him to complete the feedback survey online and he observed that there was no place to comment on why he gave the number of stars he did. He gave 3 stars but would have preferred 3 ½ as he likes the app but sees lots of opportunity for improvement. He noted that dialogue boxes for comments appear only when selecting negative responses to questions and he wasn't answering those questions that way. It was only after he selected submit, that I got him to expand on what could be improved and the comments, which I submitted by email to John Luxford and Mirja Cole at the time, are also attached at the end of this report. Ryan gave me the contact information for his local WorkSafeBC Agricultural representative, [Dawn Lanson](#) and suggested that I contact her as he could see WorkSafeBC playing a role in the use of the app in BC.

I followed that up with an email and voice message to Dawn, requesting a meeting. We planned on meeting on 24 Jan 14. In the meantime, Dawn sent the information to her colleague [Anna Billingsley](#), the Occupational Safety Officer, Agriculture, in the WorkSafeBC Fraser Valley office, and sent me an email with her contact information while I was over on the mainland. I was able to set up a short notice meeting with Anna for the

early afternoon at a Langley Starbucks down the road from the FARSHA office as she was in the area at a meeting that morning.

On 21 Jan 14, I went to UFV to speak to the Farm and Equipment Safety course. The timing was excellent as the first half of the class was on Chain Saw operation. I started after the break and, after I played the SafeFarms video and gave a brief introduction, the class of 20 students created a SWP for Chain Saw Operation. I then showed them how it synced to my mobile device. This exercise helped reinforce the safety procedures they had just gone through outside with the chain saw and provided a knowledge check for the instructor. The class was comprised of young men and women who were already engaged in farming operations and very conversant with computers and mobile devices. One girl had the app downloaded to her iPhone before we were finished. As a class, we filled out the online feedback survey so I do not have a separate record of their comments.

On 22 Jan 14, I went to the FARSHA office and met with Wendy and 5 of her colleagues. I provided background information on CEW and played the SafeFarms video. We then created an SWP for harvesting cranberries with a beater as there had been recent safety incidents in the cranberry bogs. The time flew by and I was surprised that we had been meeting for 3 hours. As with the UFV class, all their collective feedback went into the online survey.

I then went to Starbucks to meet with Anna as the coffee shops provide the wifi connection necessary to do the demo. Anna was very interested and we had a thorough discussion, reviewing the SWPs created by the UFV and FARSHA folks. She then completed the online survey, but I was able to elicit further feedback after she completed that which I submitted by email at the time and which is also attached at the end of this report. She also mentioned another colleague who might be interested - [Doug Pasco](#) at WorkSafeBC's Richmond Office where he works for the Industry and Labour Services division. She suggested that he has some influence over funding and might be a possible source for a second phase to add uploadable content such as pictures, videos, and text files of SWPs that already exist (which would avoid extensive data input of existing text into the SWP

template). The next day, Anna emailed that she had spoken with Doug and that he would be happy to speak with me. She included his contact information for me to follow up with him.

Doug Pasco and I have been in contact by email several times to find a time to meet over the phone but that was interrupted when he went on sick leave for several days. We have been in touch since his return and he is still in the process of catching up on other work before he can schedule time with me. As I am going to the mainland on other business later this month, I will try and arrange a face to face meeting as I think that would be more beneficial, especially if he might have money to spend. I had the impression from Anna that his division might be the one that funds FARSHA but I do not have confirmation of that at this time.

The scheduled meeting with Dawn Ianson did not occur as planned as she was called away right before our meeting time to a family emergency. She has just returned to work this week and we are trying to reschedule. While she was making a site visit to Ryan Vantreight's farm in late January, he showed her the app so he evidently finds it useful. She suggested that she might have information from Ryan and that perhaps we did not need to meet but I have asked her to try and fit me in as I felt it important to get her feedback directly for the benefit of the project and she seems amenable to finding a time that works.

