



United States  
Department of  
Agriculture

Grain Inspection,  
Packers and Stockyards  
Administration

# **Meeting Minutes**

## **Grain Inspection Advisory Committee**

**December 6-7, 2011**  
**Portland, Oregon**

**GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION  
GRAIN INSPECTION ADVISORY COMMITTEE MEETING MINUTES**

**Embassy Suites Hotel | Portland - Downtown  
December 6-7, 2011**

**WELCOME**

Jerry Cope, Chairperson, Grain Inspection Advisory Committee (Advisory Committee), opened the meeting with a welcome and introductions.

**ACCEPTANCE OF JUNE 21-22, 2011, MEETING MINUTES**

The Advisory Committee approved the minutes of the June 21-22, 2011, meeting as presented.

**REVIEW AND ACCEPTANCE OF DECEMBER 6-7, 2011, AGENDA**

The Advisory Committee approved the agenda of the December 6-7, 2011, meeting as presented.

**MEETING ATTENDEES**

**Committee Members**

Tammy Basel, Vice-President, Women Involved in Farm Economics  
David Cantu, Owner/Manager, A. Cantu Farms  
Theresa Cogswell, Consultant/President, BakerCogs, Inc.  
Jerry Cope, Commodity Manager, South Dakota Wheat Growers  
Tom Dahl, Vice-President, Sioux City Inspection and Weighing Service Company  
Rennie Davis, President/CEO, Davis Seed Farms, Inc.  
Rigoberto Delgado, Senior Partner, Delgado Farms Lcc.  
Warren Duffy, Vice-President/Export Operations, ADM Grain  
Edgar Hicks, Director, Nebraska State Grange  
Mark Hodges, Executive Director, Oklahoma Wheat Commission  
Jayce W. Hoyt, Managing Partner, Go Grain LLC  
Paul Lautenschlager, General Manager, Beach Coop. Grain Company  
Nannette Phegley, Operations Leader, Cargill/Farm Service Group  
Sarah Ann Sexton-Bowser, Director of Membership Services, Kansas Grain and Feed Association

**GIPSA**

Mary Alonzo, Director, Technology and Science Division (TSD), Federal Grain Inspection Service (FGIS), Grain Inspection, Packers and Stockyards Administration (GIPSA)  
Stephanie Brown, Assistant to the Deputy Administrator, FGIS, GIPSA  
Randy Deike, Field Office Manager, FGIS, GIPSA  
John Flemm, Federal Manager, FGIS, GIPSA

David Funk, Deputy Director, TSD, FGIS, GIPSA  
Randall Jones, Deputy Administrator, FGIS, GIPSA  
Bob Lijewski, Director, Field Management Division (FMD), FGIS, GIPSA  
Pat McCluskey, Chief, Policies, Procedures and Market Analysis Branch (PPMAB), FMD,  
FGIS, GIPSA  
Tom O'Connor, Director, Quality Assurance and Compliance Division (QACD), FGIS, GIPSA  
John Pitchford, Director, Departmental Initiatives and International Affairs (DIIA), FGIS,  
GIPSA

### **Other Attendees**

Keith Ackerman, Washington State Department of Agriculture  
Ed Durgin, GIPSA, Retiree  
Cassie Eigenmann, Dickey-john Corp.  
Mark Fulmer, Lincoln Inspection Service  
David Grillot, CHS  
Jess McCluer, National Grain and Feed Association

## **JUNE 2011 RESOLUTIONS RECAP**

Randall Jones, Deputy Administrator, FGIS, GIPSA, provided an update on the status of the resolutions from the June 2011 meeting held in Kansas City.

1. The Advisory Committee recommends that GIPSA move forward on implementing new diverter type (D/T) check testing procedures at both the export and domestic markets. The Advisory Committee charges GIPSA to replace the current procedures with procedures that focus on safety and reliability such as drop, visual, and installation certification.

GIPSA will provide a briefing in the Field Management Division presentation.

2. The Advisory Committee is concerned that the newly formed Domestic Inspection Operations Office (DIOO) is currently understaffed to properly perform their required duties (equipment, federal appeals, testing, SIMS samples, AMA) and supervise approximately 30 agencies in the domestic market. The Advisory Committee recommends that GIPSA evaluate the number of personnel under the DIOO banner, including what steps will be taken to ensure that GIPSA will be able to facilitate the marketing of grain in the domestic market under the increased workload of DIOO.

GIPSA will provide a briefing in the Field Management Division presentation.

3. The Advisory Committee recommends that GIPSA continues to support marketing to Asian markets through the Collateral Duty Officer (CDO) program and explore ways to expand the program. The Advisory Committee suggests that the Agency work with industry, if possible and appropriate, to look at ways this may be accomplished.

GIPSA will provide a briefing in the International Programs presentation.

4. The Advisory Committee recommends that GIPSA continue to identify new and improve current rapid technology in the area of protein quality (visco-elastic test) and ensure that the results correlate with end users.

GIPSA will provide a briefing in the Inspection Methods Update presentation.

5. The Advisory Committee recommends that GIPSA continue working on sorghum odor. In continuing this effort, reach out for industry and end-user feedback to set a storage musty sorghum odor reference that refers to end uses.

GIPSA will provide a briefing in the Inspection Methods Update presentation.

6. The Advisory Committee strongly recommends that export user-fees collected and maintained as retained earnings be solely used to support services that facilitate the export of grain and grain related products and not be subject to use for any other purpose.

GIPSA will provide a briefing in the FGIS Programs Update presentation.

7. The Advisory Committee recommends that FGIS/GIPSA continue to go forward with the evaluation and adoption of the 149 MHZ technology as the new official standard for grain moisture measurement.

GIPSA will provide a briefing in the Inspection Methods Update presentation.

8. The Advisory Committee recommends that GIPSA expedite the scheduled review of the barley standards considering the needs of all stakeholders.

GIPSA will provide a briefing in the Field Management Division presentation.

For additional details, see the attached presentation, *June 2011 Resolutions/FGIS Programs Update*.

## **FGIS PROGRAMS UPDATE**

Randall Jones, Deputy Administrator, FGIS, GIPSA, gave a general overview of FGIS operations.

### **Market Overview**

The 2011 crop year export inspections were historically strong and the second highest volume since 1983. Total export grain inspections, including FGIS delegated states and designated agencies, were 4 percent ahead of last year, and nearly 8 percent ahead of the 5-year average. China was the main destination accounting for more than 35 percent of the total inspection volume. Nearly two-thirds of China's imports were soybeans.

In 2011, FGIS export inspections increased approximately 4.5 percent from 2010. Wheat was the leading force as U.S. wheat enjoyed a prosperous year on the world market. For the same period, the total State and Official Agency export inspections were relatively flat as compared to last year.

Total 2011 export inspections for soybeans, corn, and wheat were as follows:

- Soybean inspections were 1.4 percent below last year's record pace (representing a decline of .6 million metric tons).
- Corn export inspections were down 7.2 percent (4.5 mmt).
- Wheat export inspections were up 34 percent (8.6 mmt).

Rice inspections were similar to 2010 at 14 percent above the 5-year average. According to USDA reports, rice production is expected to decline into 2012 due to an estimated 22 percent decrease in planted acreage. Pulse inspections were lower by 13 percent and expected to be dramatically lower for 2012 as production was substantially lower due to an excessively wet planting season, flooding in many of the primary growing areas, and a late harvest. Containerized grain inspections were ahead by 42 percent (1.3 mmt) as compared to 2010 and 14 percent above the 5-year average.

### **Financial Status – User Fees**

Export Inspections. As of October 1, 2010, FGIS held retained earnings of \$6.6 million. For FY 2011 (October 1, 2010, through September 30, 2011), FGIS had operating expenses of \$36.6 million and revenue of \$38.0 million increasing retained earnings to \$8.0 million.

Oversight of Official Agencies. As of October 1, 2010, FGIS held retained earnings of \$3.4 million. For FY 2011, FGIS had operating expenses of \$1.9 million and revenue of \$2.5 million increasing retained earnings to \$4.1 million.

Rice Inspections. As of October 1, 2010, FGIS held retained earnings of \$2.7 million. For FY 2011, FGIS had operating expenses of \$4.4 million and revenue of \$5.4 million increasing retained earnings to \$3.6 million.

Commodity Inspections. As of October 1, 2010, FGIS held retained earnings of \$2.0 million. For FY 2011, FGIS had operating expenses of \$2.8 million and revenue of \$2.8 million with retained earnings remaining at \$2.0 million.

### **Financial Status – Appropriated Funding**

For FY 2012, FGIS appropriated funding is \$16.5 million as compared to \$17.8 million for last year, \$18.3 million for FY 2010, \$17.9 million for FY 2009, \$17.6 million for FY 2008 and 2007.

For additional details, see the attached presentation, *FGIS Programs Update*.

## **INTERNATIONAL PROGRAMS**

John Pitchford, Director, DIIA, FGIS, GIPSA, provided a briefing on the international trade and outreach initiatives.

### **Asia Collateral Duty Officer Program**

In 2002, GIPSA began the Collateral Duty Officer (CDO) Program. A representative was placed in Kuala Lumpur (KL) on a long-term (1 to 4 month) temporary duty assignment to work with overseas customers and their Governments in Southeast Asia. Following the successful completion of this initial assignment, GIPSA has continued to annually place representatives in Asia under this program.

