Youth & Grain

- Youth under ____________.
- Do not work in/around grain storage unless ____________________.
- Do not work inside grain structures when grain is being ____________________, ____________________, or ____________________.
- Properly trained by experienced & knowledgeable ____________________ for all tasks.
- Knowledge about ladder/climbing safety
- Employers must comply with ____________________.

Stand T.A.L.L.

Talk. ____________________. Learn. ____________________.

Employee Rights

www.whistleblowers.gov
www.osha.gov

Workers are entitled to:

1. ____________________ & ____________________ working conditions which **DO NOT** pose a risk of serious harm.
2. Fair compensation.
3. ____________________, unsafe or unhealthy working conditions without retaliation.

Major Grain Hazards

- ________________/______________
- ____________________________
- Falls
- Electrical
- Other Hazards
  - Dust
  - Struck By
  - Noise exposure
Hazard = Danger; Risk = Action

Hazard: ____________________________________________________________

Risk: ______________________________________________________________

What you don’t know CAN hurt you

Reduce Risk

• Know _______________________________

• Understand __________________________ ______________________________

• Take proper ______________________________________________________

Take Action to Reduce Risk

• __________________________ hazard

• __________________________ hazard

• __________________________ hazard
  ○ __________________________ equipment

• __________________________ __________________________

• Use proper PPE
Entrapment vs. Engulfment

- **Entrapment**
  - ________ of body submerged
  - Over ________ – can’t rescue self
  - _____ ________ to helplessness

- **Engulfment**
  - Total submersion ________ seconds
  - Usually ________________ recovery
  - Death caused by suffocation

Impact – Entrapments

- Entrapments increased > ____________% (2001-2010)
- 36.8 per year - 5 year average
- ________% involve youth 11-20 years
- ______% ________________ rate 11- 20 age group
- More common on ________________
- Numbers are under reported

Grain Facts

- Normal: sink around ________ inches
- One cubic foot of grain weighs~ __________ ________________.
- Grain acts like ______________________________

Hazard – Bad grain condition

**Bad Grain Condition**

- _________________ temperature
- _______________ moisture content
- Smell - ________________, musty, fermented, ________________

**Good Grain Condition**

- _________________ temperature
- _______________ moisture content
- __________________ movement
- Sweet smell
Notes Pages Section 3: Entrapment/Engulfment Hazards, continued

**Hazard – Tower, Cone Up or Cone Down**

- Grain towers
- Grain cones up (______________)
- Grain cones down

**Entrapment/engulfment – 3 ways**

- __________________________ Grain
- __________________________ Grain
- __________________________

**Flowing Grain**

- Acts like quicksand; pulls worker down
- ________________ worker in seconds
- NEVER “_______________ ______________” grain

**Bridged Grain**

- Crust forms on top; creates cavity __________________________
- __________________________ when walked on
- __________________________ worker

**Avalanche Grain**

- Worker attempts to dislodge grain
- Falls unexpectedly; buries worker
- Stay above the grain

**Ground Piles & Flat Storage**

- Moving/flowing grain
- Tower/Pyramid
Lock out/Tag out/Try out – LOTO

Keep others from turning machines on!

- De-energize all energy sources
- Lock out – put on lock
- Tag Out – warn others
- Try Out – ensure no energy is present

Avoid entrapment/engulfment

- Do not ____________ bin with grain
  - Law – must be ≥ 16
- Lock entrances

Bin entry – all workers

- MUST be ______________________
- ALWAYS Lock Out/Tag Out
- NEVER “walk down” grain
- ALWAYS have ______________________
- Use harness & lifeline

Rescuing a victim

Only trained personnel enter a bin

- Stabilize victim
  - grain tube or other means

Lock out/Tag out Requirements

Your lock cannot be opened with another key.

Why can’t you help?

Amount of force required to pull a person out of grain depends on ______________________ of entrapment.

- Remove grain
  - cut bin exterior evenly
- NEVER attempt a rescue
Common Machine Hazards

- Nip Points
- Shear/Cutting Points
- ________ - ________ Points
- Wrap Points

Guard ALL moving parts to reduce exposure & injury.

Pinch/Nip points

- ________________
- Pulley, _______________, gears
- Auger drive motor
- Bucket leg drive/belt
- Sliding doors (bin)

Cutting/Shear point

- ________________
- Sickles
- Mower blades
- Harvesters
- Windrower cutter bar

Pull-in points

- Crop/forage harvesters
- Combine headers
- Windrow pickups
- ________________

Wrap Points -

Wraps in direction shaft is turning

- ________________ shafts
- Augers
- Motor drive shafts
- Pulley attachments

Guarding

Guard ________________ exposed moving parts.
Rotating Speeds

You do not have time to react!

- ___________ second to react
- Equipment rotates >500 rpm
- 3/4 second pull-in person > ___________ feet

PTO Demonstration Observations

________________________________________________________________________

________________________________________________________________________

Human reaction time activity – observations

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Entanglement Hazard Prevention

- Review ________________________________ manual
- ________________________________ in place
- Wear ________________________________ fitting clothes
- Remove all ties & drawstrings
- Pull back & secure hair
- No jewelry
- Keep children away