

Rural Firefighters Delivering Agriculture Safety and Health Training Manual



**AMERICA'S TWO MOST
ADMIRIED PROFESSIONS.
SEPARATE NO MORE.**

First Edition



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SEPARATE NO MORE.

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Foreword

The RF-DASH program is made possible by the many individuals and organizations that have dedicated their time and expertise to making what the program has become today. The program originally started out in Central Wisconsin and now has trained emergency responders in over ten states and five provinces in Canada. This dedication and commitment to serving the agricultural community and preventing injuries and fatalities on farms is made possible because of you.

Special thanks to our partners for making this program possible: Centers for Disease Control and Prevention (CDC), Marshfield Clinic Research Institute, National Farm Medicine Center (NFMC), Upper Midwest Agricultural Safety and Health Center (UMASH) and the rural emergency responders that deliver agriculture safety and health throughout our rural communities.

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About RF-DASH

Some farm. Some show up when you call 911. Some do both. But no matter who you are in rural life, you play a role in making it safer. Rural Firefighters Delivering Agriculture Safety and Health (RF-DASH) is bringing together farmers and emergency responders for a big job: **reducing agricultural incidents throughout our rural communities.** Connecting farmers with their local emergency service teams, RF-DASH is designed to give the community peace of mind by building trust and sharing access to necessary tools and knowledge to reduce injuries and fatalities to those that live and work in agriculture and respond to emergencies throughout our rural communities.

RF-DASH was developed out of the question, “what influential people

around farmers (insurance agents, bankers, etc.) can be targets of agricultural health and safety interventions?” This led the research team at the National Farm Medicine Center and the Upper Midwest Agriculture Safety and Health Center to begin piecing together a list of various resources and community members that farmers would listen and trust when it comes to making changes regarding health and safety on their farms and ranches. Farmer’s first choice was family and friends. However, right behind them was firefighters and EMS throughout their local communities. This led to the development of the Rural Firefighters Delivering Agriculture Safety



and Health (RF-DASH) program.

We partner with institutions that offer industry-leading tools and technology to help achieve the goal of increasing farm safety. This training manual will serve as a guide to help you train others in the RF-DASH program. Similar to the in-person trainings, this manual will walk you through the five modules of the RF-DASH program, how to conduct a training and farm visit, tips on talking to the media about a agricultural incident, and much more. The curriculum and information is led by industry leading experts ranging from a wide variety of background in Fire/EMS, occupational medicine, research, and agricultural health and safety specialists.

The majority of the nation's fire

departments are volunteer and cover a vast amount of agricultural operations in the U.S. We want you to be the advocate for the program and expand its reach to others in your community, and be the rural firefighter that delivers agriculture safety and health.

RF-DASH and NFPA Standards

The National Fire Protection Association (NFPA) is an international, nonprofit organization that focuses on mitigating injuries, fatalities, and property damage (NFPA.org). The NFPA develops standards that provide best practices and guidance on how to prepare, mitigate risk, and approach an emergency in a multitude of environments and emergencies, including agriculture. These standards are considered by many first responders as the ‘bible’ of the fire department and allow them to stay up to date and maintain their training and preparedness.

The Rural Firefighters Delivering Agriculture Safety and Health program has been acknowledged by NFPA committee members and editors as being in line with many NFPA standards, specifically the 1300 standard *Community Risk Assessment and Community Risk Reduction Plan Development* and the 1670 standard *Operations and Training for Technical Search and Rescue Incidents*.

The RF-DASH program does not cover everything within these standards, but the program will help your rural department remain knowledgeable on how to prevent and reduce risk of injury to those involved in agriculture, as well as keeping your personnel safe.

A photograph showing emergency responders in full gear, including helmets and reflective vests, working at an agricultural emergency scene. They are gathered around a patient on a stretcher. In the background, there is a white ambulance with its rear doors open, a blue tractor, and a red tractor with a "KNIGHT" logo. The scene is outdoors on a paved area with a field and trees in the distance under a clear sky.

Module 1 Introduction to Agricultural Emergencies

Goals

- To raise awareness to first responders about the many hazards that can be found on farms.
- Identify ways to better prepare for, respond to, and manage on-farm emergencies
- Understand the importance of a well-coordinated Incident Command System (ICS)

The Agricultural Industry

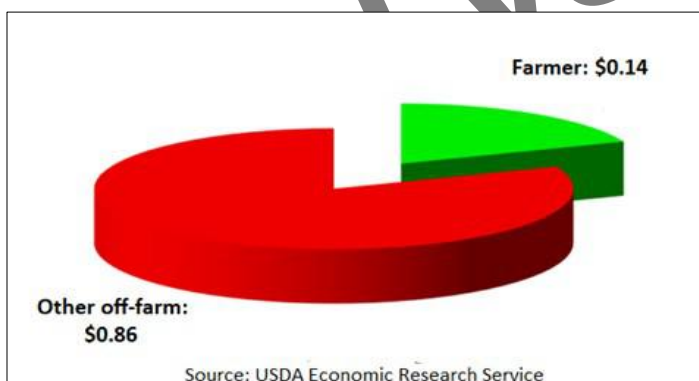
The Agricultural, Forestry, Fishing and Hunting (AFF) industry ranks as one of the most dangerous industries across the Nation. Within this industry, the production agriculture sectors (Crops, Animals, Support Services) make up the majority of work-related fatalities and serious injuries. There are a wide variety of hazards that farmers, ranchers, employees, and first responders could be exposed to. Emergencies occurring at an on-farm or on-ranch setting can pose unique challenges for first responders who would be summoned for help. Because of this uniqueness, it will be important to understand the importance of pre-planning and become familiar with farm/ranch facilities local within your area. Pre-planning provides the opportunity for farmers/ranchers and firefighters to become acquainted and share thoughts on safety and prevention efforts.

The production agriculture sector serves a vital role in local economies. The commodities that are produced in

farming and ranching are often easily thought of, however it extends much further than that. Farms and ranches require numerous supplies to keep the operation running such as equipment, land, parts, fuels, and employees to name a few. This cash flow is extremely important for keeping the economy in good standing. Commodities produced can also influence how other parts of the market perform, such as the availability of products such as Corn or Soybean. An excellent resource to find local statistics is the Census of Agriculture's State Data. To maintain this success, farmers/ranchers must have a well-rounded operation that is both efficient and safe. If a farmer, ranch operator, or their employees, gets injured or killed, there is potential for that incident to significantly impact the economy. In some cases, a farm/ranch could go out of business with a significant loss of property or a fatality. Bringing farmers/ranchers and first responders together is a great way to take a proactive approach to safety for both groups.

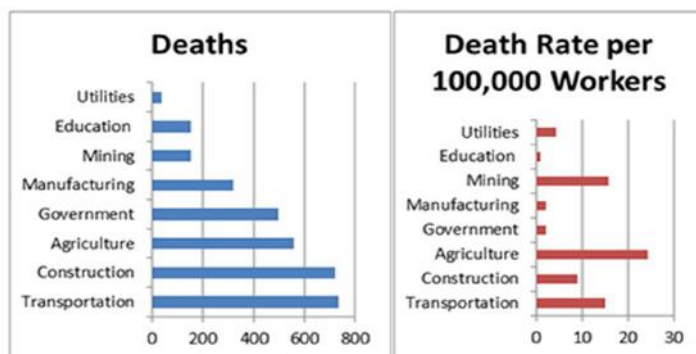
Technology, Regulation, and Major Hazard Areas Commitment

Other aspects for farmers/ranchers to achieve a successful operation include remaining up to date with new technology and complying with regulations set forth by governing agencies. These practices are intended to protect the agricultural operators and local communities that surround the farm/ranch. Unfortunately, some of these regulations make it more difficult, and at times costly, to perform work tasks and remain in business. Other challenges for farmers/ranchers can be found in nearly every grocery store. Consumers of food products expect to have a readily available supply of excellent quality food at a fair price. Additionally, movements within the food industry such as non-GMO or pesticide free can greatly influence agricultural operations. With the continuous demand for food, it's assumed that farmer/ranchers make an abundance of money by selling their products. According to the 2012 USDA Economic Research Service, only 14 cents of each food dollar spent returns to farmers/ranchers. The remaining amount is shared between the processing, packaging, marketing,



and delivery of the product to consumers. Regardless of these challenges, farm and ranch owners are committed to fulfilling their job 24/7/365. Many operations have been family owned for generations, which gives yet another incentive to work through long hours and tough conditions. As with any self-owned business, these working conditions can expose operators to more hazards and lead to more risky behavior. It's important to remind farmers/ranchers and employees not to become complacent to hazards that surround them.

As we have already established, there are many hazards that can be found on farms and ranches that lead to serious injury or fatality. The AFF Industry consistently has one of the highest rates of death per 100,000 workers. The most common causes of serious injuries and fatalities results from incidents involving tractors and machinery or



animals. It is important to remember that if first responders receive an emergency call from a farm/ranch, expect it to be a significant incident. Many times, operators will try to "fix" a situation on their own before calling for help. Pre-panning farm/ranch facilities can greatly aid in preventing an incident from occurring and provide valuable information to first responders. By starting this conversation, the first responder will have a better idea of what types of injuries to expect and how to treat them effectively to provide a better outcome for the patient. Another uniqueness more common to farm emergencies is the duration the event has happened before being discovered. This extended period of time will affect how patient care is provided. An excellent example of this is Crush Injury Syndrome, which can develop after a body part has been constricted for an extended period of time. Understanding the proper procedures to treat this condition before attempting to remove the weight will lessen the chances of causing further harm or death.



Tractor and Machinery

Tractors and machinery continue to rank as one of the leading causes of fatalities on farms and ranches. If you visit any farm/ranch, you are likely to find a variety of tractors and machinery that range in age and condition that are used to complete daily work tasks. Tractors can be used in many ways such as:

- Pulling powered equipment (balers, mowers, tillage, manure spreaders, etc.)
- Transporting equipment and products on roadways
- Stationary power source for on-farm operations (Silage blower, grain auger, manure pumping, etc.)

Tractor incidents are typically categorized into three areas; Roll overs, Run overs, and Entanglement. Tractors can overturn to the side or rear. The side roll over is the most common, whereas the rear rollover is the most fatal. Entanglements can occur on both tractors and machinery when a person becomes caught on a rotating component such as a Power Take Off (PTO) shaft.

Machinery types can vary depending on the type of farm/ranch you visit. It is important to note that machinery and tractors are designed very robust in order to operate in tough environments. These machines will not stop for a person, nor can a person react fast enough to avoid an incident from occurring. Utilizing proper shut down procedures and Lock Out / Tag Out is a must. Special consideration should be given to the size, weight, and strength of the equipment compared to the tools and resources carried on the Rescue truck. During the Pre-planning phase is the best time to identify additional resources you may need to request during an emergency. Other farmers/ranchers, tow truck, and other local fire departments can offer valuable support.

Discussing an example of an incident is an excellent way to start considering resources and challenges. The following image is of a tractor overturn incident. Discussion topics and questions can include:

- Scene size up
- Hazard identification

- Is the tractor and/or implement running?
- Additional resources
- Time of day, both from a discovery and response point of view



Animals

Animals can pose another serious challenge for first responders. Many first responders are not familiar with farm/ranch animals and very few are familiar with various types. First responders must be able to request assistance from people trained and knowledgeable about the specific animal species in question. Animals are responsible for a large number of injuries that occur on farms and ranches. Kicking, biting, and crushing injuries can occur in areas where people and animals interact. Scene safety will need to be a priority to protect emergency response personnel. Animals can be found in other emergency scenes such as a vehicle accident involving animal transport vehicle or fires that occur in animal housing facilities. Each will have hazards specific to the incident, but some common practice can be implemented to prevent the incident from becoming worse. Avoid the use of loud sirens, horns, and excessive flashing lights when arriving on-scene of an emergency involving animals. These conditions can add further stress to the animal along with whatever excitement is occurring from the emergency itself. Animals that are placed in high stress environments will react much differently than they normally would.

Word from the Field

"They've got millions of dollars tied up in their operation, so we got to treat them like a business. Let's take care of them so if they do have an accident or a fire we can help them get back on their feet. At least mitigate it quickly and with as little damage as we can and life safety, of course, is always the important thing."

-RF-DASH Trainee

Pre-planning animal facilities will aid responders in what actions to take if responding to a structure fire. In some instances, animals may not have ever left the vicinity of the structure. During a barn fire, it is not uncommon for animals to be reluctant to leave or even run back into the structure after they have been evaluated. Others may spend most of their time at pasture and will be more willing to be moved. Regardless of the circumstances, starting the conversation with the farm/ranch owner before the emergency will increase preparedness.