With the exception of FY 2003, GIPSA has increased its presence in the KL region (SARS affected the length of presence in FY 2003). In FY 2006 and FY 2007, two back-to-back assignments (one in KL and the other in Hong Kong) represented an 8 month presence in the region each year.

GIPSA has worked in 11 countries during various tours – from India to China. Common activities for GIPSA’s CDO representatives include: participating in educational seminars, investigating quality and weight complaints for grain shipments that were inspected and weighed by GIPSA at the time of loading, and participating in Government-to-Government discussions or negotiations concerning import restrictions or conditions/specifications that restrict U.S. trade.

GIPSA’s long-term assignments in Asia continue to draw praise from customers (buyers, millers and processors), USDA Cooperators, and Foreign Agricultural Service (FAS) representatives in the area.

### **China-Soybean Memorandum of Understanding**

In September, six Officials from China, Administration and Quality, Supervision, Inspection and Quarantine (AQSIQ) visited the U.S. to gain a better understanding about the U.S. soybean production and marketing chain. AQSIQ visited seed producers, country, river, and export port grain elevators. At the end of the trip the Officials met with representatives from GIPSA, Animal Plant and Health Inspection Service, FAS, and Food and Drug Administration in Washington, D.C., to discuss the trip and convene the first meeting of the technical working group. The technical working group decided that the next step would be a U.S. technical team to travel to China to gain a better understanding of their sampling and inspection system. FAS is working with these officials to propose dates for the trip. FAS is seeking funding from the Emerging Markets Technical Issues Resolution Fund.

### **Mexico Outreach**

A GIPSA representative gave a presentation on the Quality Assurance and Control program at the 18<sup>th</sup> Annual APPAMEX (Mexican grain importer association)-North American Export Grain

Association (NAEGA) in Puerto Vallarta, Mexico, on November 11, 2011. GIPSA did not receive reports of any grain quality problems with U.S. imports from the forum participants.

## **Grain Surveys**

Sorghum Farm Gate - From 2006 to 2010, GIPSA conducted a sorghum farm gate assessment, using a program that is designed to be statistically sound. The program was designed to capture first-point-of-sale or farm gate inspection data for grain sorghum across all major sorghum producing regions of the United States. Survey results can be found on the GIPSA web site: <http://www.gipsa.usda.gov/fgis/eduout.html>.

Soybean Farm Gate – From 2007 to 2011, GIPSA conducted a farm gate assessment to capture soybean quality data at the first-point-of-sale. Samples were analyzed for physical quality factors, including oil, protein, and a breakdown of the foreign material component. Survey results can be found on the GIPSA web site: <http://www.gipsa.usda.gov/fgis/eduout.html>

Soybean Export - After implementing the soybean farm gate assessment in 2007, GIPSA began a similar program at export locations in 2008. The soybean export assessment collects approximately 400 soybean samples inspected for export, from all major soybean exporting field offices and official agencies during the months of September through January. Although GIPSA collects quality data for all inspected soybean exports, no data on foreign material composition was collected. The survey continues through the 2011 soybean harvest. Survey results can be found on the GIPSA web site: <http://www.gipsa.usda.gov/fgis/eduout.html>

Wheat Export Cargo Sampling Project--Weed Seed Analysis - Since 1985, the Export Cargo Sampling Project (ECSP) has become an annual activity between GIPSA and U.S. Wheat Associates (USWA) whereby GIPSA's field offices submit 10 percent of export sublots of wheat during three survey periods. Different portions of the samples are examined for quality, end use characteristics, hardness, scab damage, pesticide residues, cadmium, lead, and vomitoxin. Pesticide residue survey data has proven to be very valuable in dealing with customers' food safety concerns.

Results on the quality attributes of these wheat export samples were published in USWA's Annual Crop Quality Report, which advises importers worldwide on the quality of the current U.S. wheat crop.

In conjunction with the ECSP project, this year, USWA has contracted with the Agricultural Marketing Service's National Seed Testing Lab to analyze a subset of the samples for weed seed analysis.

Japan Wheat and Barley Residue - Japan's Revised Food Sanitation Law, implemented May 2006, sets maximum residue limits for agricultural chemicals and veterinary drugs. For the past several years, GIPSA has responded to requests from Japan's Ministry of Agriculture, Forestry and Fisheries (MAFF) to collect wheat and barley samples for residue testing. GIPSA will continue to collect export wheat and barley samples to send to a commercial laboratory in Oregon for analysis and the Oregon lab will forward the results to MAFF.

U.S. Soybean Export Council (USSEC), Export Soybean Residue - Foreign buyers and officials are increasingly seeking documentation, testing, and certification for the presence of pesticide residues and toxic elements in U.S. grain shipments. At the request of the USSEC, GIPSA collected export soybean samples in 2008, 2009, and will continue the sample collection again this year. Samples are sent to TSD for chemical residue analysis. The results are maintained by USSEC.

U.S. Grains Council (USGC) Export Corn Quality - This year, the USGC will conduct a study of changes in corn quality in the marketing chain. USGC will collect corn samples during harvest from the first point of delivery. They will send them to a GIPSA official inspection agency for grading factor analysis and to a commercial lab for chemical residues, protein, oil, and starch analysis. GIPSA will collect corn samples at export and send them to the commercial lab for chemical residue, protein, oil, and starch analysis.

### **Importer Complaints**

In FY 2009 and FY 2010, GIPSA received a larger-than-normal number of complaints from importers of U.S. grain, accounting for 0.6 percent of grain exported. In FY 2011, approximately 0.6 percent of all grain exported were involved in grain quality discrepancies.

FY 2011 Complaints - In FY 2011, GIPSA received nine quality complaints from importers in six countries. Approximately 43 percent of complaints we received involved China's allegations of finding treated soybeans in six soybean shipments. Another 30 percent of the complaints involved damaged corn in five shipments to Egypt.

For additional details, please see the attached presentations, *International Programs*.

## **FIELD MANAGEMENT POLICY AND PROCEDURES**

Bob Lijewski, Director, FMD, FGIS, GIPSA, discussed the status of an Occupational Safety and Health Administration (OSHA) citation and issues related to CuSum.

### **OSHA Citation**

Mr. Lijewski briefed the Advisory Committee members on the status of a citation issued to the Corpus Christi sub-office in October 2011 by OSHA. The chronology of events, a discussion of the Miles Memorandum which delineates the OSHA policy on exposure to fall hazards from the tops of rolling stock, and the outcome/next steps related to the Informal Conference between OSHA and GIPSA senior staff in November 2011 were discussed.

### **CuSum**

Mr. Lijewski presented updates on three issues related to the CuSum loading plan:

- 1) Grain merchandisers in the Pacific Northwest region asked GIPSA to increase the size of sublots they can put together. After consulting with the GIPSA statistician, GIPSA decided to increase the size of sublots for lash barges and vessels, and leave subplot sizes

unchanged for unit trains; whereas previous policy allowed a maximum subplot size of 80,000/160,000\*\* bushels (\*\*when component sample analysis is requested) the new policy will allow 100,000/200,000\*\* bushels. The new policy will also impose new limitations on maximum component size and the minimum number of component checks.

- 2) GIPSA clarified the policy on the “Cutoff” of the CuSum loading plan to end inspection. An applicant for service may request a cutoff at any time provided grain is already on board. Thus, the first subplot is not eligible for a cutoff. GIPSA denied the request in order to ensure the CuSum loading plan was not circumvented by resetting the CuSum starting values.
- 3) A request from the industry was evaluated regarding the transfer of material portion (failed) sublots. Current policy is restrictive on transferring the failed sublots, and permitting the transfer provides additional options to grain handlers. GIPSA agreed to revise the policy after the review with the GIPSA statistician. Accordingly, GIPSA’s policy was revised to permit the transfer of material portion sublots or extra grain sublots to an Average Quality lot or to a combined Average/CuSum lot.

## **FIELD MANAGEMENT POLICY AND PROCEDURES**

Pat McCluskey, Chief, PPMAB, FMD, FGIS, GIPSA, briefed the Advisory Committee on reconditioning grain, rulemaking, and drop sample test.

### **Reconditioning Grain to Reduce Aflatoxin**

Mr. McCluskey discussed a request GIPSA received from Grain merchandisers in the Central Gulf (New Orleans area) to revise the policy which permits one attempt at reconditioning a lot which exceeds 20 parts per billion (ppb) of aflatoxin, with one official analytical after reconditioning to determine the final disposition of the actionable lot. GIPSA is evaluating a plan to allow multiple attempts at reconditioning while maintaining the single official analytical test, and will review the proposed policy with the Food and Drug Administration. Notable concerns are safety of technicians exposed to aflatoxin during testing, and accuracy of test results for submitted samples associated with reconditioning attempts but that were not taken by official sampling methods.

### **Rulemaking**

Mr. McCluskey provided updates on four rulemaking activities currently in the clearance process. Progress and timelines were discussed regarding the following:

- Advance Notice of Proposed Rulemaking: U.S. Standards for Barley – the comment period will close on January 3, 2012;
- Notice of Proposed Rulemaking: U.S. Standards for Wheat – in agency clearance;
- Notice of Proposed Rulemaking: Fees Assessed by the Service (fees under the United States Grain Standards Act) – in agency clearance; and

- Final Rule: Inspection and Weighing of Grain in Combined and Single Lots (container rule) – workplan in the clearance process. Once the workplan is cleared the rule will be submitted for final clearance and published in the federal register.

