

HAZARD IDENTIFICATION AND RISK ASSESSMENT

LEARNING OBJECTIVE

Upon completion of this unit you will understand how to identify hazards and assess risks for your dairy operation.

LEARNER OUTCOMES

- 1. Understand that behind each fatality or serious injury there are thousands of at-risk behaviors and unidentified hazards that contributed to the incident.**
- 2. State the definition of a hazard and explain how to identify hazards in the workplace.**

LEARNER OUTCOMES

- 3. Determine methods for controlling hazards in the workplace.**
- 4. Complete a job hazard analysis for a typical dairy farm task.**

INTRODUCTION

- **Safety management leads to**
 - **Increased productivity**
 - **Avoiding injuries**
 - **Avoiding costly, time consuming, stressful and inconvenient incidents**



SAFETY PYRAMID



SAFETY PYRAMID

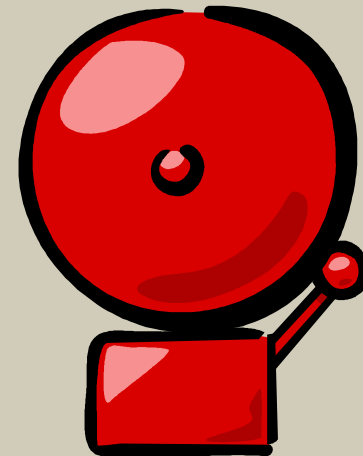
- **ConocoPhillips Marine, 2003**
- **Ratio of serious accidents to near misses**
- **1 fatality : 300,000 at-risk behaviors**

SAFETY PYRAMID

- **At-risk behavior: activities not consistent with safety programs, training and components on machinery**
 - **Bypassing safety components on machinery**
 - **Eliminating safety steps to save time**
- **Can be reduced with machine guarding and training**

HAZARDS

- Hazard: condition or set of circumstances that present a potential for harm
- Two categories



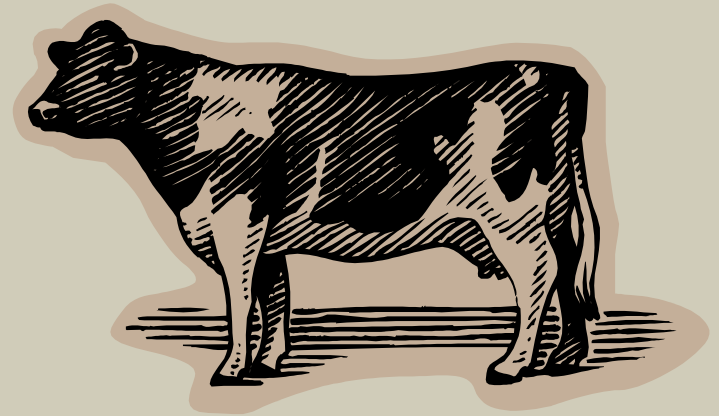
HAZARDS

- Health hazards: occupational illnesses
- Safety hazards: physical harm, injuries



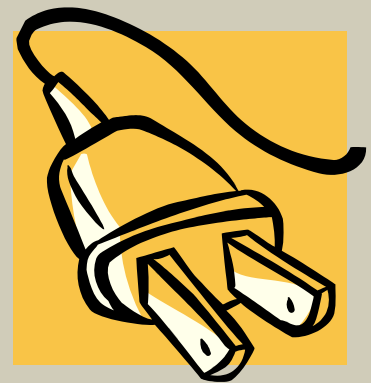
HAZARD IDENTIFICATION

- Process of identifying all hazards in the workplace
- May be grouped by Dairy LEP



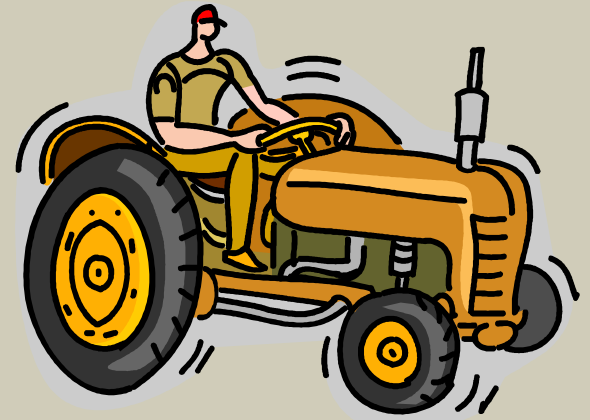
DAIRY LEP

- **Manure storage facilities and collections structures**
- **Dairy bull and cow behavior/worker positioning**
- **Electrical systems**



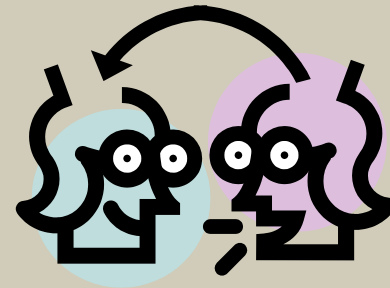
DAIRY LEP

- Skid-steer loader operation
- Tractor operation
- Guarding of Power Take-Offs (PTOs)



