Safety and Quality Go Together

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When does quality matter?

Source: Grain Journal Nov 4 2010
Managing more than quality

- Security
- Cost
- Compliance
- Customers
- Safety
- Speed

QUALITY
Quality is one of many concerns

- Customer service
- Speed/ Productivity
- Personnel safety
- Food safety
- Profits
- Biosecurity
- Site security
- Environmental

Quality directly impacts storage, marketability, and end use!
# Quality Management Systems

**QMS are**
- Disciplined structures for organization of production
- Require structured format for documenting
- Focus on consistency and repeatability

**QMS are not**
- Strict standards on what to do and not to do
- Inflexible
- Generic checklists / audits

[Fail]
Quality management in agriculture

- Respond to security regulations (food safety, environmental, bioterror)
- Increased operating efficiency
- Better ability to meet customer demands
- Tighter control and management of inventory
- Better definition of processes
- Poor decisions mean lost profit!
Safety in the Workplace

• Preventing injury and fatalities is a continuing challenge
  – 4,547 recorded occupational fatalities in 2010 (BLS, 2011)
  – 3 million cases of non-fatal occupational injuries reported in 2010, with nearly 2 million requiring day off work, job restriction or job transfer
  – Fatality and injury rates in agriculture higher than other industries – 37 per 100,000 vs. 3 per 100,000

• Majority of fatalities and injuries occur as a result of:
  – Employees actions
  – Taking shortcuts & not following procedures
How important is safety?

• Reduces absences and days lost to injury
• Decreases insurance premium costs
• Enables enterprises to meet and exceed customer expectations
• Increases motivation and the commitment of employees to the business
• Mistakes are expensive!
Safety and quality are a lot alike

• Common characteristics:
  – Driven by management, often top-down
  – Focus on continuous improvement
  – Training procedures and standardized operating procedures play important role
  – Emphasis is on prevention rather than reaction

• Several processes can be used in both applications
  – Process documentation
  – Improvement and standardization of processes
  – Statistical process control
  – Decision-making based on data, trends, and evidence
Addressing Safety and Quality with QMS

• Recall QMS does not tell you what to do
• Use to increase consistency and repeatability in processes – safety and quality
• Knowledge about your organization and its processes helps in decision-making:
  – Receipt, storage, shipping options to preserve quality
  – Safety procedures
  – Compliance documentation
Constraints??

PEOPLE!

PEOPLE!

PEOPLE!
People Connections Between Safety and Quality

- Safety is a more fundamental need than quality
- Workers who feel unsafe will not make quality a priority
- Both are dependent on employee actions
- Employee actions may be controlled by limits of the system
- Perceptions are important to success of programs
More connections

- Quality guru Deming saw safety and quality as complimentary workplace goals
- Based on Maslow’s Hierarchy of Needs
Safety & Quality in Agriculture

• Out-of-condition grain has been cited as a major factor in engulfments

• Poor quality grain:
  – Does not handle or convey well
  – Uses more power & capacity
  – Attributed to:
    • Shorter “shelf life”
    • Food safety issues (mold, damage)
Interactions Between Safety & Quality

- Engulfments infrequent and low profile but entirely preventable
- 2010 - record number of engulfment incidents
- Higher number at commercial grain elevators than previously
- High fatality rates
  - 1964-2005, 74% (Roberts & Field, 2010)
- Corn primary entrapment medium
Out-of-condition grain
Connections in Employees’ Minds

• Do employees see safety and quality as parallel or complimentary goals?
  – We asked about 180 employees from three elevator companies in Iowa
  – Do these feelings differ for different personnel?
    • Managers – set safety and quality policies
    • Supervisors – implement and enforce safety and quality policies
Safety & Quality - Management

Relationship between perceptions of management's commitment to safety and quality
Safety & Quality - Supervisors

Relationship between perceptions of supervisor's commitment to safety and quality
Data on Strength of Relationships

- Employees perceived a very strong relationship between safety and quality
- Stronger quality feelings about management than supervisors
- Follows theory from safety and quality experts
- To increase likelihood of success of quality programs, engage your supervisors in quality management!
Wrapping up ...

• Quality can and should be integrated with other workplace goals
• Workers will not focus on quality outcomes unless their safety needs are met
• In grain handling, high quality grain prevents safety incidents
• Safety and quality are strongly linked in employees’ minds
Safety

Quality
Thank you for your attention.
Questions?

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