### **Drop Sample Test Update**

Mr. McCluskey provided an update on drop sample test noting that GIPSA personnel have successfully tested a protocol for approving Diverter Type (D/T) samplers in domestic facilities using a drop sample test, which was previously approved for D/T samplers in export facilities. FMD staff tested the protocol at three Midwest elevators in 2011. The drop sample test, in conjunction with a review of mechanical drawings and inspection of the installed sampler, provides an appropriate alternative to the pelican sampler for approving D/T samplers.

The drop sample protocol is superior to the pelican sampler in several ways. It requires a minimal amount of grain during the drop sample test compared to the many elevations of large amounts of grain during the pelican test. The drop sample test provides a tightened testing scope by using standard reference samples resulting in greater accuracy. The test is also much safer introducing the samples into the system instead of collecting them under the load out spout. The drop sample protocol provides an alternative for approving D/T samplers that is safer, less labor intensive as well as less time consuming, usually allowing for a test to be completed within 3-4 hours.

For additional details, please see the attached presentations, *Field Management Division*.

### **QUALITY ASSURANCE/MANAGEMENT PROGRAM**

Tom O'Connor, Director, QACD, FGIS, GIPSA, provided a briefing on the Quality Assurance and Management Program.

Mr. O'Connor provided a historical perspective on how the program has evolved over the past 15 years and noted that agency management has begun a comprehensive analysis of the quality assurance program within the official system.

Mr. O'Connor also provided a status update of the implementation of the Quality Management Program (QMP) and some of the initiatives underway to enhance the efficiency of that program. It was noted that Official Agencies and FGIS offices are now in their second year of working under the QMP with marked improvements related to the implementation and review of the QMPs which ensures consistent delivery of high quality services.

For additional details, please see the attached presentation, *Quality Assurance Management Program*.

## FGIS INITIATIVES

Stephanie Brown, Assistant to the Deputy Administrator, FGIS, GIPSA, briefed the Advisory Committee on the primary FGIS initiatives for FY 2012. The initiatives support the implementation of the GIPSA strategic plan and the FGIS mission to facilitate the marketing of U.S. grain and related agricultural products. GIPSA's vision is to be an innovative and responsive organization that protects and fosters the economic growth of America's farmers.

Ms. Brown identified four objectives that help to promulgate the GIPSA vision; improve customer experience; focus on quality; modernize service delivery; and to be the employer of choice.

Improve Customer Experience-Using the Lean Six Sigma - Lean focuses on maximizing process speed (cycle time) by reducing waste and Six Sigma focuses on reduction in variance and reduction in "defects", defined in the broadest sense to include any deviation from customer requirements or expectations. Lean Six Sigma is a combination of the two for an approach that will increase quality and reduce defects/variations while increasing process speed and efficiency.

Focus on Quality - Develop a comprehensive strategy for the quality program moving forward utilizing continuous process improvement methodologies to identify opportunities, re-engineer selected quality processes, and provide quality assurance and control reporting tools for Official Service Providers.

Modernize Service Delivery - Prepare for adoption and implementation of new moisture meter technology and transition delegated States to FGISonline's Inspection, Testing and Weighing system.

Employer of Choice - Develop goals and guidelines to enhance service delivery, safety, and efficiency in future laboratory designs. For the next class of recruits for FGIS interns, use the Office of Personnel Management's Pathways Program and implement an enhanced recruitment strategy to increase diversity of the FGIS talent pool. Also develop and implement a mentoring program to support employee development and continued learning.

For additional details, please see the attached presentation, *FGIS Management Initiatives for 2012*.

## NATIONAL GRAIN CENTER RENOVATION UPDATE

Mary Alonzo, Director, TSD, FGIS, GIPSA, provided an update on the National Grain Center (NGC) construction project in Kansas City, Missouri.

When completed, the new NGC will house all FGIS employees in the Kansas City area, and provide opportunities for expanded training and meeting services. GIPSA recently completed Phase 1 of a three phase construction and renovation plan. The completion of Phase I has increased available space from 35,000 square feet to 55,000 square feet. The NGC now houses employees from Technology and Science, Field Management, Information Technology and

Quality Assurance and Compliance. Phase II, renovation of the top floor of the former building, is in process, and scheduled for completion in March 2012. The final phase, renovation of the bottom floor of the former building, will begin at that time, and is scheduled for completion in August 2012.

For additional details, please see the attached presentation, *National Grain Center Renovation Update*.

## **INSPECTION METHOD UPDATES**

David Funk, Deputy Director, TSD, FGIS, GIPSA, provided an update on inspection methods.

The Yamamoto Rice Sheller was put into use for California-production of medium- and short-grain rice as of September 1, 2011.

Dr. Funk reported that the sorghum odor project is nearing completion. As requested at the June 2011 Advisory Committee meeting, GIPSA reached out to several end-users of sorghum on the acceptability of a reference for sorghum “storage musty” odor. After reviewing previously obtained survey and taskforce results along with sorghum end-users input, FGIS selected a chemical “recipe” that will be used as the reference for “storage musty” sorghum. The reference sample will be a mixture of the chemical compounds Geosmine and 1,2,4-Trimethoxybenzene added to a base sample of stored sorghum with an “okay” odor.

In the fall of 2011, with the assistance of Kansas State University (KSU), FGIS created the reference sample and the Board of Appeals and Review commenced training for all official inspection personnel. The training will ensure that all sorghum inspectors are calibrated to the reference sample when assessing whether stored sorghum has a musty odor. The new odor reference material will be distributed in March 2012 for routine use by inspectors who grade sorghum.

Dr. Funk provided information about a current international proposal to create a globally acceptable grain moisture reference method and requested Advisory Committee input as to the desirability of such an effort.

Dr. Funk also reported on the Agency’s continuing efforts to prepare for implementing new official grain moisture measurement technology. In response to a November 2010 resolution by the Advisory Committee, the Agency conducted a study of moisture meter measurement accuracy in relation to “green” grain for rough rice and soybeans. The “green” grain research included studies of wide moisture variation between kernels in a sample and “rebound” effects due to rapid drying of outer kernel layers. Tests were done with Near-Infrared Transmission (NIRT); the current Official moisture meter (GAC 2100); and the United Grain Moisture Algorithm (149 MHz technology) to compare each technology’s performance with these anomalous grain conditions. The results showed that 149 MHz technology was consistently less

affected than the GAC 2100. The NIRT was even less affected than both the GAC 2100 and 149 MHz technology for most, but not all, samples. These extreme tests demonstrated that the 149 MHz technology performs at a high level on “green” grain.

For additional details, please see the attached presentation, *Inspection Method Updates.*

### **DENSITY CORRECTION EFFECTS FOR CORN WITH UGMA AND GAC CORN**

David Funk, Deputy Director, TSD, FGIS, GIPSA, reported to the Advisory Committee that inconsistencies have been reported between the current Official Moisture Meter and the new instruments based on the UGMA (149 MHz technology) for corn with high test weight. The Advisory Committee was reminded of a presentation given at the June 2011 meeting regarding the performance of the official moisture meter, the GAC 2100, that demonstrated that for all 2009 U.S. corn from all harvest locations that the GAC 2100 performed well with the exception of some samples with low test weight. Low test weight samples caused smaller errors for the 149 MHz technology as well, but it was augmented with a “secondary density correction” that improves accuracy for low test weight samples. To make the necessary corrections to the GAC 2100 would require each machine to be returned to the manufacturer for reprogramming which is not practical or feasible. The 149 MHz moisture meters provide lower moisture readings on high test weight corn when compared to readings from the GAC 2100. GIPSA’s tests show the results from the 149 MHz technology are more accurate when compared to the air oven reference method. During the discussion, it was suggested that the Agency should accelerate its planned implementation of the 149 MHz technology for use for fall-harvest crops and implement a change in August 2012 instead of August 2013 as previously proposed.

For additional details, please see the attached presentation, *Density Correction Effects for Corn with UGMA and GAC Corn.*

## **RESOLUTIONS**

The following resolutions were introduced and passed by the Committee:

1. The Advisory Committee recommends that GIPSA continues to hold these meetings twice a year to stay abreast of resolutions submitted by committee members.
2. The Advisory Committee recommends that GIPSA expedite the formation and release of reports from the Quality Assurance Control (QAC) program to the official agencies. The development of these QAC reports should incorporate feedback from the official agencies.
3. The Advisory Committee recommends that GIPSA consider the confusion and uncertainty for market participants if there was a change in the current market moisture reference. Potential changes in the moisture reference should be avoided. The only reference method the Advisory Committee would support for global harmonization would be the one currently utilized in the United States.
4. The Advisory Committee recommends the implementation of the 149 MHZ technology for moisture measurement in August 2012 for fall harvest grains.

GIPSA should also work with industry to transition from the GAC 2100 to the 149 MHZ technology to aid in stakeholder needs.

5. The Advisory Committee recommends that GIPSA perform a comprehensive review of all inspection fees associated with processed commodities and containers, including but not limited to users fees, oversight, and those collected to ensure the charges are equitable in comparison with these same fees on bulk grain.

## **CERTIFICATES TO OUTGOING MEMBERS**

Randall Jones, Deputy Administrator, FGIS, GIPSA, presented certificates to and thanked the following outgoing members for their 3 years of service to the Committee: Tammy Basel, Theresa Cogswell, Jerry Cope, Tom Dahl, Warren Duffy, and Mark Hodges. Outgoing alternate members not present were Paul Coppin, Godfrey Friedt, Brian King, and Gene McEntee.

