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Time to Participate in 2008 Grain Quality Analysis Program

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Abstract
Participants in public corn and soybean yield trials and in other public research efforts or collaborations can have grain quality analysis done at the Iowa State University Grain Quality Lab, through the Iowa Grain Quality Initiative (IGQI). The corn quality factors included in the analysis are moisture, test weight protein, oil, starch, density, and a ranking of estimated ethanol yield. Soybean quality factors analyzed are moisture, protein, oil, and fiber (plus linolenic acid and saturated fats for modified fatty acid soybeans). This is an excellent way to compare end use quality for genetic trials and other field studies.

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Time to Participate in 2008 Grain Quality Analysis Program

By Charles R. Hurburgh, Department of Agriculture and Biosystems Engineering

Participants in public corn and soybean yield trials and in other public research efforts or collaborations can have grain quality analysis done at the Iowa State University Grain Quality Lab, through the Iowa Grain Quality Initiative (IGQI).

The corn quality factors included in the analysis are moisture, test weight protein, oil, starch, density, and a ranking of estimated ethanol yield. Soybean quality factors analyzed are moisture, protein, oil, and fiber (plus linolenic acid and saturated fats for modified fatty acid soybeans). This is an excellent way to compare end use quality for genetic trials and other field studies.

Users must ship or deliver samples to the ISU Grain Quality Lab. The data will be returned electronically and as a hard copy if desired. We normally organize data in a standard format that contains yield and agronomic factors as well as the quality data. Yield adjustment for check strips will be made if data is available.

Distribution of the data is up to the participant; we will not distribute further unless you ask. We have provision for posting yield trial data on the Grain Quality Initiative website; there will be a place to indicate if you want this posting. Research data will be provided only to the researcher involved. Data will be completed within two weeks of receiving the samples.

How to Participate
1. Collect a one-quart (or more) sample from each plot and seal in thick, self-sealing plastic bags only. We will provide Hefty freezer bags if desired. Do not use paper or sandwich bags.

2. Identify each plot/sample clearly, preferably with an all-numeric code. We can provide barcode labels for sample identification, with whatever coding is desired, and can also provide label cards and plot data sheets. Please provide an email address for results.

3. Please include with the samples a list of the plot order and yield if available. It is recommended that you fill out cards and other information before you begin harvesting.

4. Wet grain spoils quickly. Do not hold the samples! Send them in quickly!

5. Ship or deliver immediately to:
ISU Grain Quality Lab, Attn: Glen Rippke, 1547 Food Sciences Bldg., Iowa State University, Ames, IA 50011-1061

Benefits of Participation
This is an opportunity to increase understanding of end user quality traits as they apply to specific areas or treatments. For example, in corn, the combination of starch (high), protein (lower) and density (fairly soft) indicates possible advantages to ethanol producers.

Ethanol yield is increasingly important in the development of corn hybrids. Likewise, higher protein and harder texture is better suited to animal feeding, for both nutritional and particle size (grinding) uniformity reasons.

For soybeans, certain processors are already paying some premiums for specific levels of protein and oil. There is an economic gain to be captured if variety, regional and agronomic practice knowledge can identify potential premium grains without requiring a complex testing or identity preservation procedure.

We hope that this program will be useful, and will assist in creating new opportunities. We have improved handling and turnaround process in response to your demand.

Contacts
If you have questions or would like to participate, contact one of the following: Glen R. Rippke at (515) 294-5387 or rippke@iastate.edu; Lindsey Shultz at grainlab@iastate.edu; Dr. Charles R. Hurburgh at (515) 294-8629 or tary@iastate.edu.

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