DAIRY LEP

- Guarding of other power transmission and functional components
- Hazardous energy control while performing servicing and maintenance on equipment
- Hazard communication



DAIRY LEP

- **Confined spaces**
- **Horizontal bunker silos**
- **Noise**



HAZARD IDENTIFICATION

- **Main cause of occupational health and safety problems**
- **Eliminating hazards or controlling risks is the best way to reduce workplace injury and illness**

HOW TO START

- **Check your farm for:**
 - **Regular hazard assessment surveys of operations, equipment, substances and tasks**
 - **A system of recording injuries, near misses and identified hazards**
 - **Safe procedures for dairy farm tasks**

HOW TO START

- **Safety training and supervision for new and young employees**
- **Protective clothing and equipment**
- **Safety training and practice for each new piece of equipment**

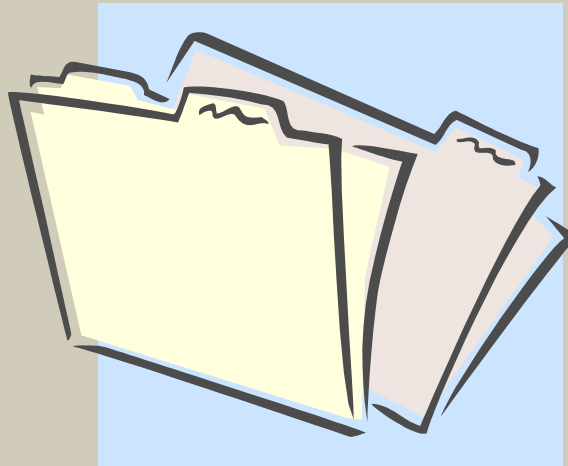
HOW TO START

- Safety discussions between employers, contractors and employees
- Safety information readily available for hazardous substances
- Copies of the regulations



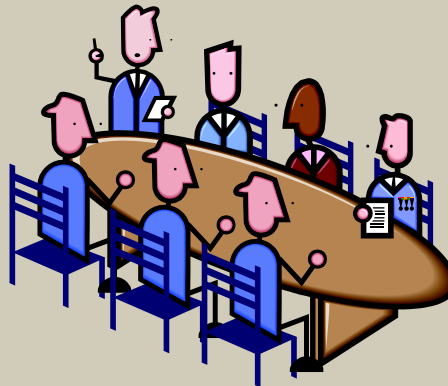
DEVELOP A PLAN

- Written plan
- Store with other safety information



DEVELOP A PLAN

- Discuss the program with others during development
 - Assure all safety concerns are met
 - Incorporate a system for hazard identification, risk assessment and risk control



DEVELOP A PLAN

- Ensure employees are familiar with:
 - the plan
 - safe work procedures
 - current legal safety and health requirements



DEVELOP A PLAN

- **Other components**
 - **Providing farm workers with safety information**
 - **Orientation for new employees**
 - **Safety training for new procedures**
 - **Special safeguards for young employees**
 - **Record of injuries, near misses and potential hazards**

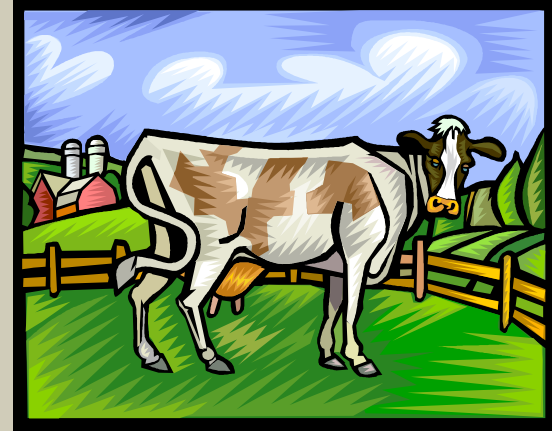
IDENTIFY THE HAZARD

- 24 hour approach
- Environments
- Substances
- Workplace layout



IDENTIFY THE HAZARD

- Work organization
- Equipment
- Farm animals



IDENTIFY THE HAZARD

- Heights
- Electricity



HAZARD IDENTIFICATION

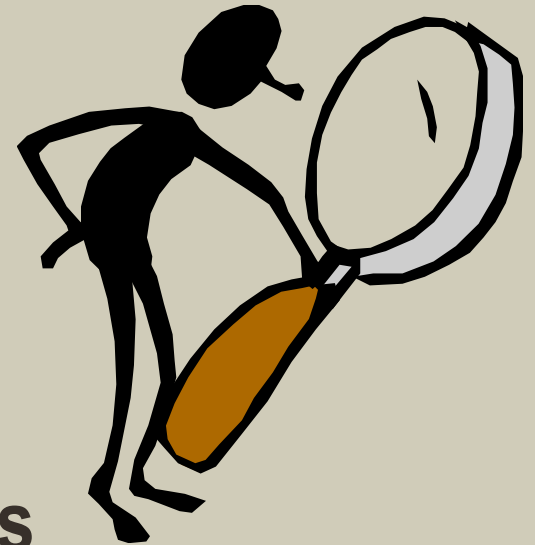
- **Observation**
- **Material Safety Data Sheets (MSDSs)**
- **Hazard and risk surveys**
- **Children and visitor considerations**