## **NEXT MEETING**

The Advisory Committee recommended that the next meeting be held June 2012 in Kansas City, Missouri.

## MEETING MINUTES

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

Randall D. Jones  
Deputy Administrator  
Federal Grain Inspection Service  
GIPSA, USDA

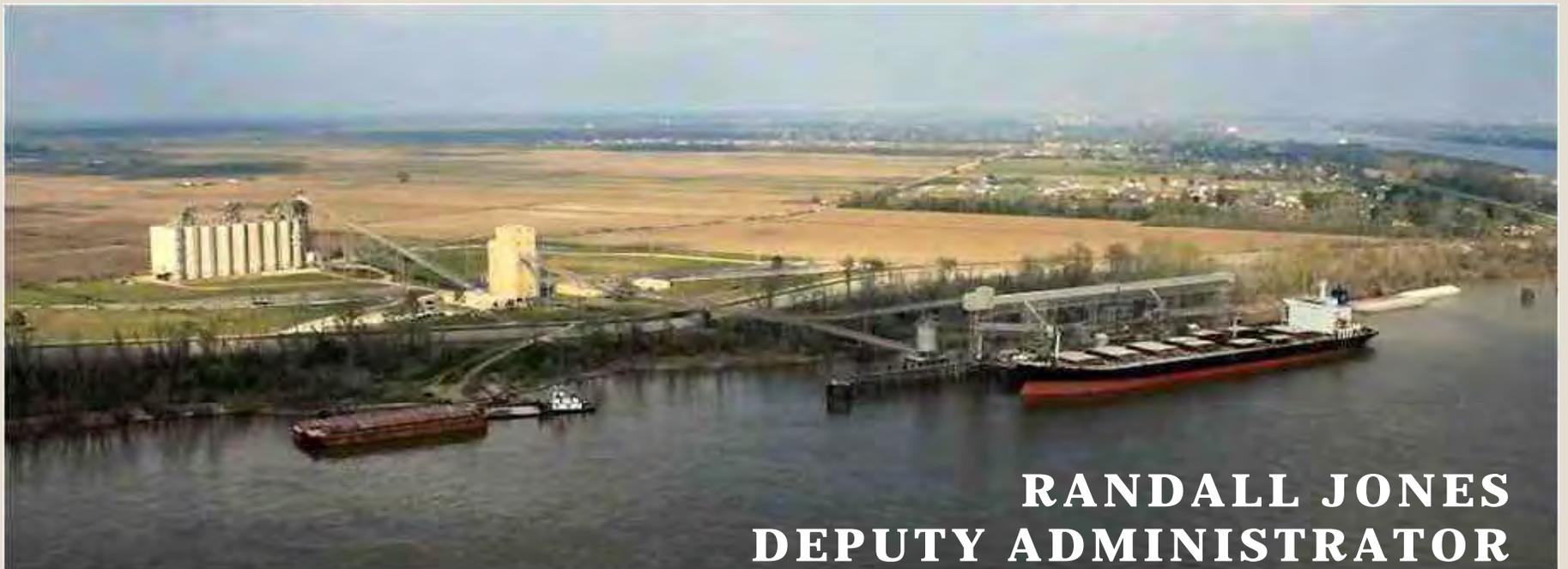
*RJ* 1/4/12

Jerry Cope  
Chairperson  
Grain Inspection Advisory Committee

*JDC*  
1/4/12

These minutes will be formally considered by the Advisory Committee at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.

# Grain Inspection Advisory Committee Meeting December 2011



**RANDALL JONES  
DEPUTY ADMINISTRATOR**

# Grain Inspection Advisory Committee Resolutions - June 2011

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# Grain Inspection Advisory Committee Resolutions - June 2011

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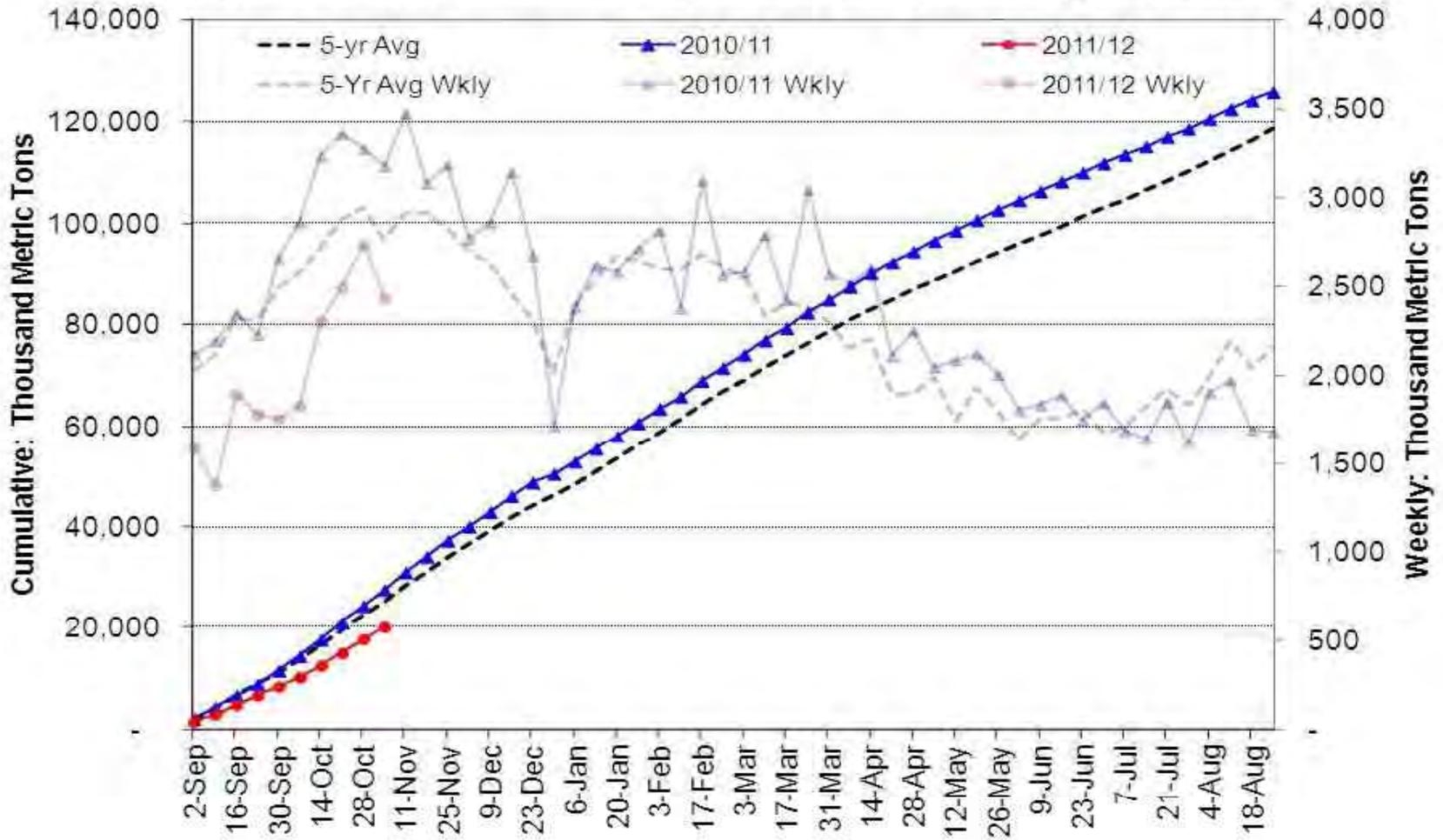
- The Advisory Committee recommends that FGIS/GIPSA continue to go forward with the evaluation and adoption of the 149 MHZ technology as the new official standard for grain moisture measurement.

# Grain Inspection Advisory Committee Resolutions - June 2011

- The Advisory Committee recommends that GIPSA expedite the scheduled review of the barley standards considering the needs of all stakeholders.