I also contacted the Horticulture Centre of the Pacific as they run a horticulture college as well as display gardens. I sent emails to both the head gardener and the college director and was following up with voice messages when I reached the college administrative assistant who was interested and who invited me to come and meet the next week. As we spoke, she told me that the head gardener is very anti-technology and that the college students were not allowed to use their phones while at the college. I sent her the brochure and the weblinks and several days later she replied that they were not interested in a meeting at this time, again reiterating that the students were not allowed the use of their phones. I replied that if in the future they changed their minds, I could speak with them

about it, and that the SafeFarms SWP template could still be used to show due diligence and create SWPs that could be printed and displayed in key locations on the property without focusing on the technology side.

In summary, the SafeFarms app has been received positively. However, there have been several common threads of concern. First is that the addition of pictures and videos would be extremely helpful, especially as there are numerous languages spoken amongst farm workers in BC and a picture is said to speak a thousand words and does not need translation. Secondly, there is a huge time commitment in having someone input procedures directly into the template, especially if those procedures already exist in another text form, such as pdf. If it is possible to create a central library of common SWPs that individual farms could download and then adjust to their particular circumstances, the app would be more immediately usable. The libraries would have to be organized along provincial lines as the regulations differ from one province to the next. Someone along the way, perhaps one of the FARSHA staff, envisioned being able to register their farm by province and then a library of standardized SWPs for their jurisdiction would be available to that farm id to download. Thirdly, there is concern that websites come and go and if the effort is to be made to create SWPs, the expectation is there that they would be available well into the future.

Thank you for the opportunity to participate in this project. I found it very interesting and hope that funding can be achieved for a second phase to address the areas for improvement.

Respectfully submitted

Amy Campbell

Further Feedback beyond what was captured in the online surveys

Further Feedback from the meeting with Ryan Vantreight and Ken Lacroix, 15 Jan 14:
Ryan would have rated the app with 3 1/2 stars but that wasn't a choice. He felt it was better than a 3 but had potential for much improvement. What would make it better for him, would be the option to upload files, such as photos and videos of the equipment and/or procedures, as well as pdf files that already exist for some safety procedures. Input time is probably the biggest barrier and he felt that some of the info already existed and he wouldn't want to reinvent the wheel if he could attach that info to the SWPs. Also, how will the website survive long term - what if all this info gets captured and the website disappears one day - only items that were printed would remain.

He and Ken Lacroix from FARSHA and I tossed around some more ideas. I need to contact the WorkSafeBC agriculture rep because the guys would love to see someone there use the app to create a number of common SWPs that could then be easily tweaked by individual farms.

He also has a lot of similar procedures with specific differences, such as deliveries from different types of vehicles. He can see the possibilities of creating different SWPs for each delivery vehicle so that the person driving the van does not have to read through the safety info for the person using the loading dock for example.

That raises the question of how to group SWPs so that everyone's mobile device doesn't get overloaded with the SWPs they don't need.

Could a farm create multiple farm IDs to allow all the workers in a specific area to sync the SWPs for that part of the operation while workers in another area get only theirs?

Ryan's feedback form was based on his first impressions and we did work through more issues after that, as noted above. One that we figured out on our own was the security

issue - once he created an SWP with his login, the mobile app only accessed the info by Farm ID so the workers could not change the document but just sync it to their device.

Contact info: Ryan Vantreight - ryan@daffodil.com and Ken Lacroix - Regional Safety Consultant for FARSHA - kglacroix@shaw.ca

Further feedback from meeting with Anna Billingsley, WorkSafeBC, 22 Jan 14:

After she submitted her feedback form, she gave me more info on possible improvements. She suggested having a forum for discussion on the safe farms site where farmers could share their ideas for safety practices. She is a horse person and suggested looking at the [BC Horse Council forums](#) as a model as the [Rodeos classifieds forum](#). She also agrees that pictures and videos to go with the text, esp with the language issues of farm labourers, would really help. The next common comment is around sharing SWPs amongst farms and safety organizations.

Contact info: Anna Billingsley - Occ Safety Officer for Agriculture – anna.billingsley@worksafebc.com

APPENDIX E – Results from Alberta

February 2, 2014
Nancy Steel, Workforce Education Consulting

From Late November 2013 - January 2014, Nancy made contact with several organizations, three of which wished to learn about the SafeFarms Safe Work Procedure template to explore its application to their context.

Alberta Rural Development Network, Sherwood Park, Alberta

On December 9, Nancy spoke by telephone with Melissa St. Denis, Communications Manager with the Alberta Rural Development Network (ARDN) <http://www.ardn.ca/home/>, whose purpose is to create connections with the rural community through education.

