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Harvest Update—It's that Time Again

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Abstract
It hardly seems like a year has passed since the last grain harvest and quality briefing. Last year we had very dry grain, thanks to warm dry weather after a summer of warm nights and accelerated plant development. In 2011, the weather just could not make up its mind – wet, moderate, hot but humid, moderate and dry, and then rain and storms. The net result is that average exists as a mathematical term but probably not on anyone's farm.

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Harvest Update – It's that Time Again

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It hardly seems like a year has passed since the last grain harvest and quality briefing. Last year we had very dry grain, thanks to warm dry weather after a summer of warm nights and accelerated plant development. In 2011, the weather just could not make up its mind – wet, moderate, hot but humid, moderate and dry, and then rain and storms. The net result is that average exists as a mathematical term but probably not on anyone's farm.

Corn

Until July, conditions looked great with high yields of heavy corn in the offing. However, the extreme heat in July accelerated plant growth; example – denting very early, fewer kernels per ear , lighter kernels and eventually tipping back. From a grain quality perspective, the potential for high test weights (57-60 lbs/bu) was reduced. The subsequent shift in August to cooler nighttime temperatures limited the chances for field mold and toxin development. The forecast for the next 10 days is very conducive to field drydown and low grain moisture at harvest.

There are some caveats to letting the corn dry down in the field the next 15-21 days. If you determine that particular fields have stalk rot, which is prevalent this year, harvest those fields early and dry the corn. At current corn prices, drying is preferable to grain loss. At $2 per gallon for propane, the drying cost in an average dryer (2000 btu/lb water) for one point of moisture is equal to about 0.25 percent field loss, with $7 corn. Dryers vary and propane costs change but in general, very little field loss can be accepted before early harvest and drying is a better choice.

Corn diseases have been prevalent this year, especially Goss's Wilt, normally a western Corn Belt problem. This bacterial disease has caused premature death in many fields. We do not know the total impact of Goss's Wilt on grain quality, but premature death normally reduces kernel weight and test weight. We are doing a study this fall of fields with Goss's Wilt to determine if this disease affects quality beyond low kernel and test weights.

Use test weight as a storage decision criterion. In general, corn below 52 lb/bu (dry) will be a high storage risk; market it first. There will be variations by hybrid and area; know the test weight of each one to make good decisions. The test weight readings from elevator moisture meters are adequate to make these decisions assuming the elevator has periodically checked against a USDA grader to adjust the machine. There will be large variations in test weight this year. Feed value (protein) is likely to be good. Lower yields and fewer nitrogen-removing heavy rains favor increased corn protein, which is good for livestock feed, but which reduces ethanol yield per bushel.

There is a transgenic (GMO) issue this year – you may have heard of the Agrisure Viptera™ 3110 and Agrisure Viptera™ 3111 problem. Viptera is an insect prevention biotech trait developed by Syngenta to address insect resistance and other issues especially in continuous corn. This is the first year of commercial planting. There are approximately 70 hybrids from

Syngenta companies and licensees with this trait. Estimates are about 2 percent of U.S. corn acres concentrated in the Central Corn Belt have this trait. This transgenic event is approved in all major world markets except China. The Chinese approval process is well structured and organized but requires at least one export nation to approve it before their two- year field tests begin. The Chinese process will conclude in March or April 2012; until then, corn or corn products (e.g. dried distillers grains with solubles for ethanol) containing this transgenic event cannot be imported. If you planted corn hybrids with this trait, please hold the corn for marketing in 2012 rather than at harvest, unless you know the buyer does not sell corn or corn products into market chains that could include China. Also notify the buyer if there is a chance your deliveries could contain this trait. In the next week or so, we will release a more in-depth discussion of the Viptera 3110 and 3111 issue and response options for producers and grain buyers.

It appears that both corn and soybeans will be harvested in hot weather this year. The most important initial action in grain storage is to cool the grain. You may have to add one to two more aeration cycles this year. Dry air (low dew points) will cool grain by evaporative cooling. The high value of grain puts a premium on cooling but not over drying. After harvest, we will do a series or newsletter articles on inventory management for quality control and weight preservation.

Soybeans

Many soybean fields benefitted from late- season rains. The result will be mixed maturity in the same field – dry and wet beans together. This will be a challenge for combine setting, but from a storage perspective, mixtures will respond in storage like the wetter fraction. Therefore, the common practice of putting beans in unaerated bins will not work well; aerate them to cool and equalize moisture, then transfer to other bins if needed.

Moisture meters will read 1-2 percentage points low on mixed moisture soybeans, especially in the first week of harvest. This is a storage issue, and also an inventory management issue. One percent moisture in $14 beans is about 16 cents per bushel. There is a much greater premium for accuracy in all grain testing and inventory monitoring.

Frost is forecast in far northern Iowa later this week. Corn is likely out of risk, but some soybean fields will be green. Green soybeans contain chlorophyll which enters the oil requiring additional refining. Green soybeans also do not extract as efficiently, causing a loss of oil into the soybean meal. Greenness will subside somewhat over time. The best plan is put these beans in an aerated storage and wait two to four weeks before delivering them. If there are green soybeans, buyers will need to refresh themselves on the “line” (intensity) of greenness required to be classed as Damage in the Grades. Always use an Official federally-licensed grain inspection agency to determine this line, and as a referee in borderline cases.

Protein will probably be average to above average – late season growth favors protein.

Summary

Grain quality this year should be good, but not exceptional. Stresses will cause variability; use test weight in corn as a storage criterion. Grain will be warm coming out of the field; both corn and beans will need to be cooled immediately after harvest. Mixed moisture soybeans will create storage issues that can be avoided by good aeration immediately after harvest.

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