Chemicals

Chemicals represent another hazard area that can be found on farms/ranches. These are used to control a host of agents such as:

- Herbicides to control weeds
- Insecticides to control insects
- Fungicides to control fungus
- Germicides to control germs
- Algaecides to control algae

A little bit of information can go a long way. You will not need to know every farm/ranch chemical in creation, however being able to identify what the use is and where to obtain additional information will be extremely valuable. The type of agricultural operation you visit may give an indication on what type of chemical to expect. Crop farms may have fertilizers, pesticides, herbicides, etc. whereas a Dairy farm may additionally have chemicals for sanitization. Chemical storage can vary widely across these operations. Some may be neatly organized in a well-labeled building, while others could be in a makeshift shed. An important question to consider in colder environments is, where are the chemicals stored to prevent freezing? Chemicals stored on farms/ranches are typically in a concentrated form, meaning that it is at full strength and has not been diluted for application. Hazmat training should be referenced if responding to a suspected farm/ranch chemical emergency. Utilize best practices of staying upwind and out of the product while attempting to identify the product. The best source of information can be found on the containers label which can provide details on first aid and contact for the company. Most first responders are familiar with the Emergency Response Guidebook (ERG) however this will not be a great resource when dealing with farm chemicals.



Instead, an online resource called greenbook.net will provide users with the product label and Safety Data Sheet (SDS). The picture shown above is an example of chemicals being stored on a farm. These situations may occur a longer duration after the exposure, but first responders must not overlook this possibility. This should be noted during a pre-plan farm/ranch visit.

Structures

Farms and ranches have a tremendous number of structures which have unique hazards associated with them. Some of these can be extremely dangerous during certain times and will require a good understanding to identify and safely work around these hazards. Some of these structures will meet the definition of a confined space and must be treated by first responders as such. Lock Out Tag Out and air monitoring is a must when dealing with a confined space. A confined space is defined as the following:

Confined Space:

- *Large enough for somebody to enter*
- *Limited means of access or egress*
- *Not designed for continuous occupancy*



Silos

Silos are constructed for storing silage that will be used for feeding animals (Figure 5). Silos can be extremely dangerous at certain times of the year, and some require entry quite often to operate correctly. Conventional silos require a person to enter and set the unloading equipment to operate correctly and periodically after unloading begins until the silo is emptied. Sealed silos, on the other hand, are designed to keep Oxygen out in order to store the feed. Sealed silos should not be entered. Regardless of the silo type, once the silage is placed in the silo it will start to go through the fermentation process. This process usually lasts approximately 2 weeks and produces Nitrogen Dioxide which is extremely dangerous to humans and livestock.

Grain Bin

Grain Bins are large, circular, metal structures designed for storing and possibly drying grain once it is harvested from the fields. Entry into bins is not routine but does occur. Grain bins with grain inside present hazards such as entrapment and engulfment. Grain that is out of condition or if a person enters with the unloading equipment turned on can lead to these incidents occurring. Occasionally a grain bin may need to be fumigated to treat for unwanted pests that can degrade grain quality. This will be important info to gather during a visit.

Milk Bulk Tanks

A milk bulk tank is used to store milk before it is picked up by the truck for transport. Milk bulk tanks typically do not need to be entered; however, they do meet the definition of a confined space. To keep the tank clean and sanitary, strong cleaners and detergents are used. If a person is inside, it is possible for them to be overcome. During a visit, discuss with personnel how a rescue may be performed with available resources.



Manure Storage

At any agricultural facility that houses animals you will very likely find a manure storage structure. These can include manure tanks, pits, or lagoons. Depending on regulations, farms/ranches may need to store manure longer before it can be spread onto a field. As manure decomposes it will produce gasses such as Hydrogen Sulfide and Methane. Hydrogen Sulfide is extremely toxic to people and livestock and can even be present at open air structures. Methane is another hazardous gas that can be produced and can create a flammable environment.

Farm/Ranch Shop

Most agricultural operations will have an area where they work on the equipment that is used on the farm or ranch. The work shop will be an important location to note on a pre-plan. It is not uncommon to find flammable materials such as fuels, oils or other solvents that could easily sustain a fire. However, this same location can provide first responders access to tools and manuals that may be useful during a rescue incident.

Feed and Commodity Storage

Other structures may be used for storing various types of commodities. Hay and straw are two popular commodities to store in barns. During a farm/ranch visit it will be important to note what type of commodities are stored and what hazards they present. For example, hay and straw can be stored in various sizes and shapes. This can influence how well the pile is stacked and can present a crushing hazard of a bale is to come loose.



Pre-planning

This document serves a brief overview of some of the typical hazards you can find on farms/ranches and can start the discussion on how to prevent or mitigate an on-farm/ranch incident. During your farm/ranch visit it will be important to consider the challenges that could arise.

Tractor/ Machinery

- Are you capable of stabilizing/ dismantling tractors and machinery of the size found on the farm/ranch?
- Are local repair shops available to provide additional information?
- Is there a heavy wrecker tow company able to assist during a rescue?

Animals

- Do you have animal people within your department? If not, who can you call to assist?
- Where can you find additional resources to house or corral animals?
- What other farm/ranches can assist in operations during an incident?
- Who is the closest veterinarian that services the farm/ranch facility?

Structures

- Can your aerial apparatus reach the tops of silos and grain bins?
- Where are the chemicals stored? What types and quantities? Develop a plan for fires.
- What hazards exist with structures found on each individual farm/ranch?
- What are the procedures for confined spaces?
- Where is the emergency stops and power disconnects for machinery?

Extrication Considerations

- How soon can ALS arrive to establish advanced patient care?
- Is mutual aid available from other fire departments, tow companies, and dealership mechanics?
- What is the location of the nearest trauma center?
- Are helicopters available for patient transport? Where would a landing zone be established?

Preplanning is the only way to become familiar with the hazards associated with each facility. As technology grows, farms and ranches will become more sophisticated and will utilize more computer programming to operate. It will be important to revisit the facilities to maintain up to date with their operations. New equipment can bring with it new hazards and challenges. Pre-planning farms/ranches within your response area will provide valuable information to first responders and build trust with the farming and ranching community.

Don't get kinked up!

Do all hazards on the scene need to be mitigated? No, but they all need to be recognized and acknowledged. Major hazards that have the ability to injure responders, bystanders and victim need to be controlled. If that means waiting for technical assistance, so be it.



Notes

DRAFT

Final Version to Be
Released Soon



Module 2

Pre-Planning Farm Responses

Goals

- Understand purpose of Farm MAPPER
- Identify info available to emergency responders (ERs) through MAPPER
- Recognize advantages of Farm MAPPER during response scenarios
- Discuss approaches to engaging farming/ranching community in preparation and storing information on Farm MAPPER

How Did Farm MAPPER Come About?

Emergency response curriculum today does not generally cover, in deep detail, farming/ranching incidents, which are comparatively rare. The curricular focus is primarily on high frequency emergencies such as car accidents, carbon monoxide alarms, and fires. These are what emergency responders face almost every day and our departments get very skilled at responding to these kinds of emergencies. However, farm/ranch incidents are an entirely different animal and present a low frequency-high risk situation to our personnel. In the past most rural volunteer departments had at least some members who either worked on or came from agricultural backgrounds. In responding to farming/ranching incidents, the familiarity that these individuals brought to the scene, was a distinct advantage to our departments. Today, many departments lack personnel with farming/ranching knowledge, agricultural experience, and a relationship with the agricultural community. This lack of experience

and knowledge leaves departments with unique vulnerabilities when they do respond to emergency situations in farming/ranching environments. There are many, often unique aspects to farms/ranches. For one, they often have large unlabeled buildings and work areas spread out over substantial distances. It is said that “once you have seen one farm/ranch you have seen one farm/ranch”. Each agricultural operation is different and arriving emergency responders often do not know where the important resources and potential hazards are. Farm MAPPER was designed to augment the on-site, situational awareness of emergency responders by allowing pre-planning and resource and hazard localization. Farm MAPPER stands for “**F**arm **M**apping to **A**ssist, **P**rotect and **P**repare **E**mergency **R**esponders”.

Farm: This tool is particularly designed to be used on agricultural establishments. The available set of icons used in mapping is specific to farms/ranches. However, its use can be expanded to other large area locations that can be mapped with individualized icons.

Mapping: This tool allows the user to place and find on a visual representation of a geographic area, icons representing resources and or hazards that can be useful to emergency responders when responding to farm/ranch incidents. The map can be accessed prior to or during an emergency response if cell service is adequate.

To Assist: On site useable information on resources to help respond to on farm/ranch incidents.

To Protect: On site identification of potential hazards such as explosive fertilizer, fuel tanks and dangerous animals etc.

To Prepare: Opportunities to interact with the agricultural community and engage them in pre-event staging or response drills and to provide an opportunity for ERs to visit and see potential response locations.

Emergency Responders: This includes but is not limited to Firefighters and Emergency Medical Personnel.

Farms are Complex

Farms and ranches are very complex places, and the variety of operations is enormous. Even within a specific agricultural sector, such as grain farming, different farm/ranch layouts, equipment, storage facilities, worker housing, supply storage, building configuration and terrain create unique and often invisible challenges for the emergency responder. They are ever-changing as farms attempt to improve productivity and profit. New buildings are built, old buildings are abandoned or demolished, and new facilities are regularly constructed. As the seasons change activity increases or decreases and hazards such as fertilizer and or fuel may be used up or replenished. Farms / Ranches present many hazards and challenges that are not seen in other non-agricultural situations. Unlike factory or other commercial facilities where right of entry for the fire department permits pre-planning, farms are often exempted from right of entry rules

because of private ownership and lack of regulation and preplanning is not an option. Each farm/ranch is unique and can present hazards (and resources such as water supplies) about which emergency responders may be unaware such as chemicals, power lines, fuels, dangerous animals, confined spaces, low tonnage bridges and substantial distances, and more! Each farm/ranch is a puzzle requiring a solution. Mapping the hazards and resources that assist and protect emergency responders is important to prepare and allow them to efficiently and safely carry out their duties to protect life and property. Adding to the complexity of the farm/ranch puzzle is the fact that farms regularly change. Buildings are built, animal populations change, equipment and supplies change so mapping a farm/ranch is not a one and done activity. It requires both farmers/ranchers and emergency responders to keep the map up to date, so one can be prepared in the event that 911 is called.

Farm MAPPER

Farm MAPPER is a free online tool that in its current structure provides a bird's eye view of the farm/ranch, providing emergency responders onsite information about the location and identification of hazards, resources and physical layouts of agricultural operations. The icons representing particular resources and/or hazards are put in place by the emergency responder, if you are given the opportunity to map the farm/ranch, or by the farmer/rancher if they have done it themselves. One can access this view online and arrive at the farm with the view active on a smart device. This view or map of the operation allows the responder to avoid hazards and rapidly access resources in an emergency response.

Information such as the location of the power shut off and natural gas tanks, the location of stored fertilizer and the presence of dangerous animals such as bulls, the nearest water source,

Word from the Field

"There's a huge lost opportunity with us not doing essentially pre-incident plans at these agricultural sites because we do it all the time for our local industry and factories. However, for some reason, it just slips the mind that we don't visit our farms. We don't get that eyes-on, see what everything looks like, and get familiar with that. That was the whole eye-opening takeaway for me with the whole thing."

– RF-DASH National Trainee



on farm/ranch roads and the weight tolerances of on Farm/ranch creek bridges makes the responder's job safer and speeds response.

The icons that can be placed on the farm/ranch map have been developed to clearly label hazards and resources. The format and activity of mapping also allows your department and you to drill virtually in order to be prepared and thus to be ready in the firehouse before responding to a farm/ranch incident. As we have said before, farming/ranching is diverse and operations are ever-changing, thus the designers of Farm MAPPER are delighted to accept suggestions for new icons that can serve the unique needs of local farming/ranching and fire/EMS community. Let the RF-DASH team know of any suggestions at rfdash.org.

The RF-DASH MAPPER team has a dream that will be realized in the not-too-distant future of offering virtual reality on the ground views of mapped farms/ranches to emergency responders. As receiver device technology, cellular technology, and coverage improve across the nation, the RF-DASH team's goal is to operationalize heads-up, augmented vision devices that impose virtual images of resource and hazard icons with distance estimates keyed to the user's current location. A prototype has been developed and is currently being improved for mobile devices with the expectation that a viable tool with heads-up icon identification and location will be imposed within firefighter's visors.

FARM Mapper is not just for firefighters. We designed it to assist all emergency responders who may respond to an emergency on the farm/ranch. We have discussed having icons not only providing information on the resources and hazards on the farm/ranch, but also providing information on the family and employees that live and work there. For example, farms/ranches throughout the country may have employees that are

multilingual. In the Midwest, we have a growing Hispanic and Hmong populations that are working on farms. Emergency responders often run into situations where a language barrier exists. This is becoming more prevalent, so knowing ahead of time that you may need an interpreter or that someone at the farm/ranch is available to do it can be helpful in the instance of responding to an emergency. We are big believers in arriving fully prepared with everything needed to deal with an emergency event. Valuable time is lost when ordering needed equipment begins after first arrival at the scene. When responding to a structure fire, you should have a box alarm already transmitted when leaving the station. It is best to bring all of the toys you will need to the party so planning ahead is extremely important.