First, we visited the CEW website so that I could acquaint her with the Centre for Education and Work, and the SafeFarms video. We then went to the SafeFarms website for a detailed overview of the tool. She created an account so that she could see the blank template that users would complete using the samples as guides. She was very impressed because she believes that farm procedures are typically not documented, and this template provides a vehicle for that to happen.

She mentioned that she intended to demonstrate the tool to ADNR's Executive Director and Research Manager. I asked if perhaps CEW might partner with ADNR to offer a workshop to ADNR members, but unfortunately the ADNR had other, pressing public presentations on its slate. Melissa did suggest that she might write an article describing the SafeFarms project and Safe Work Procedure template. Please see a copy of that article, attached. Melissa also offered to introduce me to Toby Williams, an instructor at Olds College, who she thought may agree to have the template demonstrated to a class. After this conversation, Nancy provided an email update to Mirja Cole, CEW.

Olds College, Olds, Alberta

On December 13, Toby Williams wrote to Nancy "Thanks for the introduction! Nancy, one of things I do at Olds College is International Development along with my colleague Pablo Ortiz. Every year, we have students from Mexico and Japan who attend Olds College for the winter term and then do a work place practicum for 4 months in the summer. Before they go out to their practicum, we provide training on farm safety. Your program could be a good solution for us so I would definitely like to talk to you. I have some time Wednesday morning (the 18th). Does that work for you?" (Toby is the Director of Entrepreneurship and International Development at Olds College.)

We had a telephone conversation on December 18th, and she invited her colleague, Pablo to join us. Pablo is responsible for the Mexican and Japanese students when they arrive for the winter term and summer practicum. As I had done with Melissa, I toured them around the CEW and SafeFarms website. Toby mentioned that every instructor and student at Olds College must have an iPad, and so that a SafeFarms application for iPad would be a valuable asset. She also proposed that she speak to instructors in the new year to see if any were interested in having a presentation made to one of the agriculture classes, and suggested I follow up with her in January. Nancy provided an email update to Mirja after the telephone conversation.

Literacy for Life Foundation

On January 2, I visited Literacy for Life Foundation (High River) to showcase the Safefarms video on cewca.org site, and the Safefarms site. I chose to visit this organization because they have, for many years, been interested in learning about and using CEW tools, and because they have great connections to the rural organizations in the High River region.

I had arranged to meet with the Executive Director, Sue Steigmeier but as good fortune would have it, her Executive Assistant was there too, and very interested in learning about SafeFarms because she and her husband are farmers. She heartily agreed that typically there is no documentation regarding farm operations in place, learning farm operation and equipment is strictly a show and do affair, especially in small farming operations.

As before, we first toured the CEW website, then the SafeFarms website. She wanted to review all of the samples because she knows all of those operations. One of her comments:

"Okay this applies to me, personally. I have been nagging my husband to write down the instructions for operating the hay baler." She tells him that yes, when he is there, she is confident operating it. But when he is not there, she lacks the confidence to do it alone - but want to be able to do it alone as sometimes her husband is away for a week at a time, especially in the fall during hunting season. "Now", she said, "I am going to sit down with him and we are going to work through the hay baler operation using this SWP tool". (And yes, she created an account to be able to do so). She wanted to try out the tool then and there for a "Building a Barn" procedure, but just didn't have the time that morning.

She did, however, have further comments to offer:

"This is great to have these in a binder because if you haven't done an operation in a while, you assume you know it all, but a reminder would be a good cautionary measure."

And finally, she suggested that Farm Insurance companies might be very interested in a) video, b) the tool. Perhaps they would use it at the time that someone makes an application for insurance.

What Literacy for Life is planning to do is look to see if any of their farm contacts would be interested in a workshop. The EA said she feels very confident that she could facilitate such a workshop - as a farmer talking to farmers. They are also thinking they might ask to be on the agenda of a couple of farming associations' meetings to showcase the tool.

I have told them that at any time they require support for such activities, to give me a call and I would put them in touch with you.