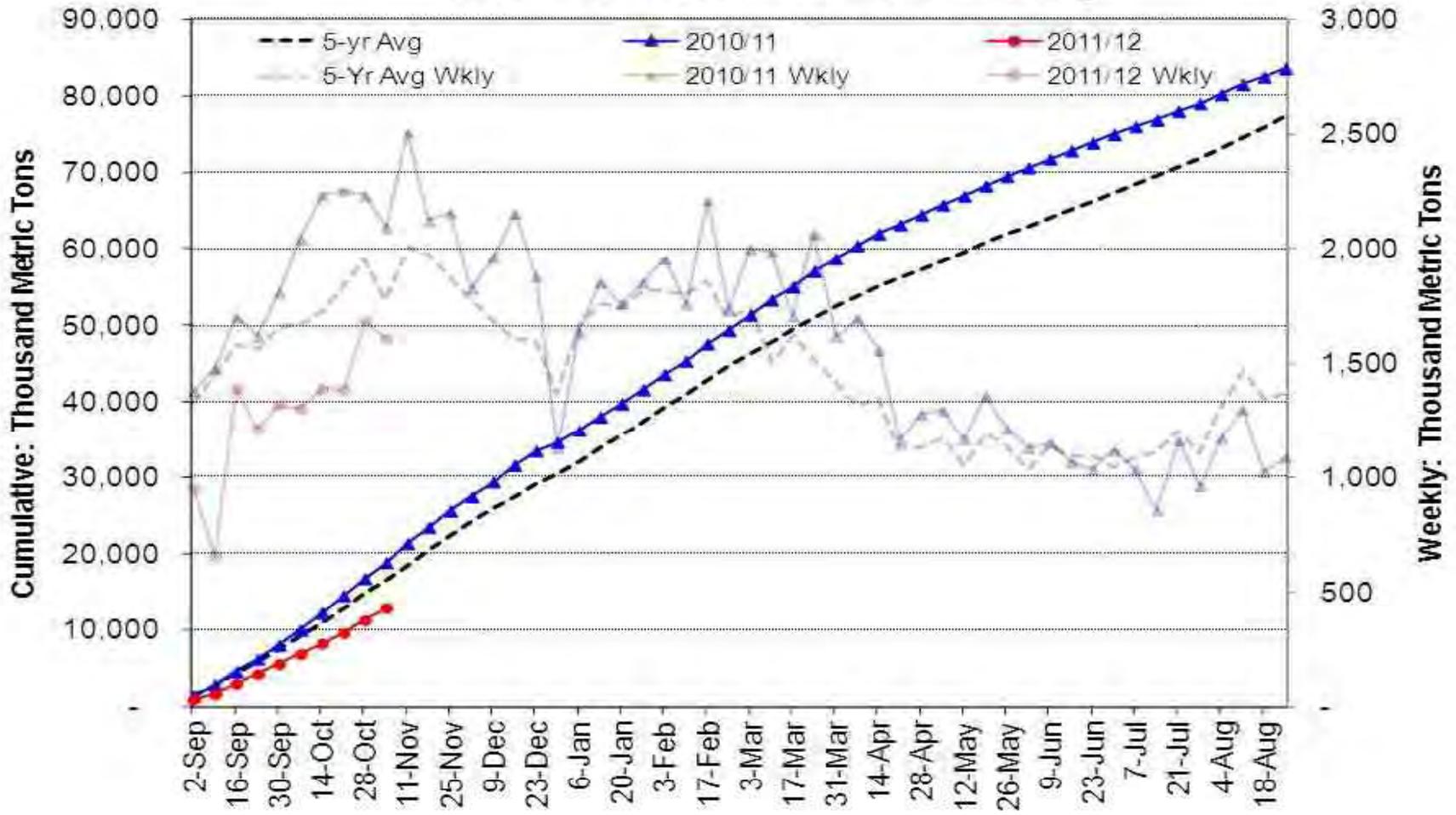
# Market Overview

## All Grains - FGIS, States, & Agencies



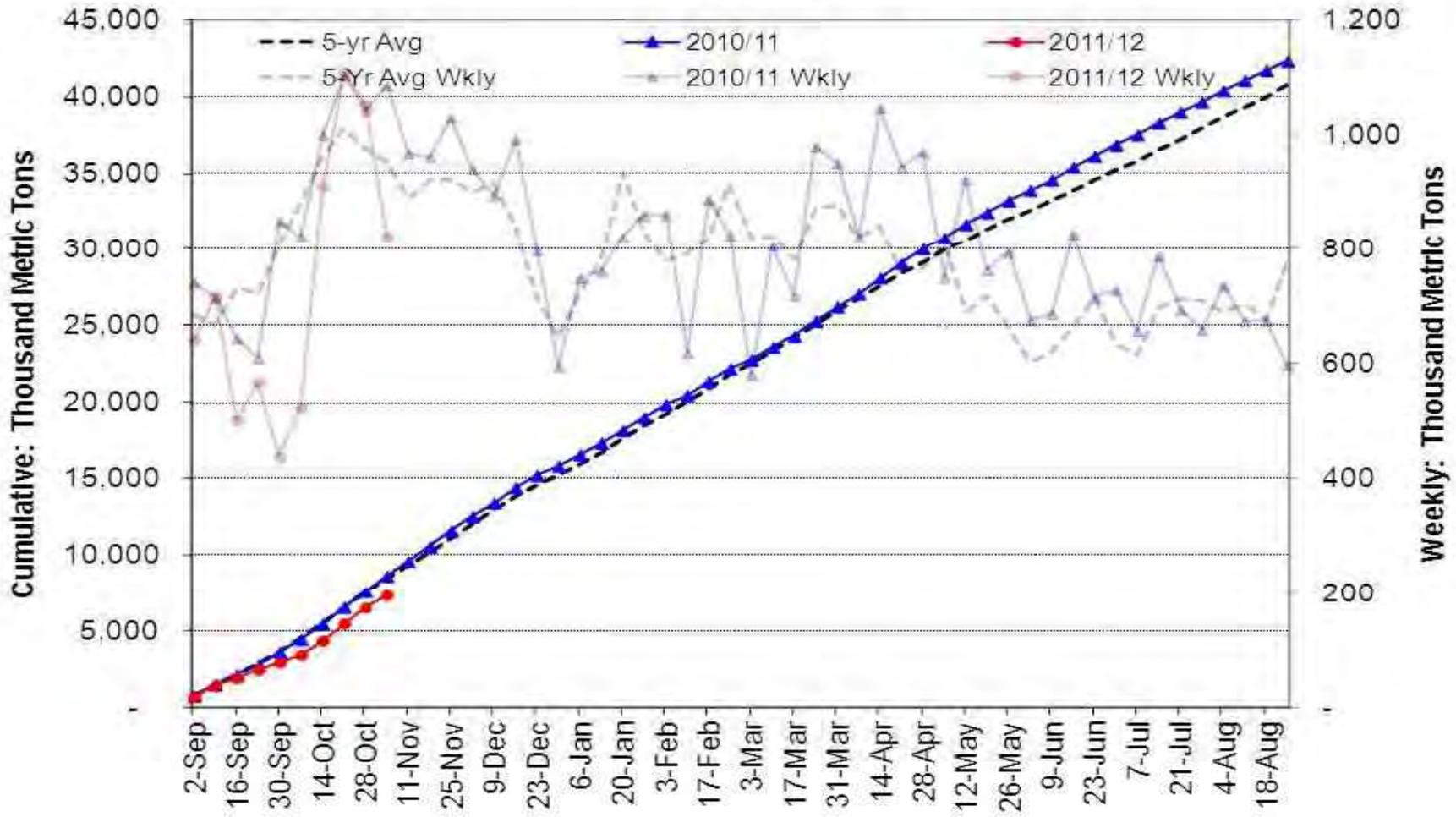
# Market Overview

## All Grains - FGIS Only



# Market Overview

## All Grains - States & Agency Export Inspections