Mappable Items

When getting started on mapping a farm/ranch, it can be daunting on where do you start first? What is the most important features on the operation that I should know about? As we mentioned earlier, farms/ranches are large and complex, so its important to capture the main resources and hazards you need to know and as you continue to visit the farm/ranch you can update and map additional items that are important to know for your department. So, we have broken down the top ten mappable items you should look for on the farm/ranch.

Life Safety and Meeting Places

First thing to always look for is life safety. Your safety, then the patients, etc. In 2018, 16% of deaths in the fire service were related to responding to or returning from an incident. If we can't get there safely we do no one any good. So on the map, identifying a MEETING PLACE should be something identified early - where does the family or employees meet in an emergency? We may not find everyone here however because chances are one of the busiest members of that farm/ranch may be the one in the middle of the accident (food for thought).

We have to look out for ourselves.

Where can we find the family? During an emergency/incident, who is most likely the patient? – the person that



knows the most about the farm/ranch. So, we may not find them at the meeting place, but we do want to know where everyone is. Keep the utilities information up to date on the form. Most don't change real often, but you certainly don't want to be stuck in that situation if it does.

Utility Shutoff's

Its important to get these things in control right away. Identify as many electric power shut offs as we can - Is there a central pole shut down? It is nice if there is, but quite often on larger complexes you will find this does not shut everything off so we go searching for individual controls in each building. Today, your going to find them in a variety of places.

Know who to contact! Its also important to identify the Utility Company in MAPPER and have dispatch make that call - get them en route early. Most of them are not just down the road!

Gas- LP or Natural gas. LP tanks are relatively easy to turn off - sometimes finding them is the issue.

Another point in controlling the utilities - if you shut it off - LOCK IT OUT AND TAG IT OUT. This is critical as you do not want the power or gas turned on when you are working around the equipment it powers.

Chemical and Hazardous Storage

Gasoline and diesel fuels are very prevalent on most farms/ranches. They can be found in numerous locations and in different spots at each farm/ranch. Its important to map the larger storage areas such as pump and tanks, barrels of oil, hydraulic fluid, etc.

The more hazardous and nasty stuff like pesticides (especially in concentrate form) can become deadly very quickly. A little goes a long way when water is added and it only takes a little to become fatal through dermal and inhalation exposures.

Its also important to think about run-off when fire suppression in these area has to occur. You can map nearby waterways and wells.

The good thing if there is any is that it is usually most prevalent during a short period of time such as during planting and halfway through the season. It is expensive and operators won't usually order more than they need for this year's application. However, its important to keep in mind to know where are the Safety Data Sheets (SDS) located? Most of the information is printed on the container, assuming its in the same container that it came

in.

With today's technology we can get that information in seconds if the internet is available. You may even create a link or use applications on your smart device such as WISER to retrieve said info.

Water Supply

Farms/Ranches don't typically contain a municipal hydrant system and contain large structures that takes LOTS of water. How much will you be needing? The "back side" farm/ranch details section of MAPPER will ask you for the building sizes. Use whatever fire flow formula you were taught ("Iowa" or "NFA") and do the math. This will give you at least the minimum knockdown flows



necessary. With the size of buildings and the fire load they contain, consider at least two fill locations that can accommodate setting up large engines or high capacity trailer pumps to fill Tenders. Water sites that are available year round are preferred. We recommend sites within a five-mile circumference of the farm/ranch. This way the Tender only has to go 2.5 miles out and 2.5 miles back.

Manure Storage

The storage of manure has become more of a bigger issue than it has in the past. Both large and small operations have to have a plan of how they store manure on their farms/ranches. For example, one dairy farm in the Midwest has over 3,000 cows that produce in total 1 million gallons of manure a day! With all of this manure, it's going to be stored somewhere on the property and sometimes in multiple locations (above ground or below?) Know where this is located because in the event that its not properly fenced in or in the middle of winter you have snow coverage and the top surface of the

manure creates a crust, you certainly don't want to have one of your crew members fall through or utilize it as a nice landing zone for a medical helicopter.

Beyond the possibility of drowning, a more dangerous aspect that comes along with stored manure is the gasses that they produce and the lack of oxygen present. They typically contain Hydrogen Sulfide (H₂S), carbon monoxide (CO₂), and methane (CH₄). Despite all of these being extremely hazardous, the most dangerous is hydrogen sulfide. It can kill your sense of smell. You may get a whiff of it for a second or two and then you may not



smell it again. Small amounts of hydrogen sulfide can kill you quickly. So, its important to understand not only the visible hazards, but the invisible hazards on the farm/ranch. You can purchase a four-gas monitor for your crew that can help provide a warning when it senses dangerous levels of these gases. You can also purchase a standing unit for the farm/ranch that will take periodic measurements and alarm them if levels begin to get to high and to stay away.

Confined Spaces

Confined spaces are an area that is restrictive in the aspect of its entry and exit and its not designed for extended periods of someone occupying the space. These would be mainly fall under grain bins, silos, and manure storage. The victim could be trapped inside which would put our operation 50+ feet up in the air. The other hazard with confined spaces is the questionable atmosphere that they contain. During filling time, they can produce silo gas which is formed during the fermentation process of grains and forages being stored. This is a very nasty type of gas that you do not want to run into because it is odorless and colorless and very easily displaces the oxygen. It is better to assume when dealing with any type of grain bin or silo rescue that these gases are present.

Another hazard with grain bins is flowing grain. An individual can quickly become enveloped in the grain within a few seconds, leading to suffocation. Be sure yours or a neighboring department has a cofferdam

available to assist in the event that someone becomes entrapped within grain of a confined space. With rescuers wearing harnesses and proper safety equipment, this will make rescue efforts not only quicker and safer for the patient, but also for your emergency crew. The last thing anyone needs is for you as the rescue team to become another patient.

Machinery

Equipment and machinery on the farm has a lot of value. Its as valuable to the farmer as a fire engine is to a firefighter. Not only do these pieces of high-tech machinery assist farmers in performing their day to day work, they cost a tremendous amount of money. So, knowing where this big dollar equipment is stored is important. Not just from a safety standpoint, but also from a "how can we protect it in the event of a fire"? Also knowing what type of equipment is on the farm, and understanding what you could do with it, could become another tool to assist you in the event of an emergency.

Special Hazards

Every type of farm, whether it be dairy, beef, turkey grain, etc., will have the standard things you would typically see. However, its not unlikely that you may find something unique to that individual farm that is not readily seen on the map and could be vital for emergency responders to know about. Near our fire department in Wisconsin, we have a huge mink operation. This isn't a big response issue for us as a department, but its certainly huge for them to let people into their facility due to the risk of disease. It's something unique and not what you would typically find on a farm.

Staging and Landing Zone Information

When receiving an emergency call to a farm/ranch, you're probably going to bring a lot of apparatuses. It's always best to order it early and be prepared. It's never an issue with someone over ordering than it is to be waiting 20-30 minutes for it to arrive when every second counts for the patient. So, knowing where to put it all is just as vital as knowing what is all on the farm. Depending on the size of



the farm/ranch, you may not be able to fit it all in one spot. Establish a staging area ahead of time. Emergency responders do this all the time for industrial complexes, so do the same for farms/ranches.

Where are you going to land aircraft if you need it? Depending on the season, it may not always be feasible to land in a nice open field. As mentioned previously, the nice, crusted layer of a manure pond with some light snow over the top can seem like a nice level place to land at the moment, but turn into a rescue effort very quickly.

Other Hazards?

What else does this farm have that could be worth knowing to the department? For example, agritourism is very popular throughout rural communities. Pumpkin patches, corn mazes, tree farms, etc. all have unique hazards for those that work, live, visit, and provide emergency services. These may not seem like a problem to your department, but have you ever tried to find a lost child in a corn maze? With technology today, you could utilize a drone to assist in your efforts. So, knowing what is out there and pre-planning on how you could respond to an incident before it happens is going to make the biggest difference.

Do you know what the capacity of your bridges are in your area? State and county bridges you can find on a state website and they will tell you what the weight restrictions are and when they are due to be replaced. Little township bridges can be the ones that are most worrisome as they can sometimes be a very low rated bridge that may not be able to hold your large tenders

Don't get kinked up!

This is our top ten list of important items to know about when pre-planning your farm/ranch emergency response. It's completely up to you with how you want to organize or change what you believe is important information to know!

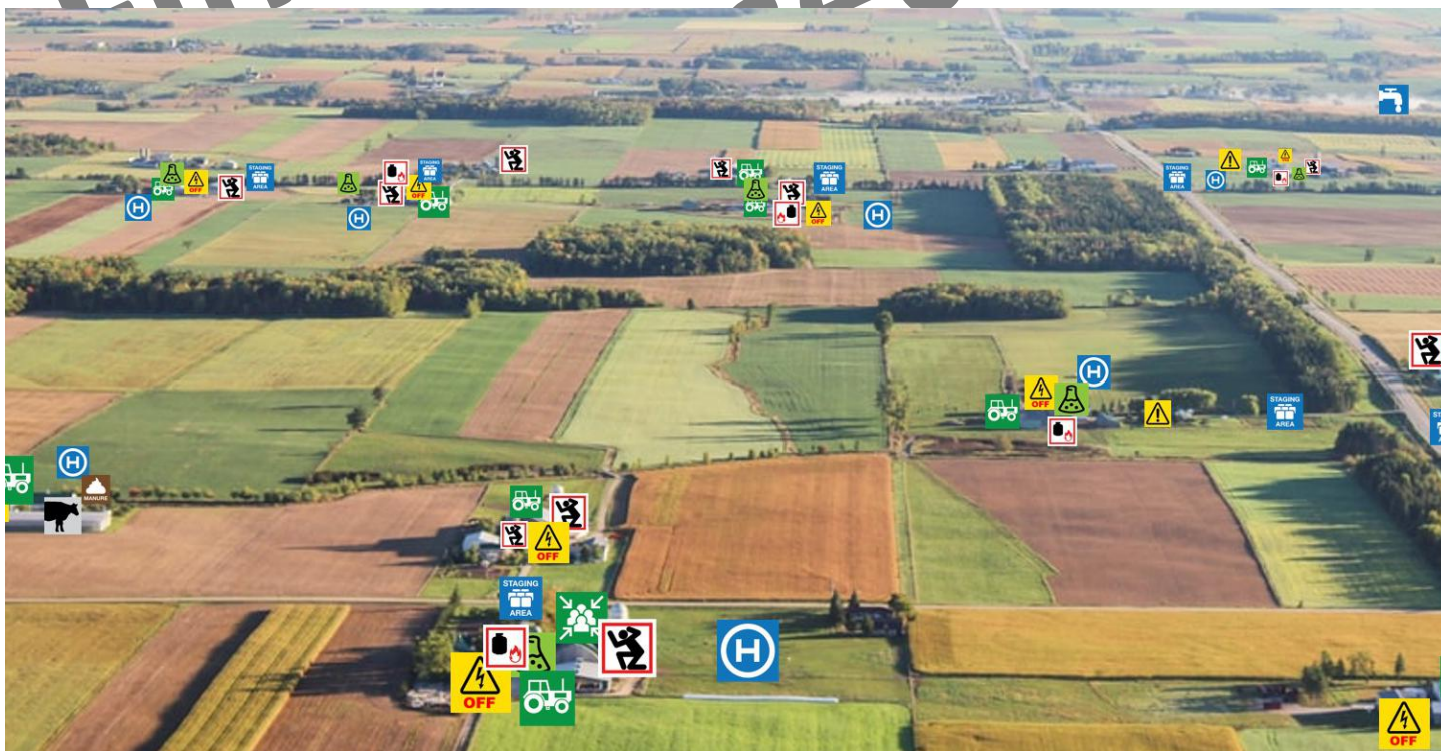


and apparatuses. Talk to the farmer too! They may have to drive their large tractors and pieces of machinery to other fields in the area and know what the safest routes are.

This is Our Top Ten List

As we have mentioned many times, every farm/ranch is unique, and every region can have different hazards and resources available to your department. So, make it your own and have MAPPER work for you!

If you have any suggestions or ideas on how to make improvements to Farm MAPPER through additional features, icons, etc., please do not hesitate to reach out to the RF-DASH team at rfdash@marshfieldresearch.org. Farm MAPPER is a continuously developing tool and we want to make sure that it is a valuable resource when it comes to safety and your department.