Conclusion

I followed up with Olds College in January, as suggested, however have not had a reply from Toby about conducting a demonstration in January, before SafeFarms project end. If she should request one in the terms when the International students are there, I will be in touch and let you know. I would be happy to make arrangements for the demonstration.

APPENDIX F - Article with ARDN – Rural Connector



A Step Towards Safer Farms

By Melissa St. Dennis

The Workers Compensation Board (WCB) wants more farmers to practice due diligence when it comes to preventing incidents on the farm. So, it's probably a good idea for farmers or anyone in the realm of agriculture to enhance their workplace safety and health practices. Why? Well, the Canadian Agriculture Injury Surveillance Program reported that "agriculture is one of the country's most hazardous industries," and in Manitoba in 2006, a WCB report stated that the most severe incidents and fatalities are in agriculture.

In 2011, the [Centre for Education and Work \(CEW\)](#), a Manitoba-based organization that creates curricula and digital resources for adult learners, received funding from WCB for a project called [Technology and Safety: Making Farm Families Safer](#). From that project, a tool was created that can help farmers and others working in agriculture understand, identify, and manage workplace hazards – [Safe Farms](#).

The tool, which is completely free, is a template for creating Safe Work Procedures for farm work. Individuals create their own account by logging in on their personal computer, create their own safe work procedures then once they have uploaded the Safe Farms app to their iPhone or android device, they can access their customized information from anywhere without the need of internet connection.

Using the tool is simple. Starting at a personal computer, anyone can sign up online for a free account. Once the safe work plan template is open, the farmer then goes through each step of performing a specific task, such as vaccinating a cow. In documenting the steps to a specific task and creating the safe work procedure it may enable or help the farmer identify any hazards present. For some workers, when repeating a certain task several times over a long period, the worker may miss certain steps, which may then result in hazards being undetected. Once the form is completed the farmer has formally demonstrated his or her due diligence and may be able to use the documentation in compliance with occupations safety and health regulations. It's a win-win!

According to a video about the Technology and Safety project, the CEW wants to help change safety behaviours and improve safety practices on farms and in agricultural settings. The Safe Farms tool is a step away from letting ourselves do our work automatically towards a more clinical and analytical approach. It's an approach that the CEW hopes will result in safer workplaces in agriculture.

Learn more at www.safefarms.ca.

Short, 30 minute, demonstrations of the Safe Farms tool are possible. If you're interested please [contact Melissa](#) for details.

APPENDIX G – CEW eNewsletters and Blogs, How to's and Media Release

**SAFE FARMS**

TECHNOLOGIES AND SAFETY NEWSLETTER
MAKING FARM FAMILIES SAFER SEPTEMBER 2012

PARTICIPATE IN FARM SAFETY | ASSESSING AND MANAGING KEY AREAS OF RISK USING THE SAFE FARMS MOBILE APP

The Centre for Education and Work (CEW) is working with farmers, like you, to develop a new electronic resource to identify and manage potential farming hazards.

This resource is a Risk Assessment Tool that will be within your reach through a mobile application or 'App' that you can easily access. It's called *Farm Safe*.



In 2006, Stats Canada reported that 75% of Canadian farmers, who use the Internet, use it to make decisions related to their farm business—and these numbers are growing as high-speed becomes more accessible to rural communities. These days, farmers are no strangers to using technology, such as new equipment, GPS, and online banking, to make their lives easier.

You, your family and employees will be able to prevent potential Key Areas of Risk while on the job, such as hitching equipment, handling pesticides, grain storage and more. Use the web, your iPhone, iPad and Android-based devices to access the steps to preventing an injury on your farm.

Gone are the days of worrying about how your new field hand is doing with their daily tasks—The new Farmer App will make life easier and safer for you and all involved.

You can also use the App to share your skill of recognizing potential safety hazards with your young family members. Together we can ensure that the steps to solve these potential risks will be at their fingertips when you're not around.

Visit our YouTube video, *Technologies and Safety—Making Farm Families Safer*
http://www.youtube.com/watch?v=4qRyE-jVGVI&list=UUIHSc8sDiCDOxOnV_fEXeL7w&index=8&feature=plcp

WE NEED YOUR INPUT!

Manitoban farmers can get involved in two ways—

Complete our online survey
OR
Participate in an interview and receive a \$25 VISA gift card.