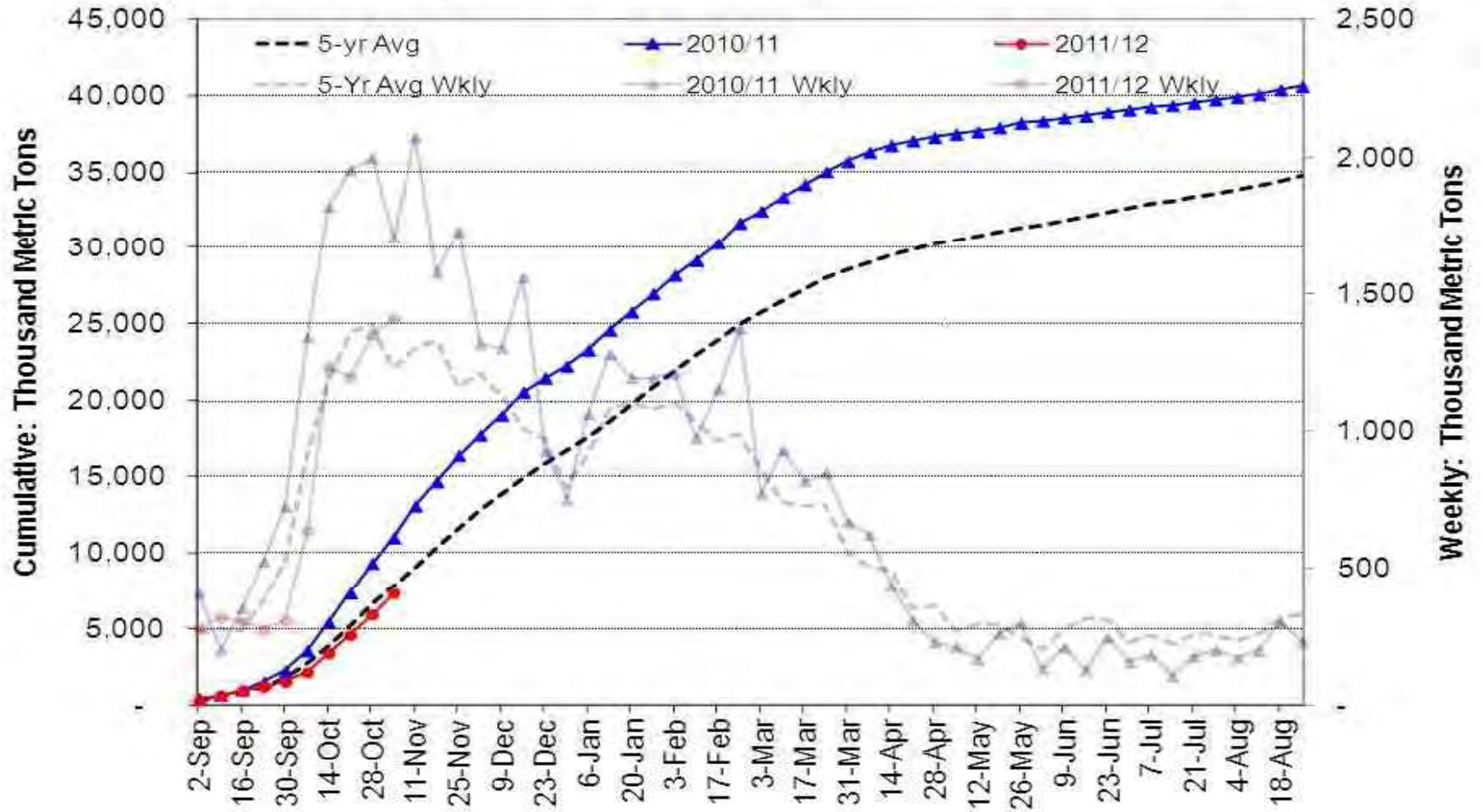


# Market Overview



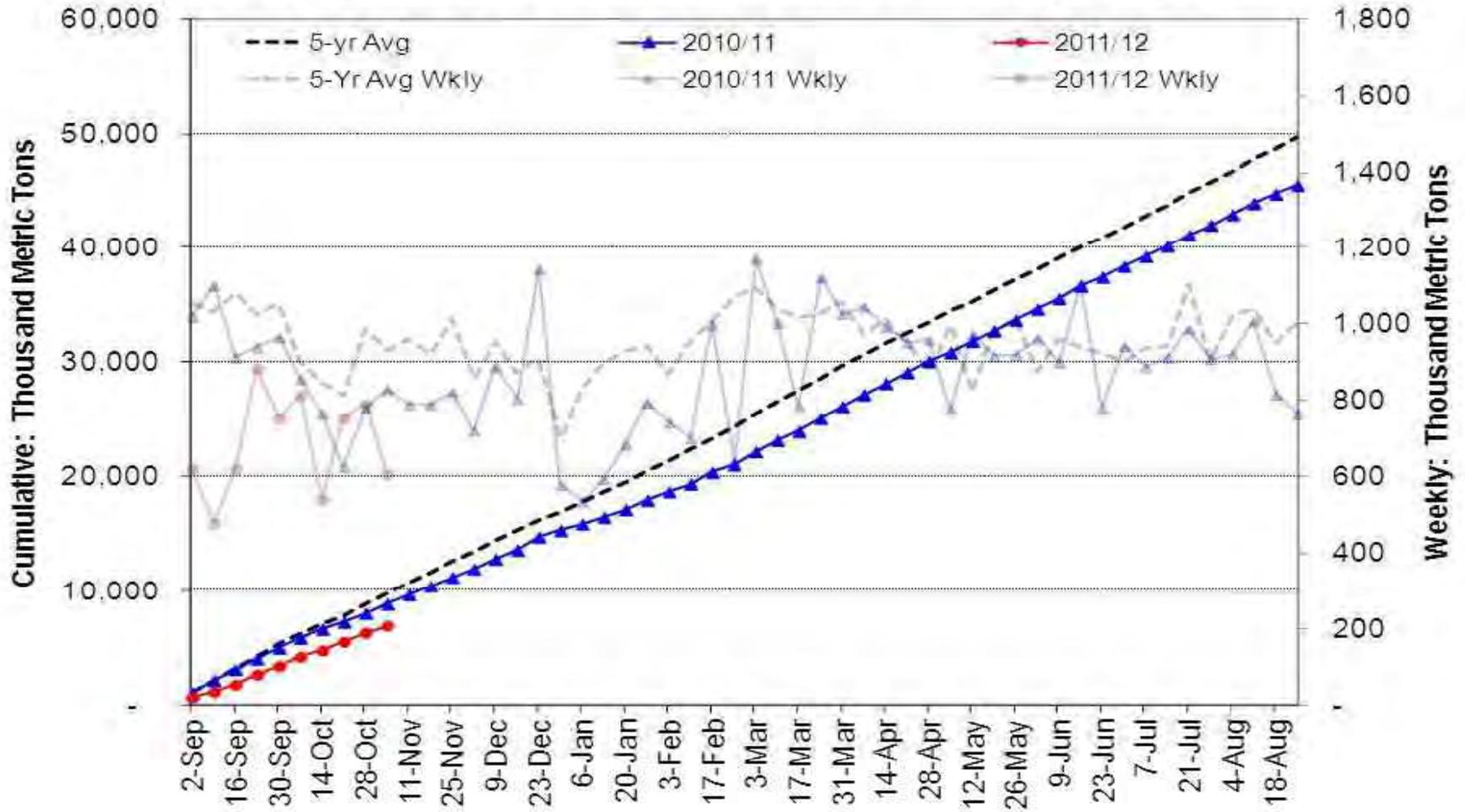
# Market Overview

## Export Soybeans - FGIS, States, & Agencies



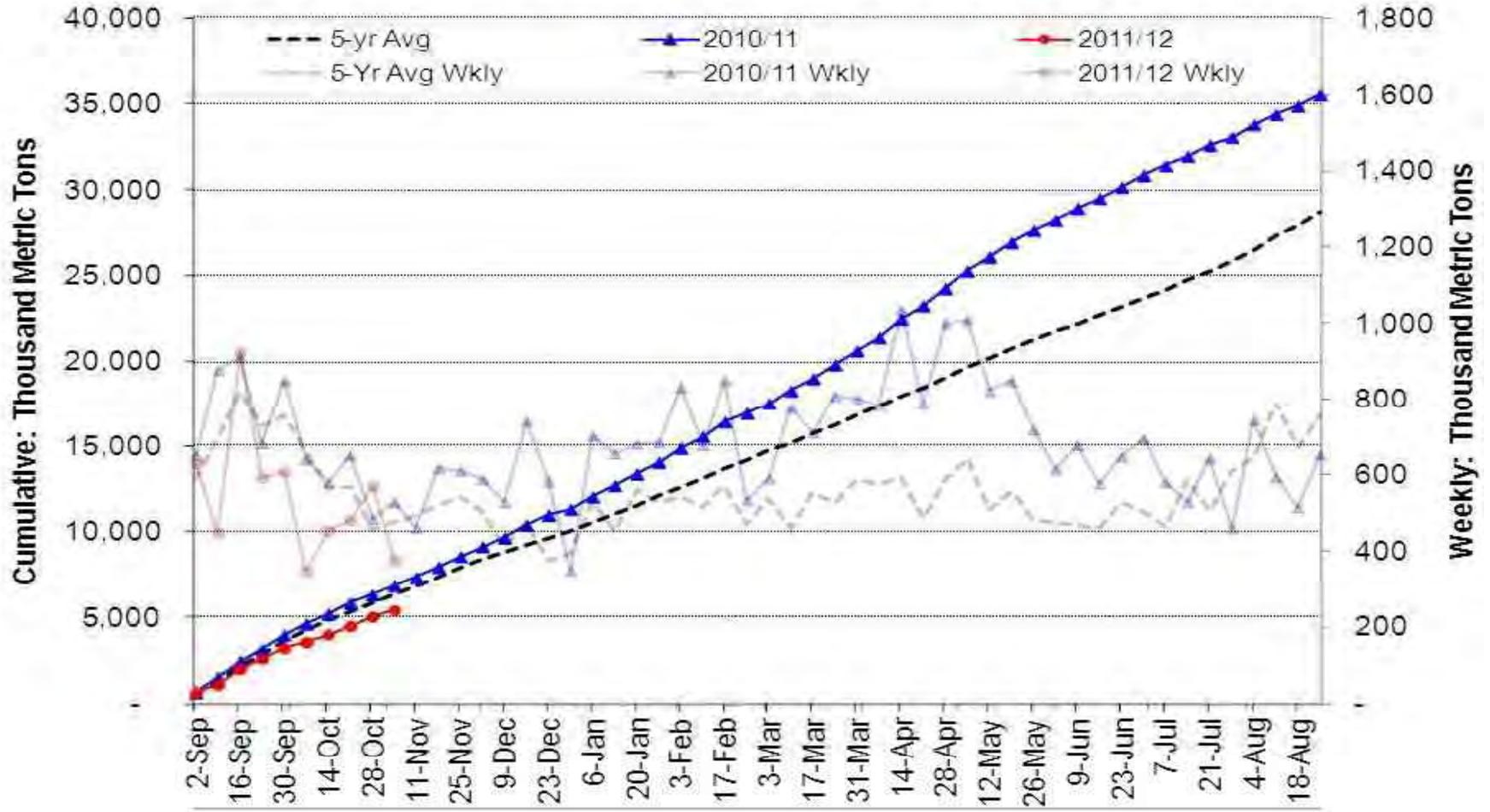
