

# Grain Inspection Advisory Committee

May 15-16, 2002

## SUMMARY OF MEETING Radisson Hotel Memphis Memphis, Tennessee

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## OPENING REMARKS

### **Donna Reifschneider**

Ms. Donna Reifschneider, Administrator, Grain Inspection, Packers and Stockyards Administration (GIPSA), opened the meeting. She introduced herself and provided a synopsis of her background in agriculture. Ms. Reifschneider brings a private-sector perspective to her new duties as GIPSA Administrator; her husband and brother-in-law continue to operate their hog and grain farm in Belleville, Illinois, during her tenure as GIPSA Administrator in Washington, D.C. Ms. Reifschneider stated that she was pleased to welcome the members, guests, and GIPSA staff.

Ms. Reifschneider indicated that the agricultural sector is rapidly changing, and GIPSA and the official inspection system will be challenged to keep pace. She views such challenges as opportunities for GIPSA, the official system, and the private sector to work together for the advancement of American agriculture. She viewed the meeting as her opportunity to learn more about the interests and concerns of the group so that GIPSA and the industry can work together to capitalize on opportunities to meet the needs of the markets of the future.

## MEETING ATTENDEES

### Committee Members

Tim Adams, Memphis Grain Inspection Service  
Gillan Alexander, Bogue, Kansas  
David Ayers, Champaign-Danville Grain Inspection  
Rod Bradshaw, (absent) Jetmore, Kansas  
Randy Cartmill, Columbia Grain, Inc.  
Lisa Curran, General Mills, Inc.  
Warren Duffy, Jr., ADM/Growmark  
Dr. Lowell Hill, University of Illinois  
Paul Lautenschlager, Hi-Line Grain Co. LLC  
John Oades, U.S. Wheat Associates (sitting in for Rod Bradshaw)  
Tim Paurus, Chairperson, Cenex Harvest States  
Mark Scholl, ExSeed Genetics, LLC  
Mary Schuler, Schuler Lands, Inc.  
Robert Smigelski, The Andersons, Inc.  
Dennis Strayer, Private Consultant  
David Swinford, Dumas Co-op Elevators  
Ernest Potter, May, Cocagne & King, P.C. CPAs

### GIPSA

Roger Friedrich, Board of Appeals and Review, TSD  
Rosemary Mayne, Training Office  
Dave Orr, Field Management Division  
Richard Pierce, Inspection Systems Engineering Branch, TSD  
Marianne Plaus, Market Analysis & Standards Branch, FMD  
Donna Reifschneider, Administrator  
Dave Shipman, Office of the Deputy Administrator  
Clyde Steves Stuttgart, Arkansas, Field Office  
Steve Tanner, Technical Services Division

### Official Agencies

Steve Adams, Leslie Adams North Dakota Grain Inspection Service, Inc.

### Other

Allen Butler, Foss North America  
Jim Cary, Vicam  
Keith Pouncey, Mississippi Department of Agriculture

## **ACCEPTANCE OF MEETING MINUTES FROM DECEMBER 4-5, 2001**

The Committee approved the meeting minutes from December 4-5, 2001, as written.

## **REVIEW AND ACCEPTANCE OF AGENDA FOR MAY 15-16, 2002, MEETING**

The Committee approved the agenda.

### **A LOOK TO THE FUTURE**

#### **David Shipman**

Mr. David Shipman, Deputy Administrator, Grain Inspection, Packers and Stockyards Administration, Federal Grain Inspection Service (FGIS) program, opened his presentation with a look at the current uses of the inspection system, changing market practices, and the impact of those changes on the system. The future marketplace will have less needs for traditional third-party services; it will have a greater demand for efficient, market responsive service and for the inspection system to improve market efficiency; and a new need for FGIS to complement the market's quality management processes. The FGIS of the future will be an internationally recognized grain inspection system that will provide accurate, reliable, and cost-effective services to all market participants. It will provide Internet-based customer service and state-of-the-art quality control processes; will offer market responsive end-use testing and process verification services; and will be flexible enough to serve a larger portion of the grain market. These changes, he noted, need to take place concurrently with a major workforce shift—the percent of agricultural commodity graders eligible for retirement will skyrocket from 12 percent today to 64 percent in 2008.

