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Farm Safety

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FARM SAFETY: STATS & CAUTIONS

UMass Pesticide Safety Meeting
April 26, 2016

Hilary Sandler, UMass Cranberry Station, E. Wareham

Photo: earlsorganic.com

Adapted presentation of Ray Samulis, Burlington, NJ Agricultural Agent
Farmers by Age %

- **15-35**: US (22%), Farmers (5%)
- **35-54**: US (38%), Farmers (40%)
- **55-64**: US (18%), Farmers (30%)
- **65+**: US (20%), Farmers (30%)
Farmworkers are at HIGH RISK for fatal and nonfatal injuries, work-related lung diseases, noise-induced hearing loss, skin diseases, and certain cancers associated with chemical use and prolonged sun exposure.

2011: 7x higher for ag than private sector: 24.9 deaths vs. 3.5 per 100,000.
Current Stats

- Between 2003-2011, 5,816 ag workers died from work-related injuries in the US.

- 90 deaths per yr from rollovers (1992-2009)
  - Only 60% of tractors have rollover bars

- Each day, 243 workers suffer a serious injury.
  - 5% of these result in serious impairment.
Main Causes of Death in Agriculture 2006-2015

N=194

- Tractors: 29%
- Machinery: 19%
- Livestock: 14%
- Drowning/Gas: 10%
- Falling objects: 10%
- Other: 7%
- Falls: 7%
- Electrocution: 2%
- Other: 2%

“Other” may include poisonings, etc.
Deaths due to Tractor and Farm Vehicles 2006-2015

- Crushed: 67%
- Overturned: 14%
- Struck: 12%
- Falls: 7%

N=57

Fatal accidents: Health and Safety Authority
Deaths due to Machinery 2006-2015

- Falls: 5%
- Caught in machinery: 11%
- PTO entanglement: 11%
- Struck by parts: 35%
- Crushed: 38%

N=37

Fatal accidents: Health and Safety Authority
Fatal accidents: Health and Safety Authority

Deaths of Older Farmers 2006-2015

- Tractors: 18%
- Machines, Quads, PTO: 24%
- Livestock: 21%
- Falling bales: 9%
- Drowning: 7%
- Falls: 5%
- Timber: 3%

N=67
Fatal accidents: Health and Safety Authority
Paradox of Farm Safety

- 100+ years of training but basically no effect on injuries (types or numbers).
- Not due to farmers not understanding issues.
- Long history of unregulated farm operations.
- Perceived high costs of safety.
- Social norms call Farm accidents “acts of God” or “freak accidents”.
Why might this happen?

- Tired
- Distracted
  - Texting while tractoring?
  - Visitors
- Time Constraints
  - Just got to get this last thing done ....
FRONT-END LOADERS

- Don’t load and turn at the same time.
- Don’t turn / drive with an elevated load.
- The bucket is **NOT** transportation!
- The bucket is **NOT** a work platform.
- Don’t walk under FEL.
FORKLIFTS

- Watch for rollovers here, too!
- Take care when the balance changes.
TRACTORS

- Be familiar with the machine.
- Check it before each use.
- PTO - danger!!
### Elapsed Times vs. Distance

**540 rpm PTO**

<table>
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<th>seconds</th>
<th>revolutions</th>
<th>feet traveled</th>
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<td>1.1</td>
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</tr>
<tr>
<td>1.0</td>
<td>9</td>
<td>7.1</td>
</tr>
</tbody>
</table>
This could have been Human Flesh!
PTO Operator Accident Factors

- Fatigue
- Lack of knowledge
- Slow reaction time
- in a hurry
- Attitude
- Quality and durability of clothing
Accident Scenarios

- Clothes completely torn off
- Clothes torn off - loose skin
- Clothes torn off - body wrapped
- Clothes not torn-off
- Hair entanglement - Scalping
What Can be Done??

- Shut-off when dismounting.
- All shields and decals in place.
- No loose clothes or hair.
- Tie shoe laces.
- Trained operators.
- Walk around equipment, not over.
- No bystanders.
- Test shaft guard, free rotation.
Choose the Right Respirator

8000 Series Assembled Respirator

Recommended by Moldex for:
PAINT SPRAY/PESTICIDE
(Waterbased Only, Free of Oils.)
8112N Medium
NIOSH approval TC-84A-1337

Includes:
#8112 N95 Filters
#8020 Retainers
#9100 Organic Vapor Cartridges

SEE BIOHAZARD WARNING INSIDE

WARNING
This respirator helps to protect only against respiratory hazards as specified. Check that contents correctly match for hazard and facepiece size. Misuse, or failure to follow all instructions, and warnings may result in sickness or death. Use only with the appropriate Moldex 8000 Series cartridges and/or filters.

For product info, consult your supplier or read other documents.
Creative but **100%** illegal!!
Learn to Control Hazards

Go to trainings!
Hearing Protection

Cheap, Disposable, Easy to use
Agriculture Disability Statistics

• ~15-25% farmers and other ag workers have limitations that interfere with work.

• According to National Safety Council: 850 agriculture related deaths and 140,000 disabling injuries annually.

• 87% farm related injuries require medical attention.

• 1 disability per every 14 farms.
Realities of Farm Hazards

- Saw / finger
- Tractor rollover
- Tractor run over
- Front end loader
- Small pesticide sprayer
- ATV accident
- Irrigation guns
- Electrocution (2)
- Thumb ½ cutoff
- Skin cancer
- Shotgun accidents (3)
- Paralysis
- Aerial spray accident
- Tree removal
- Tank explosion
- Suffocation

Depression due to financial concerns, legal issues, health problems, etc.

Experience of R. Samulis, Rutgers Extension, over several years
What can you do?

- Read instruction manuals.
- Talk to your workers and family.
- Put rollover bars on tractors.
- Routinely inspect / maintain equipment.
- Go to safety trainings.
Web Site Resources

- **OSHA:**
  www.osha.gov/dsg/topics/agriculturaloperations/

- **National Safety Council:** http://www.nsc.org/pages/home.aspx

- **EPA:** www.epa.gov/pesticide-worker-safety/revisions-worker-protection-standard

- **Agrabilities:** www.disability.gov/resource/mid-atlantic-agrability-project/#content
Think you’re having a bad day.....