# Market Overview

## Export Corn - FGIS, States, & Agencies



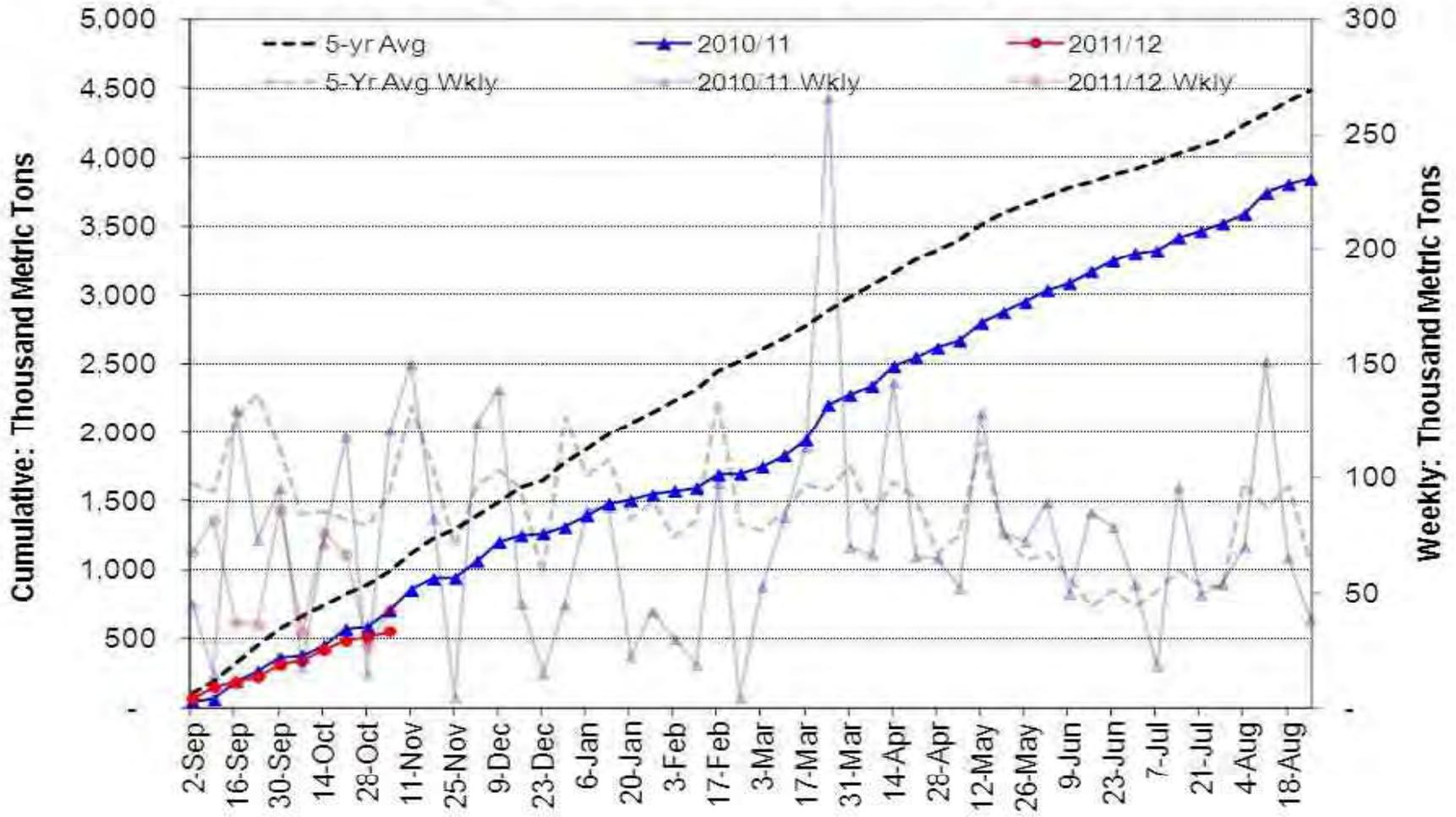
# Market Overview

## Export Wheat - FGIS, States, & Agencies



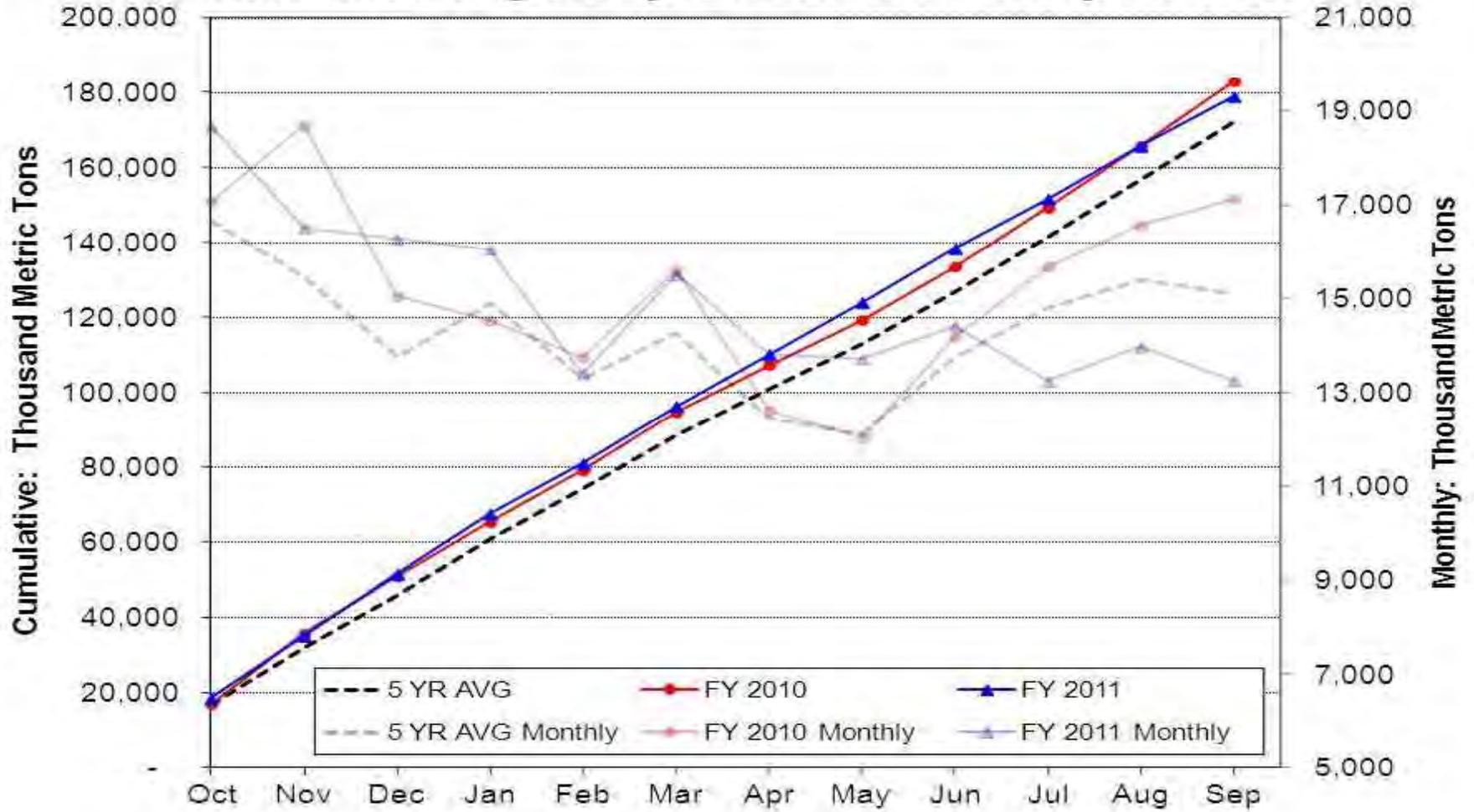
# Market Overview

## Export Sorghum - FGIS, States, & Agencies



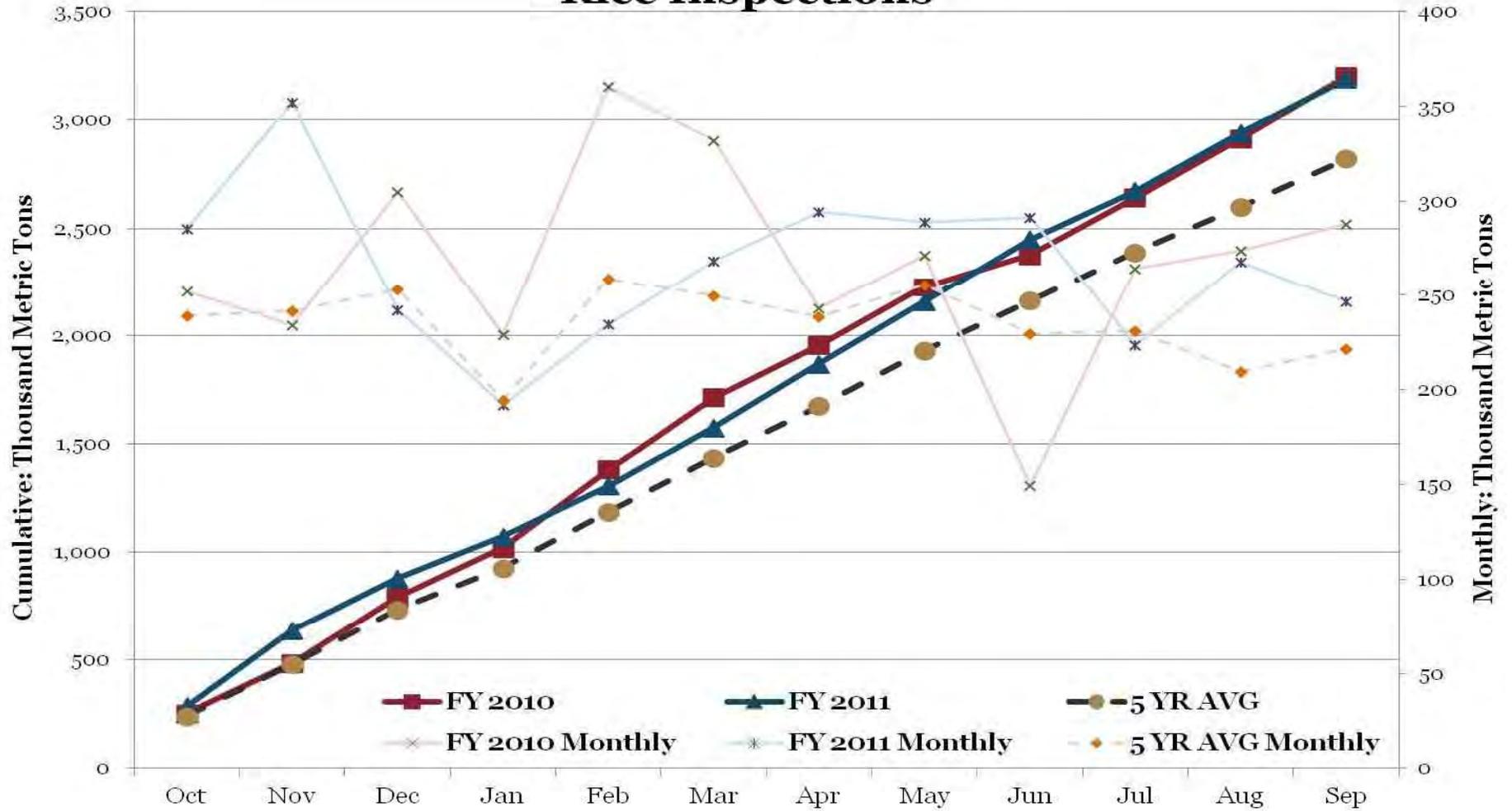