Mr. Shipman laid out a framework of how FGIS can become a flexible, responsive organization. The Agency's future viability will hinge on its ability to better utilize technology, improve internal business practices, implement system-wide quality controls, enhance customer service delivery, offer more market-responsive inspection procedures, centralize monitoring of the system, expand use of the official system, and emphasize international outreach. He outlined a number of specific initiatives in support of each of these critical success factors.

He concluded by asking for the Committee's input on the following eight key policy issues:

1. Should FGIS adopt a fee structure that includes regional tonnage fees to cover the administrative and supervisory costs at the local office and at headquarters?
2. Should FGIS develop and implement flexible inspection procedures to empower inspectors and improve industry efficiency?
3. Should FGIS establish a new equipment approval policy that would permit the use of additional types of equipment?

4. Should FGIS contract with private firms to provide official non-export services; e.g., in-bound inspections, house transfers, at export ports? The market clearly needs these types of inspection services at ports. Presently, the majority of these services are provided by private unofficial inspection companies.
5. Should FGIS seek authority to allow official agencies the opportunity to provide official non-export services in ports? Rather than contract for services as specified in No. 4 above, FGIS could expand the designation program to include non-export services in ports, provided Congress amends the U.S. Grain Standards Act (USGSA) to provide such authority. FGIS currently only has the authority to contract for such services.
6. Should FGIS seek authority to remove boundary restrictions on official agencies after the Agency implements enhanced quality control systems?
7. Should FGIS centralize monitoring after implementing enhanced quality control systems, and should the Agency establish local resident agents to provide direct oversight of official inspection providers?
8. Should FGIS contract with licensed technicians to supplement the FGIS export workforce as attrition reduces current staffing?

Mr. Shipman also provided a status report of GIPSA's appropriated and trust fund accounts.

## **FINANCIAL REVIEW**

### **David Orr**

Mr. David Orr, Director, Field Management Division (FMD), FGIS, provided a two-part financial review in response to an Advisory Committee request. The first presentation was entitled "Field Office Financial Performance," which was followed by a presentation entitled "Fee Rate and Structural Changes."

## **Biotechnology Program Update**

### **Steve Tanner**

Mr. Steve Tanner, Director, Technical Services Division (TSD), FGIS, updated the committee on biotechnology issues. He reported that global biotech acreage continues to increase with the United States, Argentina, and Canada planting the most. The major U.S. biotech crops are corn, soybeans, and cotton. GIPSA's biotechnology programs and activities continue following the strategies developed well over a year ago.

At present, GIPSA provides sampling guidelines via the Internet and has built and staffed a biotech reference laboratory in Kansas City. The reference lab has performance verified rapid test kits, including kits to detect StarLink and Roundup Ready corn and soybeans. GIPSA provides third-party biotech testing services using these kits.

Several months ago, GIPSA began offering its biotech-proficiency testing program. Mr. Tanner said that the program has 28 participating laboratories, including some in foreign countries. The program involves qualitative testing only, using DNA and/or protein-based test methods. GIPSA provides program participants with reports and posts the results on the World Wide Web.

Mr. Tanner identified the following biotech-testing issues that need further study:

- protein concentration in the sample versus percent biotech grains,
- multiple biotech events express the same protein, and
- the unavailability of reference materials for all events and the unavailability of DNA reference methods.

### **International Uniformity of Grain Quality Measurement**

#### **Steve Tanner**

GIPSA's involvement with international standardization activities, said Mr. Tanner, includes participating on international committees, working with visiting trade teams, and visiting foreign countries.

Committee work has addressed international standardization issues such as combustion nitrogen analysis protein testing, near infrared collaboration, test weight, biotechnology testing, sampling, and mycotoxin test methods.

Foreign grain trade teams visit the U.S. frequently. GIPSA exchanges technical information with many teams, thus promoting understanding and sometimes standardization of test methods.

Mr. Tanner said that GIPSA also visits our trading partners overseas. We participate in international grades and standards development programs, monitor cargo quality changes, and provide technical assistance and information to foreign testing laboratories. These activities promote standardization of some test methods.