All participants will have their name entered to win a FREE iPad!

To fill out the survey, go to:
<https://cewca.wufoo.eu/forms/technologies-and-safety--making-farms-safer/>

For more information or to schedule an interview, contact (204) 989-7140 or email at info@cewca.org

DID YOU KNOW?

Agriculture is one of Canada's most dangerous industries?

Assessing your farm regularly for potential hazards could prevent injury to your family and workers!

SURVEY QUESTION TO AGRICULTURE STUDENTS AT THE UNIVERSITY OF MANITOBA PRESENTED AN INTERESTING RESPONSE.

Q: What do you think it will take to get farmers to work more safely?

A: An accident.

CEW wants to help you prevent this response from becoming a reality. Contact us to find out how you can help!

CENTRE FOR EDUCATION AND WORK

www.cewca.org | info@cewca.org | 204-989-7140

THE UNIVERSITY OF MANITOBA

Farm and Food Discovery Centre Tour

For the past few months, the CEW team and Advisory Committee members of the Technology and Safety: Making Farms Safer project have been meeting regularly to exchange ideas for our new online tool—*The Farm Safe Mobile App*.

Lorrie Koroscil, an instructor in the [Agriculture Diploma program](#) at the University of Manitoba, teaches an elective course called Safe Farm Plan. In this course, she is teaching thirty students how to learn the key concepts and tools for creating a farm safety plan. In February 2013, the CEW staff delivered a presentation of our online tool to Koroscil and her students.

As a result, Koroscil has incorporated CEW's prototype of the *Farm Safe* tool into her curriculum. The online tool will aid farmers in developing Standard Operating Procedures (SOPs) and recognizing the hazards associated with performing various farming tasks.

This partnership is a win-win situation because the students get to use the online tool for their course work and the CEW receives feedback to help make the tool even better!

Earlier this week, three CEW staff members along with various representatives from the agriculture industry, including Health and Safety, attended an Advisory Committee meeting at the [Bruce D. Campbell Farm and Food Discovery Centre](#). They met to discuss the project's status, future testing opportunities, and follow-up on the latest student feedback.

In the afternoon, the group bundled up for a complete tour of the [Farm and Food Discovery Centre](#). During the tour, they saw everything the centre had to offer, such as interactive displays, various livestock and the amazing feed mill on site.

Take a moment to look at the pictures from their tour!



Image: Outside of Farm and Food Discovery Centre



Image: (left to right) Mirja Cole - CEW, Lorrie Koroscil - U of M, Carlos Pereira - WCB, Michael Stuski - U of M, John Luxford - CEW, Rachael Hosein - CEW



And what farm tour would be complete without visiting our animal friends?

If this project interests you, please subscribe to our blog to receive instant updates to your email!

JOIN US FOR OUR SAFE FARMS LAUNCH!

DATE: WEDNESDAY, JANUARY 15TH, 2014 | TIME: 10:00AM - 11:30AM
VENUE: GOVERNING BOARD ROOM - WINNIPEG TECHNICAL COLLEGE 130 HENLOW BAY, WINNIPEG, MB.

The Safe Farms website and mobile app gives you the tools you need to create effective safety and health training materials for your farm.

- Learn about the origins of the project, it's purpose, and outcomes.
- See a demonstration of the online tool and app that has been created to assist farms to develop a safe farm system.
- Let the CEW staff assist you in uploading the app to your device to access your own safe work procedures.

PLEASE R.S.V.P. BY JANUARY 8TH, 2014 TO KATY WINTERFLOOD - KWINTERFLOOD@CEWCA.ORG | (204) 989-7140



SAFE FARMS

SPOT THE HAZARD
ASSESS THE RISK
FIND A SAFER WAY
EVERYDAY

FOR MORE INFORMATION VISIT WWW.SADEFARMS.CA
OR CONTACT INFO@CEWCA.ORG | (204) 989-7140



SAFE FARMS

SPOT THE HAZARD
ASSESS THE RISK
FIND A SAFER WAY
EVERYDAY

MAKING YOUR FARM SAFER

Thank you for participating in the Safe Farms project!

SafeFarms.ca gives you the tools you need to create effective safety and training materials for your farm.

