

Despite drought, Council report indicates high quality corn crop

While U.S. corn production fell this year due to the worst drought in several decades, the overall quality of the crop is actually higher than the crop produced in 2011, according to the *U.S. Grains Council Corn Harvest Quality Report 2012/13*.

This is the second year for the Council's *Harvest Report*. It will be followed up by the second annual *Corn Export Cargo Quality Report* in April 2013.

"We have a good system in place to collect samples of U.S. corn, gathering samples from 12 states that combined are the source for 99 percent of U.S. corn exports," said Erick Erickson, director of global strategies for the U.S. Grains Council. "This year's U.S. corn crop, while smaller due to the drought, is of outstanding quality overall."

Erickson explained that the Council produces the reports so global importers will have access to reliable and comparable data from year to year, with samples being gathered and tested using transparent and consistent

methods.

"We're laying the foundation for evaluating trends and factors that impact corn quality, which will enhance our understanding of the relationship between growing conditions, harvest time and overall crop quality," he said.

Tests conducted on the samples cover grading factors like test weight, physical factors such as stress cracks and other items such as moisture, protein starch, oil and mycotoxins.

Test results for the 2012 crop are favorable when compared to 2011, despite the U.S. drought.

Data from tests indicate that the average test weight for the 2012/2013 crop is 58.8 pounds per bushel, an increase over 2011. At the same time, broken corn and foreign material (BCFM) is lower, as are the number of damaged kernels. Moisture, at 15.3 percent, is also lower than last year, as this year's crop dried down well in the field due to the drought conditions.

"Protein

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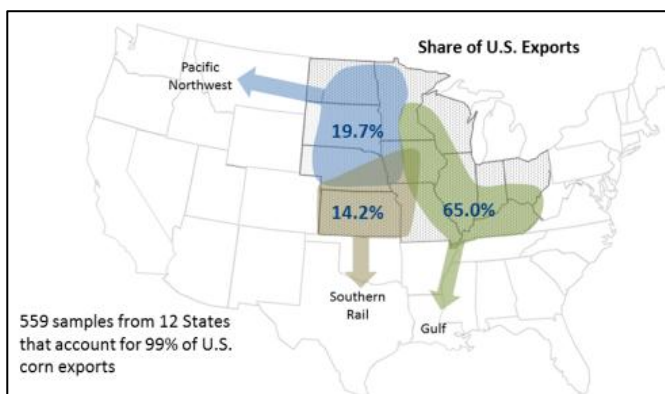
- Page 1: Corn Harvest Quality Report
- Page 2: Details of physical properties of corn crop
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numbers were somewhat higher, which is offset by a slightly lower starch number," Erickson said. "Overall oil content, though, was unchanged."

The frequency of stress cracks was marginally higher (4% vs. 3% in 2011), which indicates that the crop will have relatively low susceptibility to breakage during handling.

Because of the dry conditions, the Council also increased the testing frequency for mycotoxins, testing 25 percent of all samples compared to 10 percent last year. For the Council's purposes, the minimum level of detection for aflatoxin is 2.5 parts per billion (the maximum allowed in U.S. corn exports is 20 ppb). As expected, the number of positive tests increased this year compared to last year – aflatoxin tends to be more prevalent in dry, hot years.

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This map shows where the 559 samples of U.S. corn were taken as part of the U.S. Grains Council's Corn Harvest Quality Report. The report concludes that the 2012-13 U.S. corn crop is of high quality despite the drought.

Report: Physical characteristics of 2012/13 U.S. corn crop at harvest

Table 1 below shows the physical characteristics of the 2012/13 U.S. corn crop and compares the results of this year's U.S. Grains Council Corn Harvest Quality Report to last year.

It is important to note that these are the characteristics following harvest. The quality of the crop can be affected by further handling, blending and storage conditions.

The U.S. Grains Council encourages buyers to actively negotiate with shippers on the grade and quality of shipments for which they contract.

