Iowa Grain Quality Initiative
Advisory Committee Meeting Minutes
July 18, 2008

Present: Charles Brown, Randy Dunn, Jill Euken, Ray Hansen, Connie Hardy, Charles Hurburgh, Terry Jensen, Larry Johnson, Clark McGrath, Jerry Miller, Drue Sander, Howard Shepherd, Tim Sullivan, Greg Tylka, Dan Uthe, Dick Vegors, Guests: Aaron McKay, Pete Lammers, Ryan Sauer

Welcome and updates
Charlie Hurburgh welcomed committee members and summarized the agenda.

Update - ISU College of Agriculture and Extension Agriculture and Natural Resources
Jerry Miller thanked members of the group for their participation and gave the following updates:
   1. Chad Hart, from the ISU Center for Agriculture and Rural Development (CARD), was selected for the Grain Marketing faculty position to replace Robert Wisner who retired in December 2007. Dr. Hart has been with CARD since 1999 and will begin the new position on August 1, 2008.
   2. The Integrated Crop Management newsletter is now being offered in an electronic version that can provide timely information with daily updates. Subscribers can sign up for daily or weekly email updates.
   3. Printed Field Guides are available entitled Soybean Disease and Pest Management and Speedy Scouting of Soybean Aphids. These are sponsored by the Iowa Soybean Assn and available from Greg Tylka or Rich Pope. A similar series related to corn is planned.
   5. A webpage on Disaster Recovery is linked to College of Agriculture and ANR websites. An article entitled, “Economic Impacts of the 2008 Floods in Iowa” is included.
   6. College of Agriculture student numbers have climbed from 2350 undergraduates in 2003 to 2697 in 2007. The numbers for 2008-2009 continue to increase by 40-60 students. Freshman numbers are up. Transfer student numbers are down, but these are not final yet. Grad student numbers are down. Dean Wintersteen’s goal is 3000 students.
   7. Planning sessions on the bioeconomy - In March 2007, community leader discussions were coordinated by the County Extension Education Directors in each county with the following objectives:
      • Provide an understanding of Food, Feed, and Fuel
      • Initiate discussion about food security, feed production, and growth of renewable fuels
      • Engage folks like us to identify research and policy needs
Similar discussions are planned among county leaders for Fall 2008, resulting in a set of white papers and a webcast.
2008-2009 Workplan summary
Charlie Hurburgh listed the IGQI Workplan 2008-2009 projects. The number of entries has been reduced to concentrate on six project areas. See this and other presentations at www.iowagrain.org.

These projects are supported by approximately $170,000 in state funds and $675,000 in related funds at a leverage ratio of about 4:1. IGQI began eight years ago using Extension 21 funds with the expectation that more support would come from outside than from state funds.

Randy Dunn asked if resistance to GM grains has lessened. Charlie answered “no” for Europe and “yes” for other world buyers. The European market has been a substantial customer for DDGs, but the GM issue is still strong and influences buying, even though Europe has a shortage of feed ingredients. European food products that have documentation and labeling for “non-GM” carry an added cost to the consumer of 20% compared with foods that do not carry this label. European consumers are still willing to pay for “non-GM”. Worldwide, all GMs have to be approved and sometimes the testing takes a long time.

Updates of IGQI projects in biofuels
Ethanol production and corn usage –
- approximately 70% of Iowa’s corn would be needed to produce ethanol when all of the plants under construction come on line and assuming all the plants are operating at full capacity.
- approximately 60% of Iowa’s corn is grown west of Interstate-35 and north of Interstate-80.

Biodiesel production and oil demand –
Discussion question: Assuming that all of Iowa’s soybean and corn oil could be used for biodiesel, how much oil is being wasted by not fractionating corn and extracting oil before the ethanol fermentation?

- At the current acreage split between corn and soybeans, corn will yield almost the same amount of oil per acre as will soybeans.
- With the 2006-2007 acreage shift, the total amount of protein was about the same whether or not corn acreage exceeded soybean acreage, but soybeans have about 8-9 times as much lysine as corn.
- With projected yield increase of corn to 250 bu/ac and soybeans to 80 bu/ac, nutrients will increase and fuel will increase.

How do we distribute them to the markets that need them?
- Fewer inputs are limiting at current crop prices, but water may become a limiting factor. For the grain industry, access to capital is now a limiting factor.

Do we know the cost of fractionating systems?
• Larry Johnson replied that it is approximately $17 million for 100-mgy ethanol plant. Operating data on fractionation systems is not usually shared. Fractionation will vary the quality of the distillers grains by removing oil and bran. Charlie asked if the model that Roger Ginder has been working on is available yet.

_Could IGQI put more effort in modeling and estimating costs of the system? Does industry need the help? Will they share the information?_

• ISU could have a role in determining the outcomes of varying the process and describing the range of possible products. Tim Sullivan suggested that this would help the system to have a nutrient-based description of the potential products of ethanol production, thus facilitating sales of DDGS.