As farms change with new technology and workers, documenting safety practices becomes an important way to ensure your farm and your employees are protected.

WHAT WE OFFER

- An easy-to-use tool to create Safe Work Procedures from any web browser
- Printable job aids to post in key areas around your farm
- A free app for iPhone and Android smart phones to access training and safety info from anywhere, even when you're outside of cell phone range
- Sample materials to help you get started

BENEFITS

- Help your employees work more safely and efficiently
- Improve your training process
- Access training info from anywhere on your smart phone
- Give your employees access to training info on their phones
- Demonstrate due diligence
- Save time on your Canada Farm Safe plan

SETTING UP YOUR SAFE FARMS ACCOUNT IS EASY!

Follow the steps below and start improving the safety of your farm.

1. Go to SafeFarms.ca to set up your Safe Farms account.



SCAN THIS CODE WITH YOUR MOBILE
DEVICE TO GO TO THE SAFE FARMS WEBSITE

2. Create Safe Work Procedures for any job on your farm using the SWP creator.
3. Download the mobile app to your smart phone.
4. Sync the mobile app to your Safe Farms account to access your SWPs anywhere at any time.

WE APPRECIATE YOUR FEEDBACK!

Once you have had a chance to try out the Safe Farms website and mobile app, please visit: <https://cewca.wufoo.eu/forms/safe-farms-feedback/> to complete a short feedback survey.

SafeFarms.ca was developed with and tested by Canadian farmers.

For more information visit SafeFarms.ca or contact The Centre for Education and Work - (204) 989-7140 | info@cewca.org.



*New high-tech tools put safety first for Manitoba farmers
anytime, anywhere*

January 14, 2014 – Working on a farm is risky business. The agriculture industry posted more than 481 workplace-related incidents in 2013, resulting in 224 time loss injuries and incalculable hardship for workers and their families. The statistics are daunting, however a new, high-tech tool kit created by Winnipeg’s Centre for Education and Work (CEW), in collaboration with the Workers Compensation Board of Manitoba (WCB), aims to put practical, industry-specific safety and health resources in the hands of farmers whenever, and wherever they need it.

“It shouldn’t take an incident to improve safety on Manitoba farms,” said Robin Millar, CEW Executive Director. “The tool we’re introducing today meets a real need, giving farmers vital information on site, at any moment.”

The Safe Farms tool is a wealth of information for farmers to assist them in the development of effective safety and health training materials for their farms. Using a computer to customize their safe work procedures, individuals can then conveniently access their own information via iPhone or Android-based devices.

“One of the things that’s truly great about the Safe Farms initiative is that the information is applicable no matter what type of farm you run,” says WCB Communications Director, Warren Preece. “From here we can branch out into specific areas of practice, further enhancing the tools. There’s nothing like it out there; the project has tremendous potential.”

The Safe Farms mobile app is a highlight of the package, and can be downloaded from the safefarms.ca website. Local farmers will test the app between October 2013 and January 2014. At the same time, it’s being demonstrated to key stakeholders at post-secondary programs in Manitoba, Alberta and BC, and at agriculturally-related events, including AG Days in Brandon, Manitoba in January. Results to date are extremely positive, and indicate that having the right resources available at the right time is a significant advantage.

“The difficulty with most farm safety training is it takes you off the land, which is costly and stressful, and it’s not practical to carry binders of information with you out into the field,” says Lorrie Korocil, an instructor in the Agriculture Diploma program at the U of M. “The app is ideal because it’s all right there at the farmer’s fingertips at the exact time it’s needed. You can even access information when you’re outside of cell phone range.”

Other key advantages to the app include printable job aids to post in key areas around the farm, the ability to share access to training material with farm workers and to begin teaching children on the farm how to be safe around equipment and other potential hazards.

To access the Safefarms tools, visit www.safefarms.ca

Attend the launch event for the Safe Farms tools on **Wednesday January 15, 2014** at Winnipeg Technical College Governing Board Room from 10:00 a.m. to 11:30 a.m. Representatives from the WCB, the CEW and members of the agricultural community will be on hand.

For more information, or to arrange an interview, contact: Anne Bennett CEW Cell: 204-781-336

