

Introduction to Agricultural Emergencies

Module 1



RURAL FIREFIGHTERS DELIVERING AGRICULTURE SAFETY & HEALTH

Course Goal

To raise awareness of emergency service personnel (fire, rescue, EMS, police, CARTS) about the many hazards on farms that can cause serious injury, death and property loss and how to be better prepared to respond to and manage emergencies on farms.



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Terminal Objective

Upon completion of this module, the student will describe the importance of and need for a well coordinated incident management system (ICS) at agricultural incidents.



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Specific Objectives:

- List 5 hazards that might be encountered on a farm in their community
- Describe two major differences they might encounter managing an emergency involving farm equipment versus automobiles
- List 3 typical farm confined spaces



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Specific Objectives:

- List 3 components of a farm pre plan and describe the importance of performing pre plans on farms
- Describe appropriate resources that should be requested to the scene of an injury emergency involving farm machinery, chemicals, structures, or animals



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The Agricultural Industry



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WI Agricultural Industry

- 64,793 farms
- 14,318,630 acres
- \$11,427,423 Market value of agricultural products sold



Sources: 2017 CENSUS OF AGRICULTURE-STATE DATA



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The Challenges of Today's Farmers



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Increasing production costs vs. stagnant farm income

Rising equipment costs.
Higher operating costs.

Result:

*Farmers must produce more
and sell more to stay profitable.*



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New Technology Demands

Necessary to be efficient.
Expensive to implement.

Result:
*Farmers must constantly modify
their operations.*



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More Regulations

Additional regulations may
require costly changes which can
be unaffordable for many farms.
Local ordinances and zoning may
restrict farm changes and growth.

Results:
*Farmers struggle to “keep
up”.*



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Commitment

Farming is a 24/7/365 job.
Great investment required.
Risks are higher than other careers.

Result:
*Farming is a business and career
commitment.*



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Consumer Expectations

Low food prices.
Need for huge quantities.
Demand for high-quality and consistent product.



Result:
Increased demands on farmers' capabilities.



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Other concerns:

Extremely weather dependent.
Working in remote locations.
Lack of knowledge.
Poorly maintained equipment.

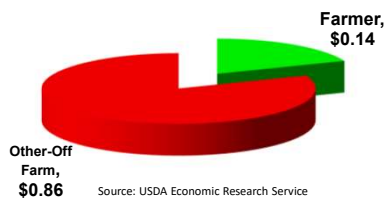
Result:
Increased risks to the farmer.



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Farm Economics:

What does the farmer make on every \$1.00 spent on food?

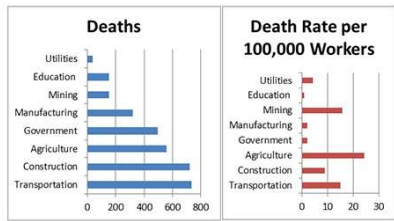


Source: USDA Economic Research Service



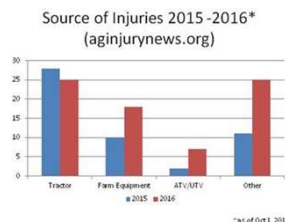
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Deaths and death rates per 100,000 workers



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Source of Farm Injuries



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Economic impacts

- Based on estimates from the National Safety Council, for every death, the cost to the family, community, etc. is estimated at \$1.5M



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Major Causes of Death & Injury:

- Tractor Overturns - side & rear
- Tractor Run-Over
- Machinery Entanglements
 - PTO, auger
- Animals



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Barn Fires

Poor surveillance



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Agricultural Hazards in your community:

- Tractors & Machinery
- Animals
- Chemicals
- Structures
- Criminal Activity / Agro-/Eco-Terrorism



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Tractors and Machinery



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Sampling of Tractor Deaths:

- Operator fell from tractor
- Tractor overturned onto victim pulling a log
- Tractor rollover during mowing operation
- Tractor rolled over onto victim working near a bank
- While dumping wood, skid steer tipped forward ejecting operator
- Child passenger crushed when machine turned over



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Animals



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Animals

- Cause of the majority of “injuries”.
- Normally scene will be secure when you arrive?
- Things out of their ordinary rile them.
- Cool, calm & collected approach – No lights & sirens
MUST have “animal” people to manage them—preplan now!
- Cool, calm & collected approach – No lights & sirens.



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Handling Animals

Fires



Accidents



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Flooding

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Animal Rescues

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Handling Animals

Building Collapses

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Chemicals



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Chemicals

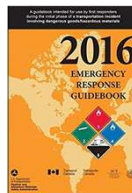
- Seasonal
- Concentrated vs. dilute
 - Ex. 1 pint to 30 gallons of water
- Stay upwind, out of "material"



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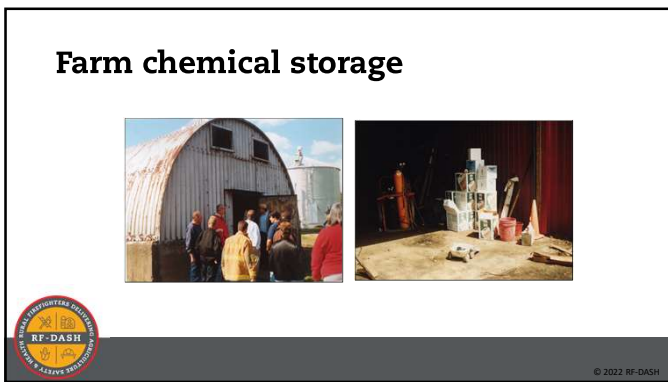
Chemicals

- ERG ("Orange Book") will most likely NOT be a source of information.
- Container label is BEST source of info for initial management.
- Greenbook (www.greenbook.net) will be a resource for ag chemicals.



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Structures

- Confined spaces
 - Silos, grain bins, manure storages, bulk tanks, wells, buried tanks, etc. etc. etc.
- Animal housing
- Machinery storage
- Farm shop
- Chemical storage
- Feed/commodity storage
- Other



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Farm confined spaces



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Farm Shop



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Animal housing



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Chemical storage



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Feed/commodity storage



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Manure storage



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Pre-Planning Farm Emergencies



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Preplanning Farm Emergencies

- Farms are industrial facilities with many hazards
- Understand what emergencies can happen
- Visit each farm in your district to walk around/tour
- Preplan exercise-commit to writing-SOP/SOG
- Set up scenarios to test procedures and guidelines



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Farm pre-plan: Tour



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Farm pre-plan: SOP/SOG's



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Farm pre-plan: Animal Emergencies



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Farm pre-plan: Machinery Issues



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Farm pre-plan: Test SOP/SOG's



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Extrication & Treatment Issues

- How to extricate
- How to treat patient
- What resources are needed?
 - Mutual aid personnel
 - Mutual aid tools
 - Wreckers
 - Helicopter, ALS
 - Etc.



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Toolbox and Special Tools



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Special Resources - Machinery



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Questions?

- Connect with us!
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