While Table 1 shows aggregate figures, the full report available at www.grains.org provides a breakdown by export catchment area in addition to those shown in the right-hand column.

The average test weight of U.S. corn of 58.8 pounds per bushel (75.6 kg/hl) indicates overall good quality and is more than 2 pounds per bushel above the grade limit for U.S. No. 1 corn. The report also indicated there was less variability among samples tested than there was a year ago.

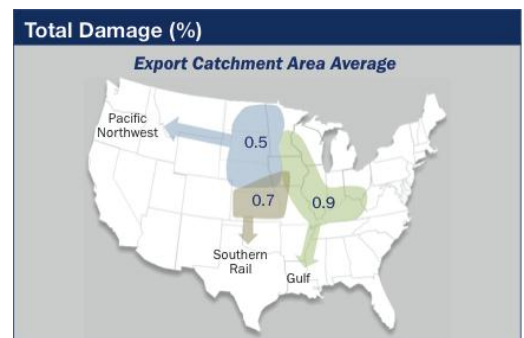
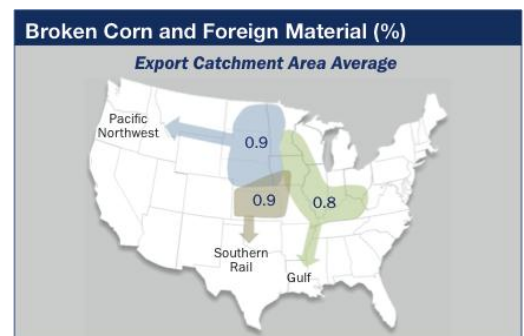
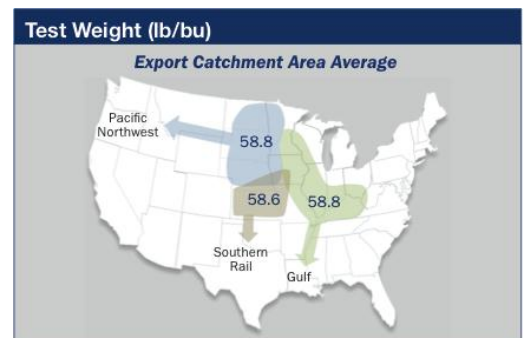
As for broken corn and foreign material (BCFM), the report said the U.S. Aggregate was 0.8 percent, with nearly 99 percent of samples being well below the maximum of 3 percent allowed for U.S. No. 2 corn.

The Council did note, however, that BCFM levels typically increase during drying and handling, depending on the methods used.

The average moisture level for the 2012/13 U.S. corn crop at harvest was 15.3 percent, compared to 15.6 percent last year. Broken down by moisture level, about 32 percent of the crop was at or below 14 percent moisture, while 19 percent was between 14 and 15 percent moisture. The remainder, 49 percent, was at or greater than 15 percent moisture.

Overall, the quality of the 2012 crop samples was slightly better on all grade factors and moisture levels when compared to the 2011 U.S. corn crop. ♦

1. Physical characteristics of the 2012-13 U.S. corn crop at harvest								
	2012 Harvest					2011 Harvest		
	No. of Samples ¹	Avg.	Std. Dev.	Min.	Max.	No. of Samples ¹	Avg.	Std. Dev.
U.S. Aggregate						U.S. Aggregate		
Test Weight (lb/bu)	637	58.8*	1.21	49.4	62.5	474	58.1	1.49
Test Weight (kg/hl)	637	75.6*	1.56	63.6	80.4	474	74.8	1.92
BCFM (%)	637	0.8*	0.53	0.1	5.7	474	1.0	0.65
Broken Corn (%)	637	0.7*	0.42	0.0	4.8	474	0.8	0.52
Foreign Material (%)	637	0.2*	0.18	0.0	3.9	474	0.2	0.20
Total Damage (%)	637	0.8*	0.72	0.0	12.7	474	1.1	0.92
Heat Damage (%)	637	0.0	0.00	0.0	0.0	474	0.0	0.00
Moisture (%)	637	15.3*	1.72	8.9	24.7	474	15.6	1.56



Corn Quality: *From page 1*

Erickson added since the report is a harvest quality report it only assesses the quality of the current U.S. corn harvest as it enters merchandising channels – and that such quality can be affected by further handling, blending, storage conditions and other downstream factors.