## U.S. STANDARDS FOR GRAIN: AN UPDATE

Marianne Plaus

Ms. Marianne Plaus, Chief, Market Analysis and Standards Branch, FMD, FGIS, provided an overview of the role of the Official U.S. Standards for Grain. The United States Grain Standards Act (USGSA) provides six objectives for the U.S. Standards for Grain that remain relevant today (7 U.S.C. 74(b)(3)). Ms. Plaus also gave three examples demonstrating the Agency's commitment to keeping the standards relevant in today's evolving market--a market characterized by globalization, technological advancements, and consumerism:

1. Wheat dockage: Based on market data, which clearly indicates a downward trend in dockage levels for Hard Red Winter wheat exports out of the Pacific Northwest and the Texas Gulf, GIPSA is heeding the Advisory Committee's advice that: "GIPSA should not work on inserting dockage as a grade factor in wheat and allow contractual terms within the marketplace to determine levels." (Resolution 4 passed at the December 5, 2001, Advisory Committee Meeting in Chicago, Illinois.)

2. Soybean test weight (TW): At the December 5, 2001, Advisory Committee meeting, the Committee recommended that GIPSA commission or conduct a study to determine where TW should be placed within the structure of the soybean standards (Resolution 9).

Ms. Plaus provided:

- o an overview of the comments received in response to the 1991 GIPSA proposal in which the Agency proposed to make TW a non-grade determining factor (similar to moisture content). She also summarized GIPSA's decision to maintain TW as a grade-determining factor, as published in the 1994 final rule.
- o the correlation coefficients for TW and several other inspection factors, such as moisture, total damage, oil, and protein. Ms. Plaus and a coworker accessed data in GIPSA's Export Grain Information System and the National Quality Database to calculate the coefficients and found that all correlations between TW and the other factors are very low to low.
- o an update on her review of load order and contractual records. Based on these records, purchasers have not specified TW levels that are more restrictive than the grade limits or anything else that may indicate that TW is of special interest or importance.

Ms. Plaus concluded her remarks about TW by asking the Committee members if GIPSA should study this matter further. (Refer to Resolution 9 passed at the December 5, 2001, Advisory Committee Meeting in Chicago, Illinois.)

3. Soybean foreign material (FM): Ms. Plaus referenced USDA data published in the March 2002 Prospective Plantings report which indicates that an estimated 74 percent of U.S. soybean acreage will be planted with Roundup Ready soybeans in 2002. She indicated that one of the main benefits of growing Roundup Ready soybeans is easier weed management. Since weed seeds constitute a portion of FM, is it logical to assume that FM levels off of the farm are dropping? Ms. Plaus asked the Committee if GIPSA should analyze FM levels in the U.S. market with an eye toward revisiting the grade limits for FM. In other words, are the grade limits for FM still relevant?

A lengthy discussion ensued about the relevancy of the Official U.S. Standards for Grain in today's evolving market (refer to Resolutions 4 and 5 adopted at this meeting). While the standards continue to serve as the basis for transactions, the Committee recognizes that GIPSA will be challenged to keep pace with technological advances and in deciding what factors to add to the standards and in what manner (i.e., as grade-determining or non-grade determining factors or as official criteria).

### **Implementing Digital Media Technology**

#### **Roger Friedrich**

Mr. Roger Friedrich, Leader, Digital Media Group, reported that TSD consolidated the efforts of the various individuals working with digital media into a single group within the Board of Appeals and Review (BAR). The new group is charged with implementing print, electronic media, and imaging technology solutions to the standardization of grain quality assessment, customer outreach, and industry education. The group's current focus is in the following four areas:

1. Interpretive Line Prints. Mr. Friedrich reported that all technical issues are resolved and production started with interpretive line prints for corn and rice. The targeted completion date is early June 2002. In the months following June, soybeans, sorghum and wheat prints will be produced.
2. Multimedia CD/DVD. Mr. Friedrich reported that GIPSA has distributed 11,000 multimedia CD's since being made available in January 2001. FMD distributed 40 percent at trade shows and grain schools; the rest were distributed in response to direct requests. Currently, TSD is working on a training CD for the QAQC program and one for rail sampling safety. TSD will develop a sorghum-grading tutorial this summer and will possibly provide Spanish translations of our corn, soybean, and wheat tutorials.
3. E Learning. Mr. Friedrich stated that GIPSA has the capability to produce advanced inspector training which can be delivered over the Internet. He demonstrated examples of corn germ damage training and corn germ damage testing. However, a technology issue must be resolved before it can be fully implemented for field use, according to Mr. Friedrich. The issue involves determining how to ensure that the color and brightness of the image that the inspector in the field sees on his/her monitor mirrors the color and brightness as it appears on the monitor used to create the image at TSD. There have been recent developments in hardware-

calibrated monitors, which TSD is currently studying to determine if this technology might provide a solution. GIPSA also will need to acquire Learning Management Software to manage the training content and to track inspector training needs and results.