HAZARD IDENTIFICATION

- Record analysis
- Discussion groups
- Safety audits

HAZARD IDENTIFICATION

- Information updates
- Consumer information
- Regulations and best practices



ASSESS THE RISK

- **Assess likelihood and possible severity of injury**
- **Determine how to best minimize risk**
- **Address high risk hazards first**

ASSESS THE RISK

- The same hazard could lead to several outcomes
- Consider likelihood of each possibility
- Prioritize

MAKE THE CHANGES

Potential control measures include:

- Remove the hazard
- Substitute
- Isolate



MAKE THE CHANGES

- Add engineering controls
- Safe work practices
- Provide PPE
- Implement and monitor controls



MAKE THE CHANGES

- **Controls should be agreed upon**
- **Make changes as soon as possible**
- **May require more than one risk control measure**

CHECKING THE CHANGES

- May need to be tested
 - Ensure that risk is minimized
 - No new hazard created
- Consultation
- New procedures

JOB HAZARD ANALYSIS (JHA)

- Focus on job tasks
- Prevention
- Relationship between
 - worker
 - task
 - tools
 - environment



JHA PRIORITIES

- **Highest injury or illness rates**
- **Potential for severe injuries or illness**
- **Possibility of incident with simple human error**

JHA PRIORITIES

- New or changed
- Complex



WHERE DO I BEGIN?

1. Involve employees



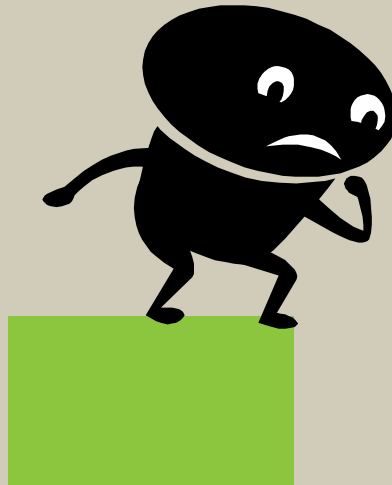
WHERE DO I BEGIN?

2. Review accident history



WHERE DO I BEGIN?

3. Conduct preliminary job review



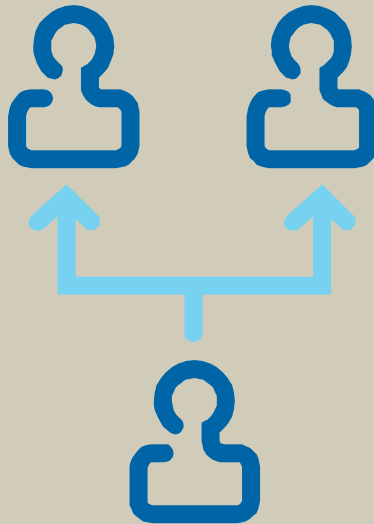
WHERE DO I BEGIN?

4. List, rank, and set priorities for hazardous jobs



WHERE DO I BEGIN?

5. Outline steps or tasks



CLASS ACTIVITY

Complete a Job Hazard Analysis Form for a typical dairy farm job.



OSHA CONSULTATION PROGRAM

- Free
- Professional advice and assistance
- On-site
- Defer OSHA inspections
- Create safety routine



CONSULTANTS' ROLE

- Help employers recognize hazards
- System development
- Problem solving
- Additional resources
- Written summary
- Safety and health training

CONSULTANTS' ROLE

- Consultants will not:
 - Issue citations during consultation
 - Guarantee a workplace will “pass”



CONSULTATION VISIT

- Request for services
- Initial meeting
- Walkthrough
- Closing conferences and follow-up
- Detailed written report
- Follow-up
- Continued contact for assistance



CORRECTING HAZARDS

- Imminent danger
- Serious violation
- Failure to eliminate or control hazards



REVIEW

1. Identify a hazard from each section of the Dairy LEP that may be found on your farm:

- Manure storage
- Animals
- Electrical
- Skid-steer
- Tractor
- PTO guarding
- Power transmission guarding
- Hazardous energy control
- Hazard communication
- Confined spaces
- Horizontal bunker silos
- Noise

REVIEW

- 2. List the steps necessary to conduct a Job Hazard Analysis on your farm**

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