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Consumers Demanding Identity Preservation in U.S. Grain Markets

Modified-starch corn is one of the fiber-rich grains developed in response to consumer demand for low-carbohydrate food. This development and others like it have led to a growing number of specialty crops requiring either segregation or full-scale identity preservation (IP) to differentiate them from conventional commodities. These IP, or differentiated, crops include products with specific traits, like waxy corn, nongenetically engineered, organic, or pharmaceutical crops.

Many other factors have also favored the expansion of differentiated grains. Biotechnology has led to innovations such as low-phytate corn, which is high in digestible phosphorus. When fed to hogs, it contributes to lower phosphorous pollution from manure. Advances in industrial processing and enzymes also play a role. The corn wet-milling industry is increasingly able to process starches tailored to specific industrial and food uses, creating

demand for specialty crops, such as waxy and high-amylose corn. Cereal makers contract for variety-specific wheat and oats with exacting milling and baking attributes. The current expansion of ethanol production is spurring research into new energy crops capable of more efficient cellulose-to-ethanol conversion. Meeting these demands requires producers not only to change production practices but also to work with buyers, certifiers, and others to ensure identity preservation.

Differentiated crops often have higher costs than generic crops to meet segregation and transactions costs for contract compliance, such as testing and/or third-party certification. The cost of segregating specialty crops from conventional commodities can be influenced by the volume shipped, shipping method, tolerance levels for foreign materials, testing, and documentation requirements. IP-specific risks also contribute to higher costs. These risks

vary depending on the purity level required, and include price discounts or rejections depending on the type and level of foreign material in the crop. Nongenetically engineered crops (including organic) can be subjected to testing and run the risk of being rejected if they were accidentally contaminated. Pharmaceutical crops are not licensed for food or feed use, so isolating them from the food supply can make handling them far more costly.

Differentiated grains also command price premiums that are affected by such factors as the proximity of suppliers to buyers and the cost and availability of substitutes. Price premiums also rise or fall depending on supply conditions for the generic commodity. The trait-specific quality attributes of IP grains require more coordination between growers and handlers/processors and more sharing of information, often through contracts. Purchasers often demand assurance of product quality and authentication of process/product claims. Suppliers of farm products (for example, seeds) must demonstrate that product attributes are verifiable and show supporting documentation. Thus, a key to IP grain markets is the growing role of third-party services for auditing, verification, and quality assurance. Ψ

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This finding is drawn from . . .

The Changing Face of the U.S. Grain System: Differentiation and Identity Preservation Trends, by Aziz Elbehri, ERR-35, USDA, Economic Research Service, February 2007, available at: www.ers.usda.gov/publications/err35/

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