4. Subjective Quality Consultation. TSD has been exploring the use of scanners for providing BAR opinions on beans, peas, and lentils. Field locations send scanned images of problem samples to the BAR and forward the actual samples for comparison. Mr. Friedrich said this method has only been useful where color is not an issue; for instance, to identify varieties and some types of damage; e.g. insect refuse. The current imaging technology does not reproduce color accurately enough to eliminate the need for mailing samples. New image sensor technology that will improve the color reproducing capability is now coming into commercial use, but it may be several years before it is available.

## **Artificial Neural Networking**

### **Richard Pierce**

Dr. Richard Pierce, Chief, Inspection Systems Engineering Branch, TSD, FGIS, provided information on the benefits of updating discontinued NIRT instrument models, discussed NIRT calibration approaches including Artificial Neural Networking (ANN), provided an overview of the development of a global ANN calibration for wheat and barley protein, and provided the benefits of implementing ANN calibration technology in the official inspection system.

The benefits of implementing ANN include:

- improved accuracy and consistency, especially for diverse sample types like frostdamaged kernels, bleached kernels, and Desert Durum,
- the possibility of using a single calibration and common standardization settings for all six wheat classes,
- the potential for improved agreement among Infratec instrument models,
- a reduction in field standardization effort and costs,
- greater ease in aligning commercial instruments with GIPSA instruments, and
- the potential for improved international consistency in protein predictions.

The technical impact; i.e. change in protein predictions, of implementing ANN calibrations was also discussed. It was noted that once an ANN calibration was implemented the future impact of calibration updates would be much less than with the current calibration technology.

## **Marianne Plaus**

Ms. Marianne Plaus, Chief, Market Analysis and Standards Branch, FMD, provided projected cost estimates (including equipment and licensing fees) for GIPSA and the official inspection system if the official system converts to ANN. Ms. Plaus concluded her brief remarks by raising an idea/question to the Committee. At this stage, GIPSA believes that a logical next step would be to conduct a pilot test that would:

- compare wheat protein results obtained using the current calibration and the ANN calibration,
- include all major production/handling locations, and
- include all major wheat classes.

Such a pilot test would provide GIPSA with data that would support not only a decision to convert to ANN but to support that decision in the event of any future challenges. The Committee discussed ANN at length. The topics included the licensing fee, the purchase schedule, upgrades, cost, service contracts and calibration services, etc. ANN is the subject of Resolution 2.

## **RESOLUTIONS OF THE GRAIN INSPECTION ADVISORY COMMITTEE**

1. **A Look to the Future:** The Advisory Committee supports GIPSA's moving forward with the key policy issues, as discussed in David Shipman's presentation, "A Look to the Future."
2. **Artificial Neural Network (ANN) Technology:** GIPSA should thoroughly evaluate the technical, operational, and business aspects of the ANN calibration system in order to better understand the benefits and consequences of changing the calibration process. GIPSA should not limit this benefit and consequence analysis to only the official inspection program but also should consider the benefits and consequences to the United States grain industry. Further, GIPSA should report these findings to the Advisory Committee so the Committee may provide guidance and advice to GIPSA before a final decision is made.
3. **Elimination of Boundaries:** Before GIPSA eliminates the boundaries of official agencies, GIPSA should place safeguards to ensure the integrity of the official system. (Note: One Committee member opposed this resolution.)
4. **Grades and Standards - FM:** GIPSA should evaluate the role of FM in soybean grades, including the effect on overall quality, cost, and uniformity with other countries. The review should include grade limits and definition of FM in the grades.
5. **Grades and Standards - TW:** GIPSA should commission or conduct an additional study to determine the importance and appropriate placement of TW in grades and standards for soybeans. (Note: One Committee member opposed this resolution.)
6. **Identity Preservation:** GIPSA should participate in, but should not be the primary developer of, an Identity Preservation process. (failed)

### **Election of A New Vice Chairperson**

The Committee elected Mr. Robert Smigelski of The Andersons, Inc., as the new Vice Chairperson. Mr. Smigelski will assume the role of Chairperson in the spring of 2003.

### **NEXT MEETING**

The Committee agreed to hold the next meeting in New Orleans, Louisiana, in late October-early November 2002. The Committee requested the agenda by late August or early September 2002.