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Module 3 Farm Hazard Analysis

Goals

- Learn how to identify hazards
- Learn how to evaluate hazards
- Learn how to rank and correct hazards

What is Hazard Analysis?

The goal of this module is to help with the identification of hazards commonly found on the farm/ranch. Most people understand the need to identify farm/ranch hazards but that is really only one part of a good plan in managing hazards and risk. You also want to evaluate and rank the hazards because a farmer/rancher is not going to fix everything immediately, meaning that hazard identification is a three-step process of identification, evaluation, and ranking. These 3 steps tend to overlap and intertwine as opposed to being discretely different functions.

Understanding Hazards

Before we go any further, I want to be sure you understand the terms hazards and risk. Many people use these terms interchangeably, but they really mean different things. A hazard is defined as any existing or potential condition, which by itself, or in interaction with

other variables, can result in injury, illness, death, or other losses. Another way to say this is that a hazard is the *potential for causing injury or loss*. A hazard is considered “objective” because the potential for loss, harm, damage, or injury can be described or characterized by descriptive words such as explosive, flammable, toxic, entanglement, gored, crush, etc.

Understanding Risk

Risk, on the other hand is defined by as a measure of the combined probability and severity of possible harm. Mathematically, risk is the product of probability x severity. Another way to say this is: *how likely is something bad to happen?* Risk is considered “subjective” because in real life the probability dimension is ultimately subjective. That is, we often do not know the probability that harm, loss, or damage, or injury will occur at a specific point in time.

Here is a practical example of how you should think and talk about these terms with farmers/ranchers. If you get a splinter from a handrail for a stairway, the hazard is the handrail that may be scuffed up. But what farmer is going to pay any attention to a splinter or a scuffed-up handrail? But if he has a large tractor and the tractor has steps that were poorly welded and are rusty and about to break off, the hazard is the weakened steps. If he climbs onto the steps, the risk is the possibility that they break and the possibility that he could break a leg from the fall. This risk is much more significant because of the severity of the injury. Remember, the hazard is the item that can be described, while risk is the probability that something bad will actually happen because of the hazard.

Hazard Inspection Forms

Many people use a simple hazard checklist to identify worksite hazards (see Fig. 3.1), but forms like this are very limited in the real world. Worksite hazards do not exist in a Yes or No, Safe or Unsafe, or Satisfactory or Unsatisfactory format. Nor does a checklist like this help you evaluate and prioritize hazards from most risky to least risky.



Hazard inspection forms like this (Figure 3.1) are said to have dichotomous scales because you only have a choice of two possible answers. Nor does a form like this allow you to evaluate or rank the hazard. Nor does it give you any suggestions on how you might correct the hazard.

Even forms, such as what you see in Figure 3.2, that have a column for identifying what you might do to fix a hazard, and a target date for fixing, while an improvement, still are dichotomous and do not allow for evaluation and ranking functions.

Simple ¹ Hazard Checklist General			
Hazard	Yes	No	NA ²
Tractors/Machinery			
Rollover protection (ROPS) on all tractors			
Seat belt available on all ROPS tractors			
PTO master shields installed and undamaged			
PTO driveline protection installed and undamaged			
Bypass starter covers installed			
SMV installed and undamaged for highway use			
Keys out of ignitions in secure storage area			
Facilities			
Shop area housekeeping rules established			
Flammable fuels in approved containers			
Walk areas maintained in slip-proof manner			
Ladders maintained in safe condition			
Chemicals stored in designated and signed areas			
Livestock fencing appropriate and maintained			
Fire extinguishers charged and visible			
Smoke and fire detectors installed and working			
Lockout/tagout capabilities available and used			
Personal protective equipment (PPE)			
Hearing and eye protection available			
Separate storage area for PPE			
Confined Spaces			
Gas detection equipment available			
Signage used to designate hazardous conditions			
Workers trained on confined space hazards			

¹Simple format refers to whether or not the hazard is found during an inspection of the worksite.
²Not applicable. These potential hazards do not apply to my farm operation.

Figure 3.1 Example of a simple hazard checklist.

Expanded ¹ Hazard Checklist General					
Hazard	Yes	No	Action Required	Date Fixed	NA ²
Tractors/Machinery					
Roll-over protection (ROPS) on all tractors					
Seatbelt available on all ROPS tractors					
PTO master shields installed-undamaged					
PTO drive-line protection installed-undamaged					
Bypass starter covers installed					
SMV installed-undamaged for highway use					
Keys out of ignitions in secure storage area					
Facilities					
Shop area housekeeping rules established					
Flammable fuels in approved containers					
Walk areas maintained in slip-proof manner					
Ladders maintained in safe condition					
Chemicals stored in designated and signed areas					
Livestock fencing appropriate and maintained					
Fire extinguishers charged and visible					
Smoke and fire detectors installed and working					
Lock-out/tag-out capabilities available and used					
Personal Protective Equipment					
Hearing and eye protection available					
Separate storage area for PPE					
Confined Spaces					
Gas detection equipment available					
Signage used to designate hazardous conditions					
Workers trained on confined space hazards					

¹ Expanded format refers to a checklist that includes action required to fix hazard and target date fixed. This column could also be labeled as a "Target Date" for correcting the hazard.
² Not Applicable. These potential hazards do not apply to my farm operation.

Figure 3.2 Example of improved but still simple hazard checklist.

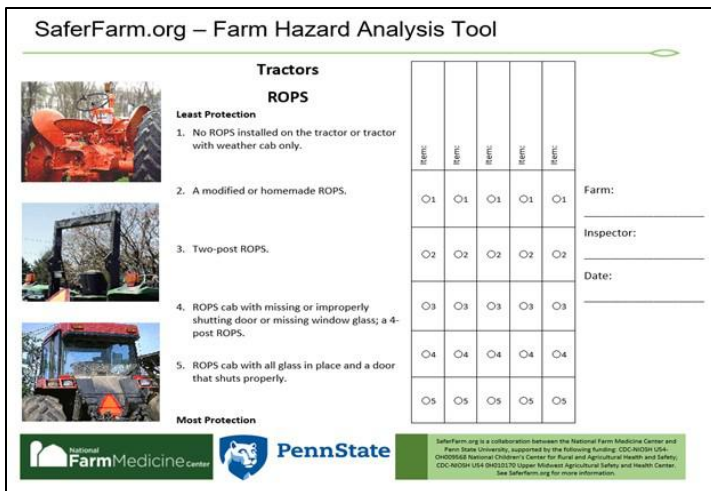


Figure 3.3 Example of SaferFarm hazard inspection format.

Here is an example (See Fig 3.3) of a more objective and informative hazard inspection form. We call it the SaferFarm -- Hazard Analysis Tool. This hazard inspection form is a result of collaboration between Penn State and the National Farm Medicine Center. It recognizes hazards are not typically “Yes” or “No, and it allows for evaluation and ranking of the hazard at the same time. As you can see, this format utilizes:

- A gradient scale to evaluate and rank those hazards. A 5 is always the best or least hazardous scenario and a 1 is always the worst or most hazardous scenario for that hazard.
- Insight on how to conduct hazard abatement or correction.
- It maximizes information with minimum amount of text
- Provides quantifiable data.

If we use rollover protection, or ROPS, for a tractor as an example (Figure 3.3), you can see how to use this type of inspection form. We use a scale where you go from a 1 to a 5. In SaferFarm, the 5 is always the best, the ideal. It gives the most protection or has the least hazard associated with it. The 1 is always the worst type of condition for the hazard. And you can see the possible scores between a 5 and a 1. You also see 3 photos. The 1st photo always represents a 1 score, the middle photo represents a 3 score, and the last photo always represents a 5 score. We think that having the photos corresponding with the various scoring options helps the user make an evaluation of whatever hazard they are

looking at. You also see just a little bit of text that helps describe each of the possible scores.

Looking more closely at the photos in our ROPS example, you can see that the first photo shows a tractor without a ROPS, which would be rated a 1. The middle photos show a tractor with a two-post ROPS, which equates with a score of 3. The bottom photo shows a tractor with a ROPS-enclosed cab, which would receive a score of 5. We think everyone can understand that a two-post ROPS is better than no ROPS but does not offer as much protection to the operator in case of an overturn, as a ROPS-enclosed cab would. And again, you see text for the 1, 3 and 5 scores that matches the photos.

A second example is shown in Figure 3.4. This example is of a possible power take-off, or PTO hazard, that is common with many agricultural machines. The #1 text and photos show a completely unguarded PTO driveline shaft, the #3 text and photo show that there is a PTO shield but that it isn't in very good condition and doesn't provide full protection against the u-joint of the PTO, and the #5 text and photo show a completely guarded PTO driveline shaft. You also notice in this example that there is no text for scores of 2 and 4. We felt that text for these scores was not needed, even though you as a scorer, could decide that the driveline you are looking at falls between a 1 and 3, or a 3 and 5. By using a scale like we in SaferFarm, you have a more objective way of describing hazards and the protection that may or may not be in place.

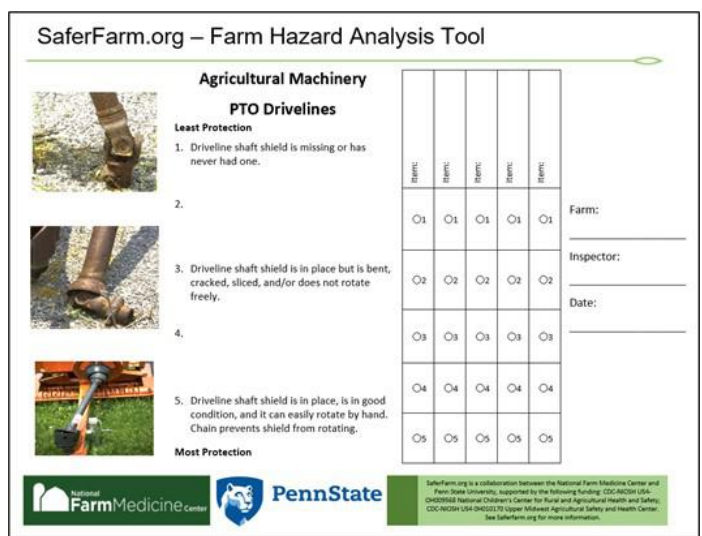


Figure 3.4 PTO example of SaferFarm hazard inspection format.

Figure 3.5 shows a scale of how to interpret the results of a SaferFarm inspection. Because SaferFarm uses a numeric scale, it gives you a more objective and consistent result when used repeatedly over time. The use of the scale for scoring is the way we prioritize which hazards should be corrected the quickest. If you score something a 1 or 2, we are trying to tell the farmer you need to fix this thing soon, or as soon as you can. A score of 3 is something that should be fixed or corrected moderately soon, while a score of 4 or 5 is something that should be fixed or corrected when possible, say at the end of a week or month.

SaferFarm Understanding Hazard Audit Results			
RANK	PROTECTION	HAZARD LEVEL	CORRECTIVE ACTIONS
1	LEAST PROTECTION	SEVERE OR HIGH	Hazard should be fixed, repaired, or improved immediately.
2			
3		MODERATE	Hazard should be fixed, repaired, or improved soon.
4		NEGLECTIBLE OR LOW	Hazard should be fixed, repaired, or improved when possible.
5	MOST PROTECTION		

Figure 3.5 How to interpret SaferFarm hazard inspection results.

Currently there are 12 major categories containing 154 hazard topics. The major categories are (in alphabetical order): Ag Buildings, Agricultural Machinery, Agri-retail, Agritourism, Animals/Livestock, B&B/Residential, Bio-Security, Manure Storage and Handling, Off-Road Vehicles/Machines, Other Structures/Accessories, Pesticides and Chemicals, Tractors.

Figure 3.6 is a snapshot of the SaferFarm.org website. You can use your cell phone, iPad, tablet, laptop, or other mobile device to bring this site up. If you are a first-time user, you will need to create an account so click on the

Register link in the upper right-hand corner. Registering is free.

