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Quality Management Systems for Grain Markets

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Country of Origin Labeling, continued from page 3

by Charles Hurburgh, Jr., Chair, Ag Quality Initiative, and professor of agricultural engineering

A study regarding consumer willingness to pay for beef labeled as to country of origin was conducted by researchers at Colorado State University and the University of Nebraska-Lincoln and released on March 20, 2003. Entitled “Country of Origin Labeling of Beef Products: U.S. Consumers’ Perceptions,” the study surveyed consumers to determine their willingness to pay for meat labeled as U.S. origin. The researchers found that the vast majority of consumers (73 percent) in Denver and Chicago were willing to pay an 11 percent premium for steak and a 24 percent premium for hamburger that is labeled as to country of origin. An actual auction determined that consumers were willing to pay an average of 19 percent more for steak labeled “Guaranteed USA: Born and raised in the U.S.” Those results indicate that COOL could bring substantial benefits to the agricultural sector in general, and the livestock sector in particular.

COOL Benefits

Recent security concerns have led many to believe Quality Management Systems (QMS) are needed to provide traceability, chain-of-custody, and security against food supply threats even in basic staple commodities. There are two routes by which QMS are being introduced at the local level through normal grain markets (that are often owned by producers), and through producer-held companies created to develop markets and coordinate very specialized production.

Development Process - Grain Handler Driven

Several grain companies are developing internal quality management systems. There are examples of International Organization for Standardization (ISO) certification such as Colusa Elevator Company, Consolidated Grain and Barge, Inc., and of other systems such as American Institute of Baking Quality Systems Evaluation (AIB QSE) such as Farmers Cooperative Elevator Company, Farmland Industries.

Firms that have an audited quality management system are good candidates for direct marketing arrangements – producer to end-user. Transportation and logistics have often prevented direct sales of bulk products; the firms creating source verification are becoming large enough that coordination of source verified bulk shipments is much more feasible than in the past.

In the grain industry program, source verification was divided into nine general areas, and specific procedures/controls were created for each.

• Raw Materials
• Process Control
• Process Verification (Statistics)
• Finish Product Acceptability
• Storage and Shipping
• Instrument Accuracy and Calibration
• Personnel Training
• Plant Programs (Safety, etc)
• Quality Policies (Management Commitment)

At this time, there is not an active specialty grain market; the benefits and targets are all based on commodity corn and soybeans. However, some firms are in an excellent position to discuss specialty needs, such as non-GM or other attributes on a larger scale basis than individual producers might be able to offer.

Part of grain handling source verification is the tracking of product from receipt to resale or use. This is important if a special trait is involved, and even more so if some consumer health or safety

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issue is involved. Logically grain handlers will extend the QMS process back to the producer in measured steps working backward from the scale ticket (receipt document of delivery). A gradual progression of activities moving back from delivery will bring producers to the level for certification without impressing major work with little tangible value to offer in exchange. QMS are essentially people training and interaction activities, such as:

- Identify wagons and trucks, and record container, time and date of deliveries. This would extend trace-ability to a field or bin if needed.
- Determine if pre-delivery sampling and control of delivery timing could improve off-harvest merchandizing potential and minimize inventories of off-grade grain.
- Utilize agronomy sales departments to create interaction with producers about data management, possible economies for them, and actual data collection in cases where the grain company is the primary input supplier.
- Document completely the use of company supplied inputs by producers.
- Develop an in-company standard data management/documentation protocol to be applied (and trained to) when and if there is a market need requiring QMS and trace-ability.
- When premium opportunities exist, always attach some QMS activity requirements to the premium. For a bulk handler, premiums are likely to be incremental at first.
- Incremental value traits (such as feed ingredient modifications or bulk non-GM) are best suited to grain handler organized QMS.

Development Process – Producer Supply Network
Producers organized to form supply network companies have some advantages in the initial stages of specialty grain production and QMS establishment. Member’s investment in these companies makes the creation of a full QMS system easier to achieve. Time investments are made to support the financial commitments. Investors in these companies, while targeting high-value premium grains, are more likely to also recognize operating efficiencies that present themselves in the course of creating a full system QMS. The intangible time-based learning activities are more easily accepted in the investor-owner format. Owner-operators can also benefit from promoting the idea “dealing with the grower”.

Producer networks lack distribution and logistics capabilities. The capital required for marketing to sophisticated users may be hard to obtain. Traits of smaller incremental value will be difficult to administer in this format. Therefore it will be very important for producer networks to understand their strengths and target products carefully.

- Producer networks will likely target higher value products, and those needing field research to commercialize.
- There are opportunities to identify cost savings in commodity operations, as well as specialty products.
- Initially there may be excess documentation, until confidence is established.
- Purity will be a major concern for the products of producer networks; operations affecting purity will be controlled even in commodity grain.
- Producer networks will maintain their individually strategic plans, but will utilize standard formats, templates and study guides for their certification programs, each applying those elements most relevant to the particular product involved.
- Technical expertise will be needed; any network must have at least one skilled person on staff.
- There will be opportunities with smaller incremental premiums where the high-value skills/procedures of a producer network connect with grain handler programs (such as sale of non biotech soybeans).

This concept is essentially an extension of the organic and container markets now operating for premium soybeans. The addition of increasing food safety and consumer concerns will impress more rigorous documentation and structure, such as is offered by QMS, but these markets will readily adapt to source verified QMS. The key addition will be third party audit and verification.

There are several groups in Iowa, that are organizing themselves in this way, or are upgrading their already successful organizations to more formal source verification.

The Importance of the Grain Buyer in Source Verification
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To capture the market benefits of source verification, the buyer must see value in the closer contact and chain-of-custody documentation that will exist. Some actions that only buyers can impress are:

- Give and demand integrity in all negotiations
- Provide simple, clear, complete and operationally feasible contract terms with reasonable economics
- Understand and interact with those actually capable of actually producing the product and bypass unneeded negotiators. Repetitive merchandising generally destroys source verification.
- Assume that the physical distribution system can do more than expected.
- Provide clear economics so that the market can pass costs and incentives efficiently. Market practices and baselines change with economic signals but respond poorly to wide ranging demands based on unclear economics.

Source verification and audited quality management systems are opening new direct market channels that require much more openness and transparency.

Third Party Audit

All source verification systems require audit by disinterested third parties. Auditing services are being created. Among them, USDA is now deciding whether it should become a quality management system auditor, most likely to the ISO 9000-2000 standards.

Summary

Producers and grain handlers in Iowa are national leaders in developing source verification programs for grain. These programs allow close contact between producer and user, and provide quality assurance to meet consumer product and safety demands. Source verification requires detailed, documented and audited quality management systems. Direct supply of products in quantities previously thought not feasible will be enabled by source verification.

States themselves are not grain growing boundaries but they can be centers of thought and creativity. Source verification and customer service are people issues, not geography issues which means that choice of purchase sources can and will provide benefits.