The full report is available at the U.S. Grains Council website, www.grains.org and from the Council's international offices.

Updated crop numbers

In November, the U.S. Department of Agriculture slightly increased the size of the U.S. 2012/13 corn crop, saying that U.S. farmers produced 10.7 billion bushels (272.4 million tons). The increase came from a slight increase in yields to 122.3 bushels per acre (7.68 tons per hectare). Final production numbers are due out in January.

U.S. sorghum production was also revised upward ever so slightly to 256 million bushels (6.5 million tons) on yields of 51.1 bushels per acre (3.2 tons per hectare). U.S. barley production was unchanged at 221 million bushels (4.8 million tons). ♦

Chemical characteristics, mycotoxin results included in harvest report

Table 2 below shows the chemical characteristics of the 2012-13 U.S. corn crop, compared to the 2011/2012 crop, as reported in the *U.S. Grains Council's Corn Harvest Quality Report 2012/13*.

The chemical analysis follows the three major components of the kernel: protein, starch and oil.

Samples taken for this year's report show a protein aggregate average of 9.4 percent, compared to 8.7 percent last year. This is a good figure for livestock and poultry producers who are looking at corn for feed.

Protein and starch numbers are typically inverted, which this year's results demonstrates. However, the average starch of 73.0 percent in 2012 is only slightly below the 73.4 shown in 2011.

The third component of the kernel, oil, averaged 3.7 percent in 2012, which matches the oil figure from last year.

Mycotoxins

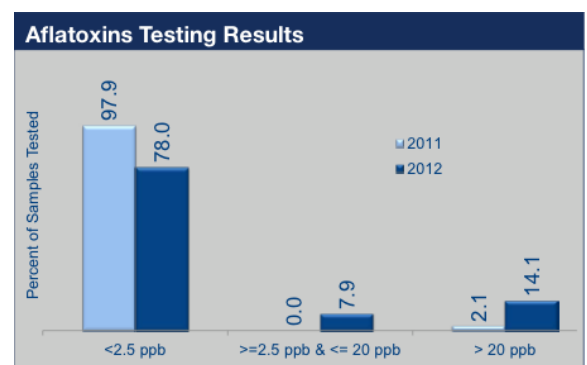
Corn harvest samples were tested for aflatoxins and deoxynivalenol (DON or vomitoxin). Since the production of mycotoxins is influenced by growing conditions, the Council anticipated that the number of positive aflatoxin results would be higher this year. It also doubled the number of mycotoxin tests performed to provide a larger sample.

On the positive side, results showed there was less DON contamination in 2012 than 2011.

As for aflatoxin, the summary chart below shows there were more instances of higher aflatoxin levels than last year.

Roughly 14 percent of samples tested above the U.S. Food & Drug Administration action level for aflatoxin, which is 20 ppb, compared to about 2 percent last year. Nonetheless, it is important to note that the maximum aflatoxin level allowed in U.S. corn exports is 20 ppb.

Additional details on the mycotoxin results can be found in the full report. ♦



2. Chemical characteristics of the 2012-13 U.S. corn crop at harvest

	2012 Harvest					2011 Harvest		
	No. of Samples ¹	Avg.	Std. Dev.	Min.	Max.	No. of Samples ¹	Avg.	Std. Dev.
U.S. Aggregate								
Protein (Dry Basis %)	637	9.4*	0.66	7.0	12.4	474	8.7	0.60
Starch (Dry Basis %)	637	73.0*	0.67	70.6	75.6	474	73.4	0.62
Oil (Dry Basis %)	637	3.7*	0.34	1.7	5.5	474	3.7	0.31