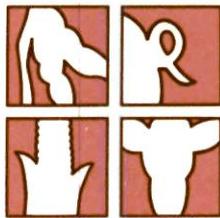




Cooperative  
Extension Service  
University of Illinois  
at Urbana-Champaign



# WEEKLY OUTLOOK

Department of Agricultural Economics  
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University of Illinois at Urbana-Champaign

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## THE QUALITY OF GRAIN IN CORN EXPORT

CURRENT LOW GRAIN PRICES and a decline in the US share of markets overseas have focused attention on improving the quality of US grain as a strategy to recover these markets. Researchers at the University of Illinois have found that the main cause for the deteriorating quality of exported corn is handling, which increases the broken corn and foreign matter (BCFM). BCFM increased in one shipment from 2.7 percent at the elevator, to 5.0 percent at the port of origin, to 11.1 percent at the port of destination. The quantity of BCFM could be reduced if the grading of corn provided incentives for delivering grain with virtually no BCFM and if corn with less BCFM and greater resistance to breakage during handling could be identified.

Sale of US corn to an importer is usually made on the basis of quality at origin before the corn is loaded on an ocean vessel. The exporter is not responsible for deterioration during shipping. It is assumed that buyers who are familiar with US corn will take delivered quality into account when negotiating the price. Deterioration in the quality of corn therefore may reduce export prices.

Existing US standards for corn permit US No. 1 grade corn to have 2 percent BCFM, No. 2 grade corn to have 3 percent BCFM, and No. 3 grade corn 4 percent BCFM. Without separate specifications outside the numerical grades, however, these standards do not allow buyers and sellers to specify 0 to 1 percent BCFM. Foreign buyers, moreover, find it difficult to pay a premium for characteristics outside the grade standards because of the cost of searching for a seller with adequate supplies of special kinds of corn. Although BCFM may be screened out at the elevator or the port, there is an economic incentive to mix the screenings back in to reach the level allowed by the contract. Screenings are likely to break down further and become corn dust, which is difficult to handle and increases the danger of explosions.

It is interesting to note that Argentina has standards with separate factors for broken corn (BC) and foreign matter (FM). No. 1 Argentine corn has 1 percent FM. Since Argentine standards specify separate factors for FM and BC, standard export contracts result in less foreign material in Argentine corn than in US corn.

The tendency of corn to break under stress varies. When corn is dried at high temperatures, the kernels develop stress cracks, which lead to later breakage. Some

varieties of corn show greater resistance to breakage than others. At present there is no inexpensive and simple way to identify corn with high susceptibility to breakage before it breaks. If stress cracks could be identified easily, traders could pay producers a premium for corn with few stress cracks (low susceptibility to breakage). South African corn, which is field dried, has low susceptibility to breakage and receives a substantial price premium over US corn in Europe.

Providing two-thirds of the corn and soybeans in world markets, the United States is still the dominant supplier of these crops even if the quality of our grain is relatively poor. But the increased value of the US dollar has made our products more expensive during the last three years. Although improving the quality of our products will probably not compensate for higher prices, it should be part of any strategy to increase our competitive position because it can help broaden the market for them. If grain standards were changed to direct different qualities of corn to markets where they have the highest value, then standards would increase total sales receipts. Because screenings of broken corn have a higher value in the domestic market than in the export market, standards should discourage exportation of screenings.

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