**Technical reports and discussion**

1st presentation


Notes:

In 2006, Iowa led the nation in hog and layer hen numbers. Corn use for livestock feed in Iowa in 2006 was 606,678,660 bu. Pigs require the most corn of all livestock in Iowa. Pete shared the results of a swine feeding trial done at ISU with 9 different diets and a control diet to study the use of other energy sources besides starch. Results of the study showed that corn use could be reduced by 25% by using co-products (7.7 bu/hd) and that starch use might be reduced by 45% (5.3 bu/hd). Though economics of diets were not fully calculated, the reference diet was the least expensive, unless glycerol were nearly free.

If we do not feed as much corn,

- Producers would have to accept slower growth rates
- Processors and consumers would have to accept different carcass characteristics
- Producers would need to find another energy source

Pete’s presentation also included comments on synergies experienced with hog production and use of nitrogen.

**Questions and comments generated by presentation:**

Does this suggest that we will have types of corn directed to ethanol and other varieties intended for feed and food uses?

Would it be useful to select diets and compare them against crop yield increases?

Corn is not the limiting factor in pig production in Iowa, but rather it is social acceptance. Higher volumes of manure come from feeding DDGS instead of corn.

What should we be doing to address changes in agricultural needs effectively?
1) Increase yield as soon as possible
There are always be perceptions that the environmental impact of any change will be bad.
Plant research community is divided on this issue. If we can package the management to
take care of the pests, water availability, etc. we could already grow 300 bu/ac corn
crops. DNR is doing a comprehensive water study now.
One response is to encourage the development of coordinated management packages.

2) Find a cheaper nitrogen source, get varieties that use it more efficiently, and get it
on the plants at the right time
3) Figure out how to efficiently handle 300 bu/ac corn
4) Evaluate costs of transportation for export.

2nd Presentation
“Distillers Grains” - Ryan Sauer of Hawkeye Renewables
This presentation is available at www.iowagrain.org
Notes:
Iowa currently has 28 plants producing 2.2 bgy of ethanol
14 plants are under construction and will produce 1.4 bgy of ethanol
Production of distillers grains could reach 10 million tons in IA.
Most of the wet distillers grains are shipped out within a 100-mile radius of the plants.
Export markets are growing. Mexico could demand 2 million tons of DDGS soon. For
ocean shipments, DDGS are usually loaded in containers at load-out facilities.
Hawkeye is very conscientious about quality and consistency. This has been challenging
from a marketing perspective, especially with buyers who buy strictly on price.

Questions and comments generated by presentation:
Will the fractionation process improve the inclusion rate in livestock diets?
Some facilities aim to completely replace corn.
Centrifuging yields feed grade oil.
Fractionation can yield food grade oil.

Could fractionation be done off-site and starch fraction sold to the ethanol plant?
This would facilitate FDA approval of the fractionation site so that some fractions could
be sold into food markets.

How can IGQI play a positive role in communicating that biofuels are a worthwhile
contributor?

Most of the industry is testing for proximates – particles size – and color.

How does one predict in advance if there might be a problem with mycotoxins and/or
sulfur? As we process more locally, maybe there is a need for weather modeling and
weather forecasting to predict problems.

Terry Jensen suggested that the ISU Grain Quality Lab could survey distillers grain
mycotoxin samples from various locations. There was a discussion of sampling methods.
contributing to inconsistent test results. Charlie said that the standard error could be as high as plus/minus 40%.

Howard suggested that there is weather data available to use in modeling weather-related quality issues. If this could be done at the county level, it might be useful in managing grain in that area.

NOAA is another potential source for information and possible research funding. NOAA’s director will be at the BIOconference in Ames in September 2008.

Other discussion:
*What are the relevant points for the University to express?*

**ISU should communicate best management practices.** For example, equipment and sensors have been developed to apply nitrogen exactly where the plants need it. This technology is nearly ready for use. Will industry be willing to adapt? Jerry Miller commented that the change in tillage practices took 5-7 years for farmers and ag supply companies to adapt.

**ISU should communicate that there are enough materials, but we need to work out the distribution to fit the new bioeconomy.** We need to do a better job of communicating what agriculture is able to produce. Farmers can outperform expectations, even in a bad year. Even some people in Iowa do not believe that there is enough. Jill Euken mentioned that the state of California is establishing a low carbon biofuels standard based on the relationship of biofuels production to the expected transition of rain forest acres going into agricultural production.

Discussion of these points included:
Raising the dollar to the rest of the world to reduce export shipments.
Helping farmers and farm organizations talk about new production agriculture to consumers.
Talking with the grocery industry (GMA) about a unified message to support the bioeconomy, recognizing that not all members support the GMA political agenda.

It was suggested that one way to formulate a unified public message about the bioeconomy and production agriculture is to use the Midwest Consortium.
Jerry Miller will talk to Wendy Wintersteen about how to proceed with this group.

Senator Grassley was recognized for his longterm advocacy of Iowa farmers.

**Next meeting:**
The date proposed for the next Advisory Committee meeting is **January 9, 2009**. Meeting adjourned at 2:20pm.

Respectfully submitted by Connie Hardy, Extension Value Added Agriculture Program