Mobile friendly website

<https://saferfarm.org/>

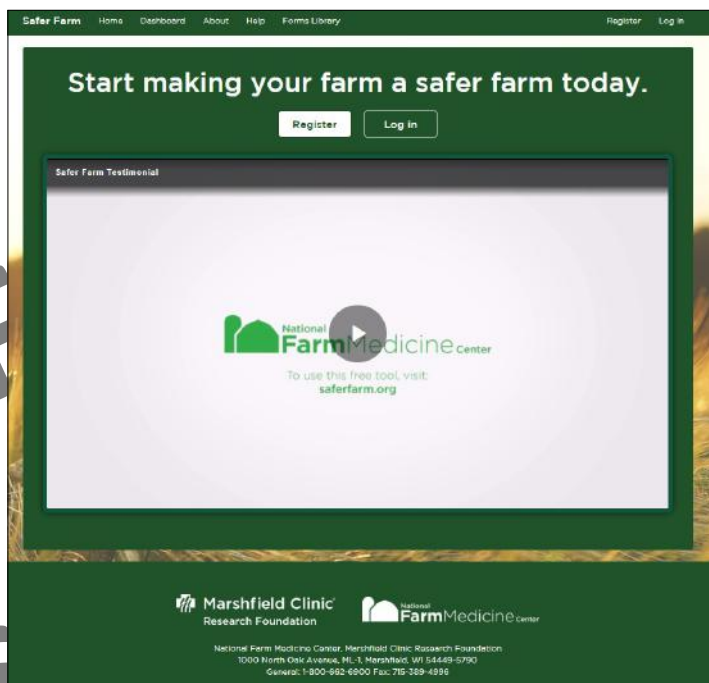


Figure 3.6 SaferFarm website. Free registration link is in upper right.

Don't get kinked up!

Remember, you don't have to identify every single hazard on the farm right away. When your first getting started, start with the hazards that are higher risk and ones you feel comfortable doing!



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Module 4

Farm First Aid

Goals

- Teaches people how to keep themselves physically and emotionally safe during an emergency situation.
- It is concerned with what actions will have a positive effect on the well-being of the victim.
- Teaches people how to summon additional help.
- Reinforces the importance for farm people to prevent incidents from occurring.

Why it's Important to Train Farmers/Ranchers in First Aid?

Agriculture is an occupation that exposes workers to many different types of hazards. Each year many farmers/ranchers are injured or killed. In most instances, the outcome of the victim depends on the actions of whoever is the first responder. Many times the first responder to a farm emergency could be a coworker or a family member. Emergency medical providers typically will not arrive on the scene immediately due to the remote nature and rural location of most farms/ranches. Critical care will need to be given well before trained responders arrive at the scene. Appropriate actions in injury care prior to the arrival of emergency medical personnel can mean the difference between life and death for the victim.

In many rural communities, it could be thirty minutes or

more before emergency medical professionals arrive at the scene. Decisions and actions need to be made and implemented in a logical order. If the first response actions are not executed properly, the first responder risks injury or death or they may cause further injury to the victim. Proper training of farm/ranch family members and farm/ranch workers is a critical link in the chain of survival for a farm/ranch incident victim.

It is vital to educate the farm community on how to stay safe, how and when to call emergency services, basic first aid procedures, and to recognize when the rescue of a family member or fellow worker is not possible to do by themselves. This is important due to the nature of some agricultural emergencies such as tractor overturns, entrapments, engulfment's, toxic atmospheres, chemical emergencies, etc.

The RF-DASH program aims to educate farm/ranch family members and employees how to manage a victim injured in a agricultural emergency incident. Most farm/ranch people will not have any formal training in emergency response and first aid. RF-DASH is designed for those individuals. With a wide range of different hazards on farms/ranches, the probability that there could be an injury emergency is high. Knowing the correct actions can improve a stressful situation and lead to better outcomes.

Program Delivery

This program is intended to be interactive and hands-on. RF-DASH instructors should not predominantly use lecture style presenting. The curriculum is intended to be followed in sequence. Instructors should begin new programs with hazard recognition and scene safety. Next is patient assessment and



stabilization. Experience has shown that most audiences want a program that will last no more than two hours. This is why some of the other standard first aid courses have not been successful with farm audiences. The modularized nature of this program makes it easy to emphasize a particular topic, or relevant topic in an appropriate time frame. RF-DASH uses the Penn State Emergency First Aid Care for Farm Families program as the curriculum that can be used to teach farm/ranch first aid.

RF-DASH instructors receive the training

materials from the Penn State Emergency First Aid Care for Farm Families program. These materials include PowerPoint presentations and presentation narrative, plus emphasized key points.

- Tractor Overturn
- PTO Entanglements
- Machinery Entanglement
- Grain Bin
- Oxygen Limiting Silos
- Conventional Silos
- Manure Storage
- Manure Storage Pond
- Manure Storage Tank
- Chemicals
- Electrical Emergencies
- Reporting Farm Emergencies
- Livestock Emergencies
- Logging Emergencies
- Skid Steer Emergencies
- Post Hole Digger Emergencies

The modules are as follows:

Practical Experience:

Many people only remember about 20% of what they hear, but will retain around 80% of what they experience. An effective instructor will help solidify the key points by having participants practice the skills presented. Using manikins to demonstrate and practice techniques will reinforce the skills. Likewise, having the students practice bandaging and splinting can best be taught in a practical sense rather than explaining the skills through a lecture only format.

Word from the Field

"I grew up in a farming center in Wisconsin. That's how this all got started. We had—in the farm family—where I grew up on, they were pumping a manure pit and they had an accident where a young man was killed. And they just didn't have it organized to care for him. It really would've changed the outcome."

-RF-DASH Trainee

As an instructor, ask the audience questions of what they would do first in the scenarios presented. For each of the Farm/Ranch First Aid modules, there is a script to aid the presentation, but once you get experienced at delivering them, you may not need the script for support. Try to personalize each of the scenarios to the audience as if it is happening to them.

Delivery of the Farm/Ranch First Aid Modules

As an example of how to deliver the modules, we will outline delivery of the Tractor Overturn Module as an example.

Set the Stage; Tractor Overturn Module



It's past 2 pm in the afternoon, your husband took off with the tractor today and he was supposed to come back in for lunch. Typically lunch is between 11:30-1:30 pm. You are getting a little nervous. You know he went up on the road on the farm/ranch about 10 minutes away out in the field. You want to go check on him, so you get in the truck and drive down the road to the field. Once you pull up and enter the field, you come across the scene above.

Ask the audience: What's your first reaction?

Don't get kinked up!

Teach the Farm/Ranch First Aid module as if you were talking to a member of a farm family or a trusted coworker. They are the ones that will make the discovery and have to make key decisions. When a loved one, or a close colleague is involved, people may take unsafe actions. The first on the scene could save a life, but they can also end a life based on the decisions made.



They may say, "My first reaction may be shock", but the first decision that may come to mind is "do I get closer or do I call 911 and get help"?

It is important to note that cell phone coverage in rural areas is not always great, so as the instructor, force them into a decision here. "You may have your phone, you may not, or may not have reception. Let's say for this example you are unable to call 911".

Next ask them; "What is the right decision? Get closer or get help?"

Point out that in most cases there is really no right or wrong decision, but in some cases there is like in this example. *Always make sure the scene is safe before rushing in to assist a victim in distress.* Whatever hurt the initial victim, could hurt the first responder too. In a tractor overturn situation, the overturned tractor could be precariously balanced. Maybe it rolls onto the would be rescuer too because it has not been properly stabilized. Now there are two victims when there was only one to begin with.

Now we get into the discussion of breathing

In this scenario there may be an airway obstruction that the trauma can cause. Maybe the best chance for the victim's survival is for the first on the scene to adjust that airway. You are not going to get them out from under the tractor, but maybe you can help to keep them breathing.



In this scenario, you may typically find that half of the audience will say to go get help right away, and the other half will say to approach the scene immediately. Tell the audience that they are going to need help, but they will also want to see how they can help without putting themselves in danger and becoming a second victim, and/or making the situation worse for the initial victim. The provided PowerPoint Slides can help facilitate these discussions.

Now we are going to get closer to the scene



Ask: What are the hazards facing the first person on this scene?

1. Stability. Tractor may be unstable. It could roll more causing more injury to the victim or potentially roll onto an unwitting first responder.
2. Call 911 as soon as possible, or send someone else to make the 911 call.
3. Is fuel leaking onto the victim or creating a fire hazard?
4. Is the tractor on fire? If so, is there a fire extinguisher available that you can safely reach?
5. Is the tractor still running? Important to shut the tractor off, but can that be done safely? Does the first responder know how to shut the tractor off? Pressure on the lower wheel?
6. Even if engine is not running but the ignition is on, tractor could jump from the wheel slipping as it tries to start.
7. It may not be safe for the individual to get close to the situation, so assess the situation from a safe distance and decide on the best course of action
8. Can you assess the patient? Yes. Don't commit yourself to getting under the tractor, but look to see if

they are breathing? Yell to them and see if they respond. Is the victim yelling/calling for help. Is there any movement of the chest?

9. It is important to note that a lot of farmers/ranchers are not familiar with what's going on with a victim's body and they may think that they should get the tractor off the victim immediately, but that may not always be the best thing to do.
10. Hydraulic hoses/pressure damaged?
11. The bucket in the front may be touching the ground, but is it safe?
12. Think about how the hydraulic system may have suffered some damage during the overturn.
13. Do you have tools in your possession to help emergency services perform the rescue?
14. Do you have a pick-up truck or other vehicle?
15. Hook a chain to the truck to act as an anchor or push the truck up against the tractor to hold it there to stabilize it.
16. Are there blocks/jacks or other material in the back of the truck that could be used to help stabilize the tractor?

Maybe you got a better idea of the scene as you got closer and you realize that there is not much you can do, except provide a good description to the 911 dispatcher and answer the questions they will have about the incident.



Now that you have assessed the scene for hazards, you get a little closer:

1. You see fluids leaking.
2. Is there anything you can do about the fluids that are running into the victim?
3. If it is safe to do, you can build some diking to carry the fluid away from the victim.

Scenarios such as this are useful to facilitate general discussions with farm/ranch workers and family members. Although the proper rescue strategies may be natural for emergency responders, farm/ranch families may not know what to do in most cases.

Why not use the truck to push the tractor over and off the victim?

1. Doing so could cause slipping of the tractor where it could come back and cause more hazards/trauma to the victim.
2. The tractor could be acting as a tourniquet for the victim.

Explain how to turn off a tractor and differences between gas/diesel tractors

1. Everyone on the farm/ranch should be trained on how to shut off all the tractors and other self-propelled machines.
2. Who is the one that is going to find dad? One of the members of the family
3. Some would say to just turn the key to turn it off, but on overturned tractors you may not have access to the key to turn it off. What else can you do? Look for other ways to stop the engine.

Change of the Scenario



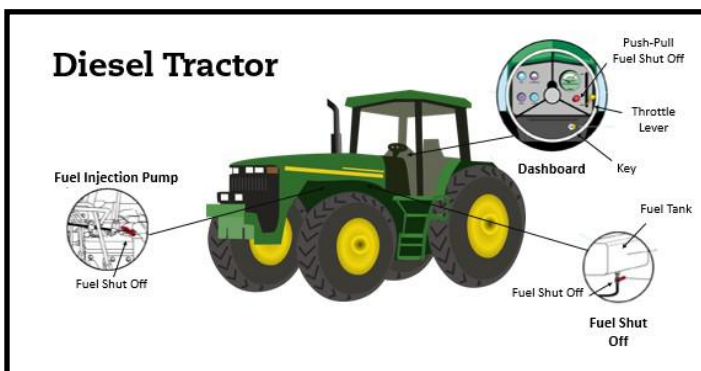
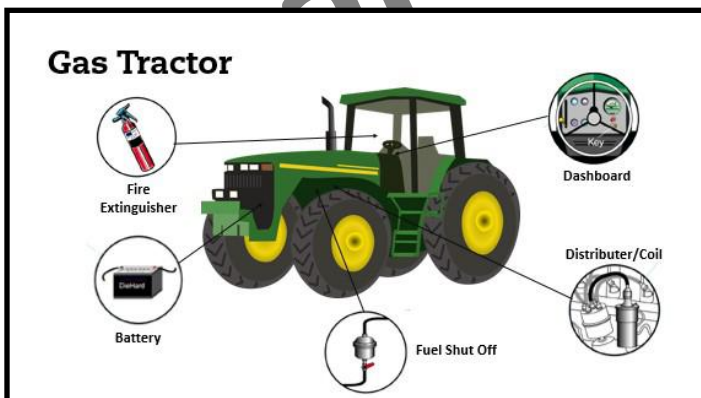
The first responder found a family member in this situation, what do you do?

- A. In this case, the family member is upset, and he wants to get close right away.
- B. Many cases in a situation such as this, the family member will end up in a vehicle and brought to the hospital. Do you ever move a person that is in this situation? Discuss why you don't move them and issues with the spinal cord. Unless the victim is in immediate danger, it is best to not move them. Leave them as they lay, try to keep them as comfortable as possible until emergency services arrives.

Change of the Scenario



- A. Tractor causing a breathing issue
- B. Is there anything you can do to help them breathe better? If safe to do so, loosen some soil underneath them to help them expand their chest cavity making it easier to breathe. If you approach an individual in this situation and they are grasping for their last breath, what sort of decision do you make?



Is there ever a dramatic moment where you try to get that tractor off that person? Possibly. If they are gasping for their last breath, then the first responder might decide to use the truck to push the tractor off them. This would be a very risky action to take, but the victim may not survive if you make a trip back home to make a phone call for 911 or for trained rescuers to get there in time.

