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2015 Pesticide Safety: Farm Safety

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Farm Safety & Less Obvious Farm Hazards

UMass Pesticide Safety Meeting
April 7, 2015

Hilary Sandler
Borrowed from:
Ray Samulis, Burlington, NJ Agricultural Agent
Farmers by Age %

- 15-35
- 35-54
- 55-64
- 65 +

US Farmers
Fatal Occupational Injury - Rate / 100,000

Age Range/years

16-24 25-34 35-44 45-54 55-64 65 +

Private
Agriculture
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 costs of safety (economic & production).

• Social norms call farm accidents “acts of God” or “freak accidents”.
Pesticide application of the past
Sprayer Innovations
## Pennsylvania Farm Fatalities

<table>
<thead>
<tr>
<th>% of Deaths</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>Machinery</td>
</tr>
<tr>
<td>18</td>
<td>Drowning</td>
</tr>
<tr>
<td>12</td>
<td>Falls</td>
</tr>
<tr>
<td>3</td>
<td>Poisonings</td>
</tr>
</tbody>
</table>
Watch the Balance Changes
Shifting the Fulcrum Balance
Try to Untangle this “Flesh”
## Elapsed Times vs. Distance
### 540 rpm PTO

<table>
<thead>
<tr>
<th>seconds</th>
<th>revolutions</th>
<th>feet traveled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15</td>
<td>1.4</td>
<td>1.1</td>
</tr>
<tr>
<td>0.25</td>
<td>2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>0.33</td>
<td>3.0</td>
<td>2.4</td>
</tr>
<tr>
<td>0.40</td>
<td>3.6</td>
<td>2.8</td>
</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.
Food & Pesticides
Posting
Choosing 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:
- #8102 N95 Filters
- #0420 Retainers
- #5102 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. Consult your supervisor for more information.
Creative but 100% illegal!!
Learning to Control Hazards

Go to trainings!
Hazards: Customers !!!
Quicksand Effect of Grains & Fertilizers

Fully submerged man = 900 lbs of force to pull out!!
Hearing Protection

Cheap, Disposable, Easy to use
Equipment Noise

New vs. Old, Mufflers, High Technology Cabs
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.
Farm Depression Surveys - Iowa

- Lost something of sentimental value
- Experienced substantial income loss
- Gone deeply into debt
- Legal problems
- Increased health problems
Realities of Farm Hazards

- Saw/finger
- Tractor rollover JK
- Tractor run over RL
- Front end loader HG
- Small Pesticide Sprayer
- ATV accident GD
- Irrigation Guns BJ
- 2X electrocution 2010
- Thumb ½ cutoff 1/15

- Skin Cancer FM
- Shotgun accidents 3X
- Paralysis EN
- Aerial spray accident
- Electrocution RW
- Tree Removal SJ
- Tank Explosion 2010
- Suffocation GT
• National Education Center for Agricultural Safety (Iowa); necasag.org

• www.midatlanticicagrability.com

Helps farmers who have disabilities; fact sheets and other support