Ethanol processing, government farm program incentives for corn, and increased corn yields have contributed to a sudden increase in the need for corn storage in Iowa. In the fall of 2004, there were many grain piles and other temporary grain storages utilized, with mixed success. Outdoor piles experienced up to 90% mold damage in some cases. Since 2004, there has been a steady increase in storage construction, but not at the rate of increase in corn production. A web-based training program was started in 2006.

On June 9, 2006, Bioterrorism Recordkeeping Rules (FDA) became effective for the majority of Iowa grain handlers and food industries. These rules require the one-step backward, one step forward traceability of all food products in the USA. Records of ownership, type, use, shipment, and other factors must be kept, and maintained in such form as to be accessible to FDA in 24 hrs, should a natural or deliberate safety threat occur. The grain and grain processing industry has had no experience with either the recordkeeping or traceability of bulk commodities. The IGQI has developed a web-based training module and has been active in explaining the rules throughout the industry. ISU studies have demonstrated that organized quality management systems (i.e. ISO9000) have to potential to address a number of procedures-based needs and simultaneously produce operating cost savings within organizations.

**Objectives for FY2008**

1. Assemble and review projections for the amounts and locations of corn production, demand and usage during the study years and the five years beyond (through 2011).
2. Project the needs for corn quality traits to meet shifting usage and storage patterns.
3. Project the need and types of storage (maximum cost; minimum damage) that will be needed to meet usage patterns.
4. Continue web-based programming for farmers, elevator operators and associated grain industry professionals in optimum storage structure design and quality grain management, given demand, cost and quality constraints. Link with other training organizations as possible. In 2008, the focus will be on spreadsheet based decision tools.
5. Expand the bioterrorism training module and deliver to Iowa grain handlers/processors as needed.
6. Connect Iowa State training programs with the Purdue-GEAPS electronic training program; add modules on traceability, bioterrorism rules and quality management systems.

**FY2008 Expected Outputs**

- Inventory of existing corn storage capacity, with projections for future needs, types, and locations for storage.
- Estimates of the interaction among corn quality traits, changing user demands, and storage success/costs.
- Spreadsheets to evaluate storage performance versus construction and operating costs.
• A major effort documented through web programs, meetings, and print materials to provide awareness and training for producers and elevator operators in current storage/quality needs and interactions.

• Comprehensive training modules (web and print) for traceability, bioterrorism rules and quality management systems. Modules will individually target producers, handlers and processors.