Each of the Farm First Aid Modules are Short

This tractor overturn module takes approximately 45 minutes for it encompasses multiple possible scenarios and covers airways and why it is important to maintain. Each module ends with explaining how the first responder makes a call for help and what information is important for them to relay to the 911 dispatcher. Farmers/Ranchers may not realize that when an emergency occurs and they tell 911 that they need help at the farm/ranch, fire/EMS equipment may not be suited to even make it off the road depending on environment and conditions in a field as an example.

Making the 911 Call

A key item to train farm/ranch first responders on is how to properly make a 911 call. A good way to facilitate making a 911 call is for farmers/ranchers to create a sheet that lists directions to farm. It should also list reminders of items to tell a 911 dispatcher and key important phone numbers. First responders should be told to answer all the questions a dispatcher may have and not hang up the phone until instructed to do so by the dispatcher. It may seem like answering all of the dispatcher's questions is taking a lot of time, but this will not slow down the delivery of emergency services. It is important to note that 911 dispatchers are trained to assist first responders over the phone. If a first responder is not sure of how to render appropriate first aid, a dispatcher could explain what to do over the phone. If there is cell service at the incident scene, the caller should put the phone on speaker so that the dispatcher can explain what to do.

1. Post the emergency information calling sheet next to landline phones.

2. Program important numbers into cell phones.
3. The person making the 911 call may not be from the farm/ranch, so it is important to have this information posted, such as directions to the farm.

Waiting for Emergency Services to Arrive at the Scene

After the 911 call is made, you may have to wait 20-30 minutes for emergency services to arrive in most rural, farm/ranch situations. While the first responders are waiting for help to arrive, there can be some things they can do to prepare.

1. If the victim is in a remote field, or woodlot, post someone near the road to direct emergency responders to the incident location.
2. If the victim is conscious, try to reassure and calm them. Tell them emergency services is on the way. If there is external bleeding, control the bleeding. Treat for shock if needed. Do not talk about how bad their injuries may be.
3. Most emergency vehicles cannot be driven off the road. Does the farm/ranch have a UTV or 4 wheel drive vehicle that emergency services could use to get to the scene, if they do not have such vehicles?
4. Gather any tools, chains, blocking that you think might be helpful to use in the rescue. The first responders may ask you for your advice on how to take a machine apart to free a victim, or may ask other important questions regarding farm machinery involved in the incident.



When emergency responders arrive on the scene, they may want to keep the farm/ranch family first on the scene busy, or occupied. They may be very distraught and could interfere with the rescue. It may be necessary to take them away from the scene and have someone monitor and reassure them.

Prevention Strategies

Each module also includes appropriate prevention strategies to cover. Instructing the farm/ranch audiences in proper prevention strategies is a key element of all of the Farm/Ranch First Aid modules.

Important safety principles of safe tractor operation that should be addressed:

1. ROPS (Rollover Protective Structures) Whenever possible, all tractors should be equipped with ROPS. Visit the website of the National ROPS Rebate Program to find out information on retrofitting non-ROPS tractors with ROPS <https://www.ropsr4u.org/> If a tractor cannot be retrofitted with ROPS, consider scrapping that tractor and replacing it with a ROPS equipped tractor.
2. Seatbelts. All ROPS equipped tractors need to have working seatbelts. The tractor operators should use the seatbelt every time.
3. Tractor shut off procedures. Everyone on the farm should be trained on how to shut off each tractor, or any other self-propelled machines on the farm.
4. Install ABC fire extinguishers on tractors.
5. All operators need to be given proper training on how to operate tractors safely.
6. Encourage the farm audience to take CPR and First Aid Certification training.



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Module 5 Farm Community Outreach

Goals

- Learn how to approach the farming/ranching community about safety
- Learn how to start the ask
- Learn how to build a relationship with the agricultural community

How do We get Started?

We know agriculture is a dangerous profession, we have learned how to pre-plan for farm/ranch emergencies and how to analyze hazards, and we have a better understanding of how we can help the farming/ranching community be prepared in the moment an incident occurs through farm/ranch first aid training. However, the more daunting task can be getting started and building a relationship with the farmer/rancher.

You may already know of some agricultural operations that will be difficult to get access to, but you may also know farms/ranches that will happily open up their operations to your department to perform a safety walk through and allow you to begin building a relationship within the farming/ranching community. Start with farms/ranches that already have a great relationship with the department or personnel of your department. Start with your families, friends, or neighbors farm/ranches.

Nothing is wrong with starting with the easy ones! You are the champion within your fire/EMS, healthcare, or farming/ranching champion. However, you really need to surround yourself with those farm/ranch champions in order to successfully outreach with the agriculture community.

Remember, our details and proposals on how to approach the farm/ranch community is not tested and you may have a better answer to reaching out within your region. With that said, there is a philosophy and rhetoric in the order of which the RF-DSH program is taught that has resulted with great success.



Approaching the Farm/ Ranch Community

“Help Me, Help Myself”

The second module is the pre-planning part. **This is the ask.** The ask of “*help me, help myself*”. We are asking them to protect our firefighters and EMS personnel. We are not there to audit their farm/ranch or critique their behavior. We are just there to ask them to participate in helping increase the protection of civic minded people. It is easier to start with the ask of protecting your department than to start with scoring their farm/ranch.

“Help Me, Help Yourself”

The third module is the auditing, which is the heart of changing things. Your department/organization has likely conducted many rescues and emergency planning as part of your profession for quite some time. This is the easier part to start with and one you may be most familiar with. Now, we are adding on the ability to identify, score, and rank the hazards so they can be changed by the farmer. This is a new philosophy and approach. You are approaching the farmer/rancher and saying “*help me, help yourself*”. Farmers/Ranchers want to be independent. This may be part of the reason they enjoy or got into farming/ranching, so give them that ability because you are not an insurance agent and you are not OSHA. You are the neighborhood fire department and you don’t want to see your neighbor or community member in a hazardous situation.

“Help Me, Help You, Help Somebody Else”

The fourth module is farm/ranch first aid. This can be the most time demanding module of the program. Mapping and assessing hazards on their operation, they may just let you go on your own. However, this module requires

them to sit down and take a class. You may know of some easier targets than others for a first aid course. Start by doing farm/ranch first aid for teens in FFA or 4H. This will probably be the more feasible than the owners or operators of a farm/ranch. You will also want to keep in mind that larger operations may have more of an incentive to have you conduct first aid courses as they may have a lot of employees and want them to be trained in first aid by fire/EMS. It is possible that by teaching farmers/ranchers in first aid, they can have their insurance rates reduced when it comes to workers compensation. It may be a stronger ask, but you are asking them to “*help me, help you, help somebody else*”. Let them know that you are wanting them to let you help them to be able to be that productive aid in their community during an emergency on the farm/ranch, while emergency personnel are responding.

Our philosophy and rhetoric for this is based on the extended parallel process model. The idea is to scare people into thinking something could happen to them. For example, if you are teaching them how to handle compound fractures, teach them about compound

Word from the Field

“I think that’s the plus of the program, taking rural firefighters and engaging them with that population. It’s a small enough community that everyone knows each other. There’s already a relationship there so—it’s not a government agency or an insurance company or something threatening, it’s someone who knows them and says, ‘Dude, I care about you, Let’s work together to make it better.’”

- RF-DASH Trainee

Extended Parallel Process Model

Scare them and allow them to see it happening

Give them the ability and efficacy to handle it

Give them the prevention power

fractures because they had a tractor roll over and make it relatable to what could happen to them. Being able to present it to them in a way that they can see themselves in it, while presenting the standard information they need to respond to, can lead to greater interest and receptivity. Lastly, you want to punctuate your first aid training with a prevention message and how they would not have to be in this situation in the first place.

Teaching the modules independently is certainly another method to help gain interest within the community and when starting out. However, the reason the RF-DASH program has its program laid out in the order of pre-planning, hazard analysis, and farm/ranch first aid is due to the model and it leading to better receptivity.

Farmers/Ranchers Trust Fire/EMS

Farming/Ranching is one of the most dangerous occupations in the country and those that work in agriculture are 8-10 times more likely to die on the job than the average U.S. worker. With a significant number of individuals involved in agriculture and not enough agriculture health and safety specialists to meet the demand, we are leaving a big gap in effectively



preventing injuries and fatalities on our nations farms and ranches.

A majority of fire departments are volunteer based and cover a wide area throughout our rural communities. It probably comes as no surprise that research has shown that farmers/ranchers trust Fire and EMS right behind

their own families when it comes to making changes to safety on their farm/ranch. You are seen as a member of the community that is present, trained, and a trusted resource. So, how can you use this to build your relationship within the agricultural community?



Present your department having no financial relationship. Mention to them about what their tax dollars can do for your department, as well as letting them know that you can come and give them more abilities and resources all because you are a taxed based funded community. Make sure to also emphasize that you are not raising their insurance rates or costing them anything. The only thing you are asking of them is their time, but remember time is a valuable resource on the farm/ranch too.

There are many avenues available to local departments to reach out and build upon your relationship within the agricultural community. Some great ideas to introduce yourself and your departments work are:

1. Farm/ranch breakfasts are a great area to meet farmers. Check your local news outlets for dates and times that farms/ranches may be hosting a session. Your department could also put on one too!
2. 4H and FFA
3. Local community events/gatherings
4. Preexisting relationships such as family, friends, neighbors, etc.
5. Agricultural organizations i.e. Ag Extensions and Farm Bureau

Benefits of Health and Safety and Partnering with Other Organizations/Community Members

Fire and EMS not only have the knowledge of the benefits and risks of health and safety throughout their communities, but they have some of the most compelling stories to go with them.

You can talk about what doesn't happen because you have witnessed or experienced these things in the most compelling thing when describing why someone should and shouldn't do something when it comes to our health and safety.

Community buy in

A common response you may get from the farming/ranching community or even neighboring fire departments is that these incidents in agriculture don't happen in our community, or happen very rarely.

Fifteen trapped miners will get headline news across the world and be covered for multiple days, but fifteen agricultural incidents can happen in a week and receive



little if any coverage because they are disparate. It's important to emphasize that you are not selling anything. They certainly do not have to use the tools we are using, nor do they have to be a part of the RF-DASH program. It's important to expand upon what you are already wanting to do for your community. To add to your health and safety arsenal, finding farmers/ranchers with Fire/

Don't get kinked up!



Don't think you have to find 50 people to conduct a training. Find the 15 passionate ones that want to make a difference. Find the champions in your region!

EMS experience can provide some nice members to your team and reaching your ultimate goal. This includes thinking about the people you are bringing into the classroom to train on RF-DASH. They are just as important as the curriculum you are providing them. So, go and find that farm/ranch leadership and community members that can help you better connect with the farming/ranching and fire/EMS community.

Extensions/local agricultural organizations

Another great affiliation to look at are tech schools, department trainers, FFA and 4H. They can help you find ways to deploy the RF-DASH program. Different states and regions fire/EMS program may have a different method of deploying the knowledge of the program, so don't be afraid to search around beyond your local extension.

Insurance companies

One possible route you could also explore is to partner the RF-DASH program with insurance companies. Some insurance companies have been involved with the RF-DASH program and are interested in ways they can be involved in all sorts of angles such as sponsoring the meal or people conducting the training. Something even more significant for the farmer/rancher would be taking your conducted Safer Farm hazard analysis audit of their farm/ranch and show the increased safety measures they have taken on their operation and possibly receive reduced insurance rates. You may find other resources that insurance companies can offer. They are interested in how they can use this knowledge with their rural communities, so be sure to ask your local insurance companies what they can do!

Twilight meetings

If you are trying to embed yourself into the farming/ranching community, use the things that farmers/ranchers use to deploy and share their information.

Farmers/Ranchers time is valuable and many times they will hold local meetings in their regions during twilight hours. Reach out to the meeting committee and ask if you can present RF-DASH summery and its importance. They are always looking for new things to bring into their meetings. This will be especially helpful, if you can get the farming/ranching champion to conduct the auditing and safety demonstration.

Benefits for both

Use your experience and yourself to talk about other benefits other than the prevention and safety message. One method is to discuss reducing damage on the farm/ranch. There is a tremendous cost with farm/ranch fires and this can put the farm out of business. According to a cost analysis of losing a farm/ranch, the community loses approximately 1 million dollars.

You can also show the size and needs for rescue equipment when responding to an emergency on the farm/ranch. This may give the farmer/rancher a better understanding of what it takes to conduct a emergency rescue at their

operation. In turn, fire/EMS crew can learn about the speed of farm/ranch equipment and how they work as well as familiarize yourself with access problems to the farm/ranch. This can present new learning experiences for hazards that your department may rarely see (low frequency; high risk).

Maintain Contacts and Relationships

Once you have developed that relationship with the farmer/rancher and agricultural community, maintaining that can be just as important. The consistent changes in agriculture and changes in operations is when relationships are key. If you map a farm/ranch one year, and the next year you go back, developments or changes to their farming operation may be different. This difference can present a whole new set of hazards, access issues for emergency departments when responding, etc. Not maintaining the relationship will take almost as much time and resources as it took to initially develop the relationship. Time, money, and resources are limited for emergency crews in rural communities, so you wouldn't want to waste the opportunity and work that was initially put in.

Understand the market of your local agricultural operations product

When maintaining the relationship with the agricultural community, it can be helpful to understand the economics of agriculture. For example, learning about when the price of grain drops, the amount of grain bin storage usually goes up on farms. Fluxes and downturns in the market can lead to increased stress and tension within the farming/ranching community. This is why it is important to anticipate these stressful times because this can affect not only your

Word from the Field

"What I got out of the seminar was tips and tricks for how to engage with the farmer themselves. That was the main focus of it—it's more about the relationship than the actual product at the beginning. It's all about building relationships and giving us a tool to introduce the idea to our farming community."

- RF-DASH Trainee



relationship with a farmer/rancher, but also the possibility of the increased likelihood of receiving a call for an emergency at their farm/ranch.

Best times to meet

When planting and harvest time comes around for farmers/ranchers, you will have a small window of opportunity in the off season before the farming community gets busy. Be aware of the best times to visit such as in the offseason (winter and summer) and also of the possible times right before a higher likelihood of agricultural incidents tend to happen (planting/spring season, harvest/fall season).

Don't get kinked up!

Reaching out to the farming community and asking to go on their farm to map it and assess it for hazards can be a tough ask, especially if they think it could come back on them with fines and lost time and money. Start with the farms you have a good relationship with and build that relationship in your community.



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How to Organize a Training

Goals

- Learn about what community/individuals to connect with to conduct a training
- Learn what materials and resources are needed
- Learn how to promote your upcoming training

How to Organize a RF-DASH Training?

This module is designed to help trainers get started when putting on a RF-DASH training of their own. However, this is not the only way to conduct a training and we encourage trainers to find more efficient and unique ways to bring RF-DASH to their local communities.

Date and Time to Conduct Training

When you first begin to organize a training, you first want to think about dates and times that would be most beneficial for the participants and the farmer/rancher. Typically, we find that winter and summer months will be the best times to schedule a training as farmers/ranchers will be more available to host the hands on portion of the training vs. having it during the spring planting and fall harvest months. Keep in mind that summer months may be additionally beneficial as participants can see more

ongoing activities and equipment being used around the farm/ranch than what is put away in storage for winter.

The RF-DASH team has typically conducted trainings on the weekend. This allows for better availability for participants to attend, especially those that have other occupations and obligations during the week. If the weekend is not an option, you can always have the training spread out over multiple days of a week during the evening hours too.

Lastly, coordinating with fire and EMS conferences and events is another means to carry out a training. They can assist with recruitment, provide a classroom, and other resources to help organize a training and bring champions from various communities to attend your training.

Location

There are numerous locations to host a RF-DASH training. Conducting trainings at a firehouse, community college, hotel conference rooms, etc. are all places that can be

effective, especially if they are closer to the farm/ranch you plan on visiting for the hands on portion of the training. If you and the farm has the technical capabilities, you could also try having the training right on the farm/ranch you will be touring later.

When finding a farm/ranch to host the hands on training , the type of agriculture activities, size, and prevalence of hazards are all something to consider. The participants may not have a certain type of agriculture commonly found in their service areas or region and it can be difficult to match what everyone is used to seeing. We recommend thinking about different ways to connect with the participants through examples or similarities based on the type of agriculture more specific to their community.

The size of farms/ranches vary significantly. Larger operations may have more income to put towards better equipment, structures, maintenance of their operation, and workers. This may make it difficult to provide real life examples of hazards on the farm/ranch. Finding a farm/ranch that has hazards will help in teaching trainee's how to identify, assess, and correct the hazard based on the Farm Hazard Analysis Tool (FARM-HAT). Sometimes the farmer/rancher may be interested in having a hazard analysis done on their farm. Offer to provide a free report of their farm on what they can do to better make their farming/ranching operation safer, including information on the program. It also never hurts to provide a small thank you token for opening up their operations to assist in training others in RF-DASH!

Agenda

There is no one set way to organize a training. We encourage trainers to coordinate trainings that work best for your audience. Below is an example agenda that the RF-DASH team has utilized for many trainings. Having a local organization sponsor the lunch is also a great idea. Reach out to your local farm bureau or insurance company and see if they would be interested in attending and promoting the training. This can help establish further relationships with other organizations in the community, as well as provide information and incentives for area farmers/ranchers to invite local fire departments out onto their operation.

Classroom Training Agenda Example:	
8:00 AM - 8:15 AM	Welcome/Introductions
8:15 AM - 9:00 AM	Part 1: Introduction to Ag Emergencies
9:00 AM – 9:30 AM	Part 2: Pre-Planning Farm/Ranch Responses
9:30 AM – 9:45 AM	Break
9:45 AM - 10:30 AM	Part 3: Farm/Ranch Hazard Analysis
10:30 AM – 11:00 AM	Part 4: Farm/Ranch First Aid
11:00 AM – 11:15 AM	Part 5: Farm/Ranch Community Outreach
11:15 AM – 12:00 PM	Lunch w/ Saferfarm.org/MAPPER demo
RF-DASH Hands-on Training Agenda Example:	
12:15 PM – 12:35 PM	Travel to farm/ranch
12:35 PM – 3:40 PM	RF-DASH Hands-On training (Two groups or split time covering pre-planning and hazard analysis)
3:40 PM – 4:00 PM	Travel back to department/classroom and adjourn training

Participant Materials

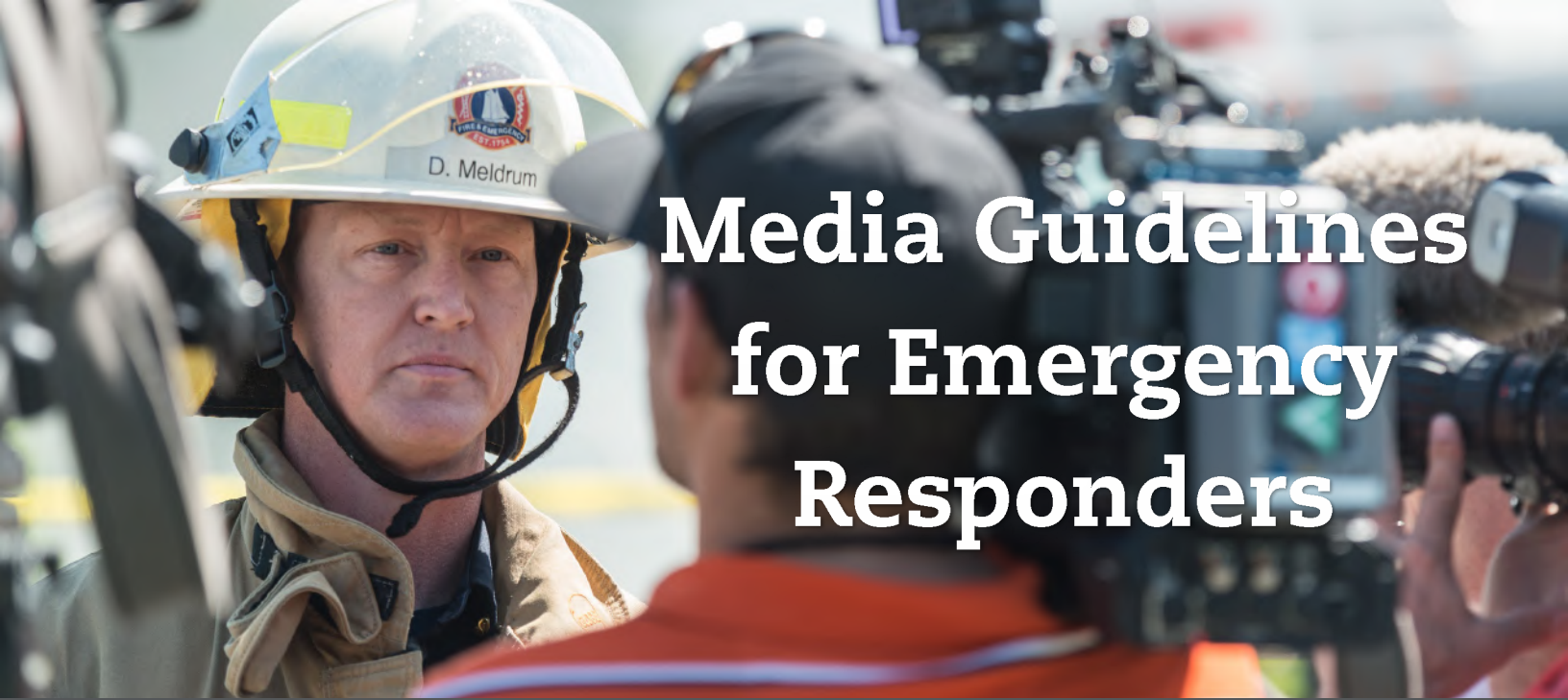
RFDASH.org contains all of the up to date training materials in printable pdf forms to provide participants at trainings. If sufficient time and resources are available, we recommend creating 1” binders with all of the module PowerPoints and materials that would help participants follow along during the training, as well as understand more in-depth the various resources and information on the RF-DASH program.

Visit the resources tab and cycle through the various sections of materials to include at your next training!

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Media Guidelines for Emergency Responders

Goals

- Learn about partnering with the media to prevent injuries in agriculture
- Learn how to prepare for interviews
- Learn how to put it all together

Partnering With the Media to Prevent Injuries in Agriculture

Firefighters/EMS are trusted sources of information for media professionals and the communities they serve. Making the most of your media relationships can help your department disseminate safety and health messages, manage incident scenes, and keep the public informed of the good work you do (e.g., training, community service).

Let's talk about the media landscape, elements of good media relations and how to maximize media opportunities.

How we receive news

Think local. How do you and your friends and family receive news? Your department might already be engaging the public via social media. That is excellent. Social media facilitates "word-of-mouth." It gives you strong control over your message, and research shows

that news received from friends on Facebook is highly trusted. But not everyone is active on social media, even if they have an account, so it is still important to work with traditional media (newspapers, TV, radio). A multi-media approach layers and reinforces your messages. In addition, by partnering with traditional media, you take advantage of their marketing research. They're experts at reaching their audiences.

The media landscape

Newspapers: This industry has declined greatly over the past 20 years, and many small town papers with local-sounding names are shells of what they used to be, operated by editors from afar. Still, you can often find locally-based editors and reporters who are invested in their communities. Check out some of the weekly papers, which focus solely on local news. You also might reach out to agricultural weekly newspapers. There are three in Wisconsin: The Country Today, Wisconsin State Farmer and Agri-View.

Television: While newspaper newsroom staffs have decreased in size, the number of TV newsroom employees has remained steady over the past 20 years.

For this reason, and because of the visual nature of the medium, you are more likely to encounter a TV reporter than a newspaper or radio reporter at the scene of an incident.

Radio: The industry has undergone much consolidation, with companies often owning multiple stations at local levels. Listen to your stations. Is there one person who usually handles local news? And is there one agricultural broadcaster whose reports are carried locally? Agricultural broadcasters are highly respected in rural communities, providing agribusiness and human interest news multiple times a day. Listeners think of these broadcasters as trusted friends. Wisconsin is home to prominent agricultural broadcasters such as Pam Jahne in Madison, Brian Winnekins in Durand, Travis Clevin in Green Bay and Bob Bosold and Scott Schultz in Eau Claire.

Each of these mediums has strengths and weaknesses, and one might be more prominent in your area than the others.

Spokesperson and a media relations plan

Decide your communication goals. They can be broad and might include:

- Building trust with the community and local media.
- Motivating and influencing safety behavior in the community.
- Setting the stage for future safety messaging.



- Promoting fundraisers for new equipment.

Whatever your specific communication goals, a **spokesperson** (public information officer) will be essential in your department's relationship with the media and community. A spokesperson embodies a department's identity, personifies its response efforts, and serves as the overall human connection to the public. Media members appreciate being able to deal with one person who can handle all their needs/questions. Having a designated spokesperson also makes it easier to manage on-scene communication. Ultimately, if a spokesperson is successfully able to communicate important safety and health messages, the community should see fewer incidents of illness, injury, and death.

As the media point-of-contact, the spokesperson's responsibilities span before, during and after an incident.

- Establish relationships with your local media agencies before an incident (e.g., invite them to a training, invite them to like your Facebook page).
- When on-scene, keep reporters out of harm's way while at the same time facilitating their coverage.
- Attempt to give reporters a reasonable timeframe to expect new information updates.
- Understand journalism deadlines and work to accommodate them. During an incident or crisis, it is important to be available to help reporters get the facts right before their deadline.
- The media can help you achieve your communication goals, but only if you work with them.
- Remember the three B's: be credible; be available; be helpful.
- There can be a lot of turnover with reporters in small markets. New reporters will appreciate you being available to provide context and guidance.

Preparing for Interviews

Scheduled

- Before you agree to an interview, ask the reporter if he/she has an angle in mind. If yes, offer to provide facts/figures/references that might help the reporter prepare for the interview. If the reporter does not have a specific angle – perhaps their assignment editor told them “go out and do a story about Fire Prevention Week” – you then have an opportunity to help shape the story and suggest an angle.
- Do your homework. Read/view some of the work of the reporter; perhaps find mutual points of connection.
- Will the interview be recorded or live?
- Ask the reporter if he/she can send you questions in advance to help you better prepare. Offer to review articles for factual content before they are published, some reporters actually appreciate that.
- Decide on what you want to accomplish with the interview. Develop one to three key talking points that you want to emphasize during the course of the interview. Practice these “talking points,” trying to keep them to 15 seconds or less.
- Don’t hesitate to say, “I don’t know, I will have to get back to you.” Follow up promptly.
- If you get a tough questions, stay “on message” and bridge back to your talking points.
- Don’t be lulled into a false sense of security by a reporter’s promise to keep your comments “off-the-record.” Everyone can be held accountable for anything they say.

On-scene

- Always assume you are being recorded and that anything you say or do could end up on Facebook Live or a media report.
- Don’t speculate. Let’s say you’re on a hazmat scene

Don’t get kinked up!

It might sound easier said than done, but try to relax! You are the expert and you have an important safety-related message to convey. Radio and TV reporters, especially the experienced ones, have a knack for guiding the conversation and getting interviewees to relax.



and the reporter wants you to speculate on what could happen if a tank, or a certain chemical, explodes or spreads elsewhere. In refusing to speculate on this worst-case scenario, you’re not hiding anything; you’re just not going to help a reporter scare viewers to death. Instead, “bridge” back to your key points. “Yes, this is a serious situation and we have responders on the scene right now who are working hard to eliminate the hazard.” This technique allows you to acknowledge the question, but very quickly bring it back to what you want the public to know.

- Talking points should include, if possible, a prevention message. For example, if a farmer/rancher is injured in a PTO (power take off) incident, the prevention message could be, “Rotating PTO shafts are extremely hazardous. Farmers/Ranchers can reduce the hazard by keeping all shields in place, staying away from moving parts, not wearing loose-fitting clothing and keeping long hair tucked under a cap or tied back.” By keeping the message general you are not “judging” the individual involved in the specific incident.
- Do not say “no comment.” That sounds like you’re arrogant or trying to hide something. Instead, for example, say, “I can’t comment on that now because I don’t have accurate information.” Or, “here is what I can tell you now for the 6 p.m. broadcast, and I will try to have more for the 10 p.m. broadcast.”
- Avoid terms like “it was a freak accident.” That implies there was nothing that could have been done to prevent the incident.



Additional Media Interview Tips

- Don't use firefighter jargon. Your information isn't going to fellow firefighters, it's going to the general public.
- Don't argue with a reporter.
- Don't play favorites. Treat all reporters the same.
- Treat reporters with respect and they will usually respond in kind.
- Know reporters' deadlines.
- Don't be intimidated.
- Monitor the news coverage that follows the interview to ensure its accuracy and follow up on any major errors. Don't be discouraged if the report doesn't turn out exactly the way you wanted. All you can control is the information you provide.
- Special TV tips: a) dress the part, look professional; b) avoid simple "yes" or "no" answers, elaborate a little but get to the point; c) no sunglasses; d) no smoking or chewing.

Power of stories



Photo courtesy of Marshfield Clinic Health System

Stories are powerful and can help influence safety behavior. Each incident can provide a "teachable moment." Consider issuing a press release or incident report with information such as: incident location, time called, what did the responders find, what actions did they take, and final results. Include a safety tip/prevention message, and an action step, such as a link to a safety resource for more information.

Putting It All Together

Case study – "Tractor vs. milk truck crash under investigation"

On November 14, 2019, a group of Firefighters and EMS personnel attending the Wisconsin EMS Association Meetings were trained about the increased risks in agriculture and how they can become effective safety advocates by being prepared to safely respond to farm/ranch emergencies. One of these individuals present at the training was Stratford (Wis.) Fire Chief, Tim Carey.

Four days after the training, on November 18, Stratford Fire with mutual aid from Mosinee and Marshfield Ambulance responded to a farm incident in rural central Wisconsin. A milk truck heading down a county road collided with a tractor in the late evening hours that sent both individuals to the hospital. Tragically, the incident resulted in the loss of the 38-year-old driver of the tractor.

Chief Carey being on scene and having just taken the RF-DASH training a week prior, did an excellent job of communicating with the local media about actions that both farmers and the community can take to prevent such incidences from ever occurring.

"At this time of year, everybody needs to slow down and be cautious of all the farm tractors out there," [Carey told WSAW TV, Wausau](#). "For all of the farmers out there, make sure you put on new SMV signs, reflectors, and all of the flashing lights you can, because I don't want to come out to another one of these."

Chief Carey, both a farmer and a firefighter, understands the hazards that come with working in high risk occupations.

Safe Depictions

The agricultural stories we share in traditional and social media can make life safer for farm and ranch families and workers. However, while not intentional, what we write, say, and the images we show can also promote unsafe farm/ranch practices.

To help minimize unsafe practices, the Childhood Agricultural Safety Network has created [Media Guidelines for Agricultural Safety](#), a list of do's and don'ts aimed at keeping folks safe and not perpetuating dangerous farm/ranch practices. Examples include:

- **Don't show** individuals riding on wagons, in the back of pickup trucks or as extra riders on tractors or ATVs.
- **Don't show** children riding on adults' laps on ATVs, or lawn tractors/riding mowers.
- **Don't show** children in proximity to large animals unless appropriate barriers are evident.
- **Do show** children doing age-appropriate chores under adult supervision and wearing protective equipment.

Media Relations Resources

- [PIO 101: The basics of media relations for the fire service \(Firehouse\)](#)
- [PIO 101: Tips for media interviews \(Firehouse\)](#)
- [The Media's Role in a Crisis, Disaster, or Emergency \(Centers for Disease Control and Prevention\)](#)
- [Emergency preparedness planning: media relations \(The Hartford\)](#)
- [Media guidelines for agricultural safety \(Childhood Agricultural Safety Network\)](#)

Notes

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Resources



RF-DASH Website—rfdash.org

The RF-DASH website houses all of the resources and materials you may need to promote the program, train others, and increase your knowledge and understanding of preventing farm incidents. It also contains a community hub of other RF-DASH members across the U.S. and Canada sharing updates and information on their successes, challenges, resources, and more in their journey to reducing injuries and fatalities on farms and ranches.

Cultivate Safety—cultivatesafety.org

Farms and ranches are home to many things that are beneficial to both children and adults (plants, animals, family, chores, business features, etc.). Many adults who grew up on farms or ranches are happy to talk about the benefits of being raised on a farm/ranch – from instilling a good work ethic and teaching responsibility to building character and instilling a passion, love and respect for the land.

However, farms and ranches also have the most dangerous and deadly worksites in the U.S. By implementing the safety strategies and using the resources on this website, farmers and ranchers, their families and employees can reap the benefits of farm and ranch life, while minimizing the risks.

The National Farm Medicine Center and National Children’s Center for Rural and Agricultural Health and Safety designed the Cultivate Safety website to provide easy access to agricultural safety information and resources for farmers, ranchers, supervisors and media. For additional information, visit cultivatesafety.org.

AG Injury News—aginjurynews.org

The AgInjuryNews.org database is both a repository of injury reports and valuable information source for agricultural injuries, fatalities, and agricultural injury prevention methods. This system allows users to: 1) monitor trends in types of agricultural injuries, 2) identify new injury agents and emerging issues in agriculture, 3) provide safety messages for media reports in anticipation of trends, and 4) raise awareness and knowledge of agricultural injuries and prevention strategies for adults and children.

National ROPS Rebate Program—ropsr4u.org

Tractors are the leading cause of deaths on farms and ranches. A rollover protective structure (ROPS) refers to operator compartment structures (usually cabs or frames) intended to protect operators from injuries caused by overturns or rollovers. ROPS, when used with seatbelts, are 99 percent effective in preventing injury or death in the event of an overturn. The goal of the ROPSR4U program is to encourage farmers to install ROPS on their tractors by offering a rebate of 70% on the purchase and installation of a ROPS. To take advantage of this program, visit www.ropsr4u.org.

About the Authors



Casper 'Cap' Bendixsen, PhD

As a social-cultural anthropologist, former firefighter/EMT, Director of the National Farm Medicine Center, and raised on a farm and ranch, Dr. Casper 'Cap' Bendixsen has an extensive background working with, living within, and researching agricultural, rural communities, and emergency responders in the U.S. Directing the RF-DASH program and instructing the "farm community outreach" module, Dr. Bendixsen sees emergency responders as the key connectors with the agricultural community to mitigate injuries and fatalities on our farms and ranches.



Dennis Murphy, PhD

Growing up in a central Illinois family that operated a grain & livestock farm, a funeral home, and ambulance service, working with rural emergency service providers, farmers, ranchers, their families, and hired workers, has always been important to me. As the Extension Safety Specialist at Penn State University for 41 years, I have helped to create farm firefighting, agricultural accident rescue, and farm/ranch family emergency response programs, and well as numerous safety and health programs and resources for farm and ranch operations.



Chief Jerry Minor

I've been doing the fire EMS thing for 40+ years so that's pretty much my entire work career. Outside of the FD stuff I do more FD stuff. I have always thought the RF-DASH program should be the "one stop shop" for Fire / EMS folks as they look for information and training on Ag related needs. I'm very grateful the partnerships that we build and believe that they can do nothing but enhance the good for all involved.

About the Authors



Dave Hill

I've helped lead in the development of the training program, specifically related to teaching emergency responders how to be better prepared to respond to and manage farm emergencies as well as teaching farm family members how to approach trauma emergencies on the farm. For the past 25+ years I have been striving to learn about trauma and teach those first on the scene how to best treat it. Our efforts led to a statewide protocol for pre-hospital treatment of crush injuries. My goal is to help the program identify some key people that can help the agriculture community recognize hazards on their farms and reduce the potential for serious and fatal injuries.



Stephen Brown

I am Farm Safety Specialist at Penn State Extension providing education and training on farm safety and agricultural rescue. Outside of my normal work, I enjoy working on my own farm equipment and volunteering with the local fire company. Being a fifth generation volunteer firefighter, the RF-DASH program has captured my interest because it allows me to combine by passion for agriculture with emergency response and working directly with both groups towards a common goal. I instruct the "Introduction to Agricultural Emergencies" module.



Jim Carrabba, MS

I am an Agricultural Safety Specialist with NYCAMH/NEC (New York Center for Agricultural Medicine and Health - Northeast Center for Occupational Health and Safety). I have been in my position for 15 years providing safety training and safety consulting to farmers in NY primarily, but also in our NEC Northeast region. Part of my duties include delivering agricultural hazard awareness level training to firefighters and EMS personnel in my region.

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About the Authors



Matt Keifer, MD

I am a Occupational Medicine Physician and former Director of the National Farm Medicine Center. My experience in agriculture starts when I was a teenager, working on a farm in the summer's, and those being some of the most enjoyable times of my life. When I became a physician, I wanted to marry my farm and medical interests together and agricultural medicine was a perfect fit. I instruct the "Preplanning and Mapping Farms" module.



Scott Heiberger, MS

In my youth, I spent summers working at my grandparents' farm in central Illinois. Fortunately, the only emergency response involved not an injury, but a wheat field set on fire by sparks from a passing railroad engine. Today, I work in agricultural safety and health as communications manager of the National Farm Medicine Center, where I apply my experience in journalism and media relations to translate research and promote safety. I am a member of the American Ag Editors Association and National Association of Farm Broadcasting.



Kyle Koshalek

I am a Project Manager at the National Farm Medicine Center and National Children's Center for Rural and Agricultural Health and Safety. My family had experienced a tragic incident on the farm that resulted in losing their operation entirely. I have not had the benefit of experiencing farm life, but have always been immersed in it having worked for the largest organic cooperative in the U.S., Organic Valley. Through my families fatal farm incident and my interest in agriculture, I have a deep passion for the RF-DASH program and working with fire and EMS to prevent injuries and fatalities on farms.

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Occupation: _____

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