# Market Overview

## State and Agency Domestic Inspections



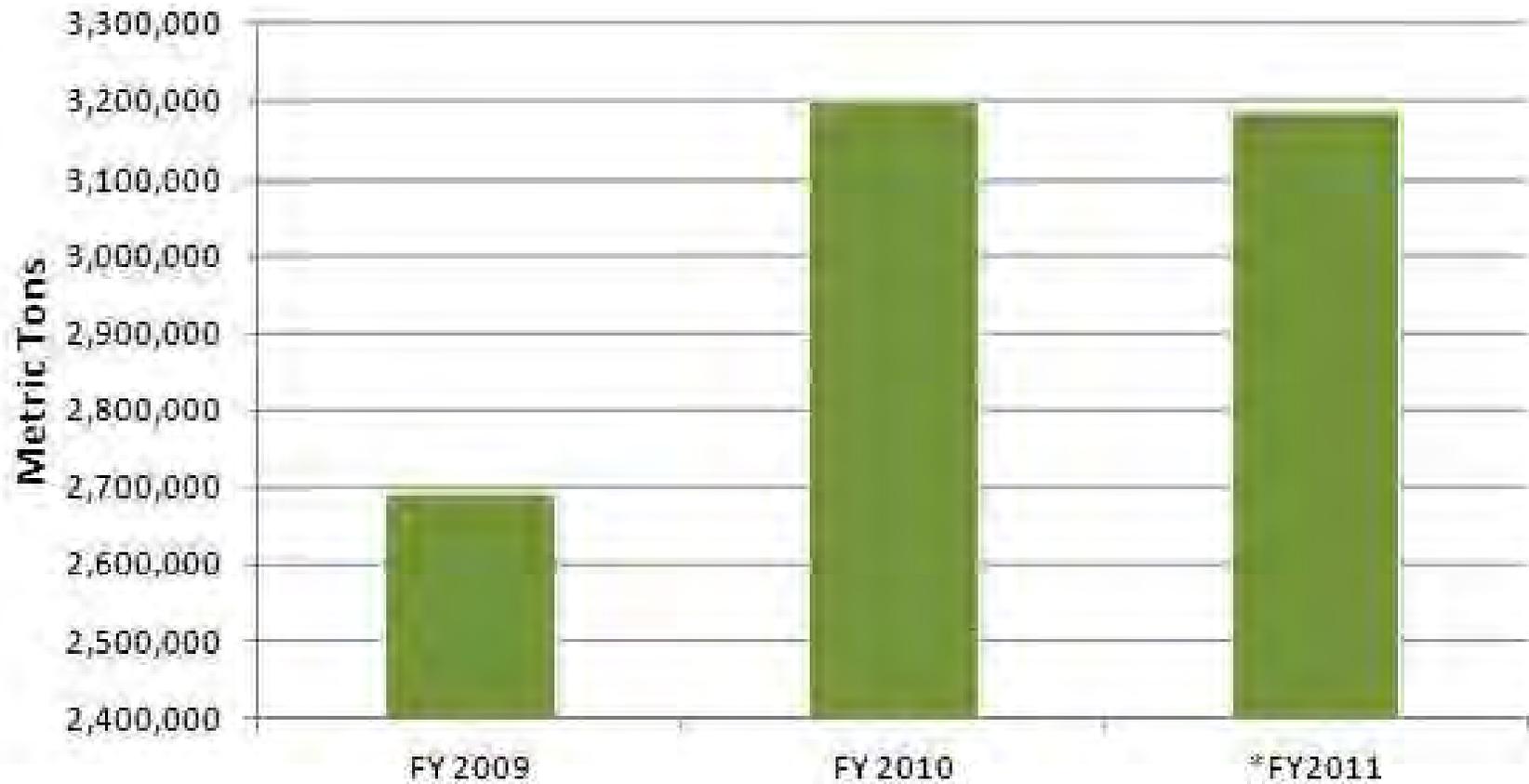
# Market Overview

## Rice Inspections



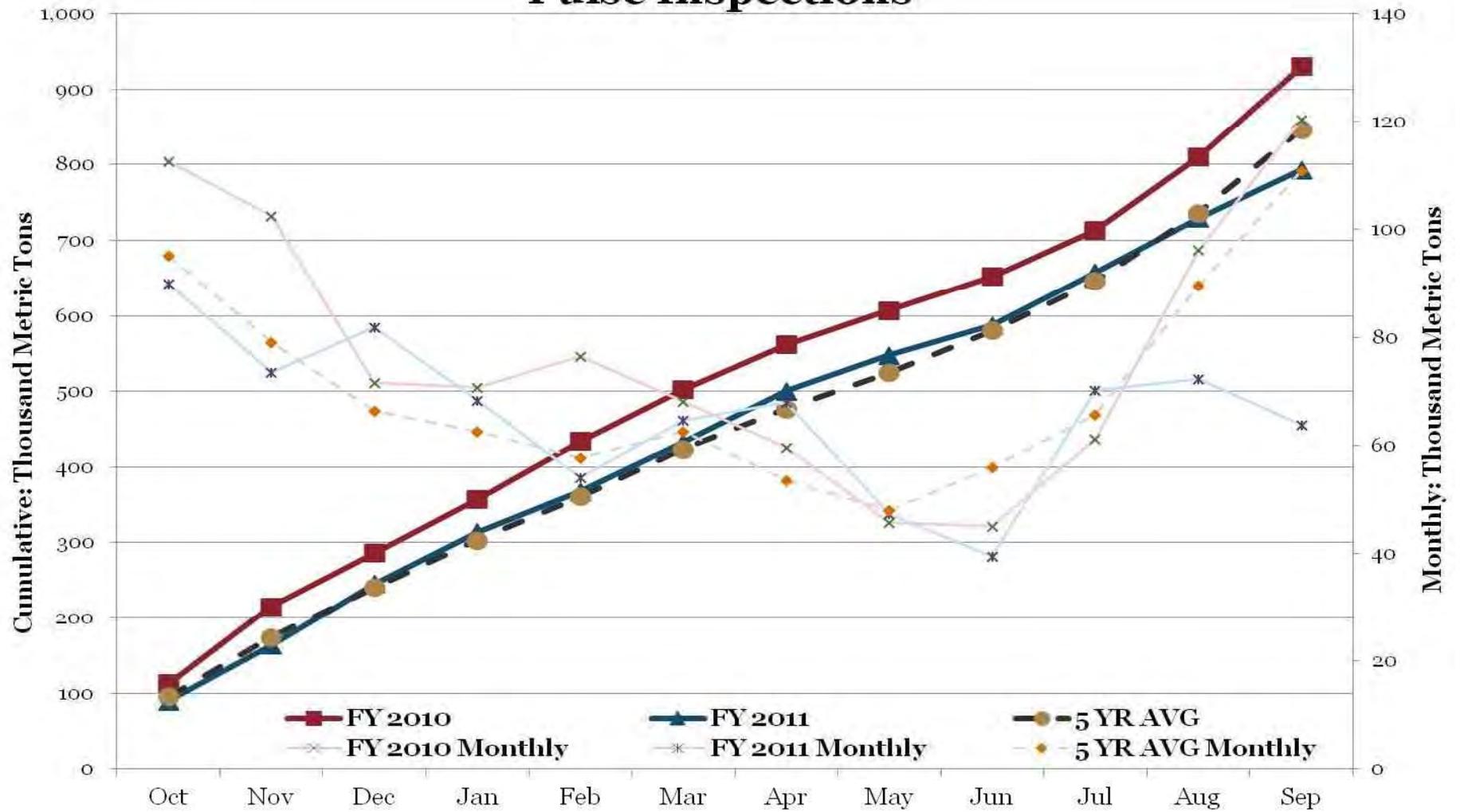
# Market Overview

## Yearly Rice Inspections

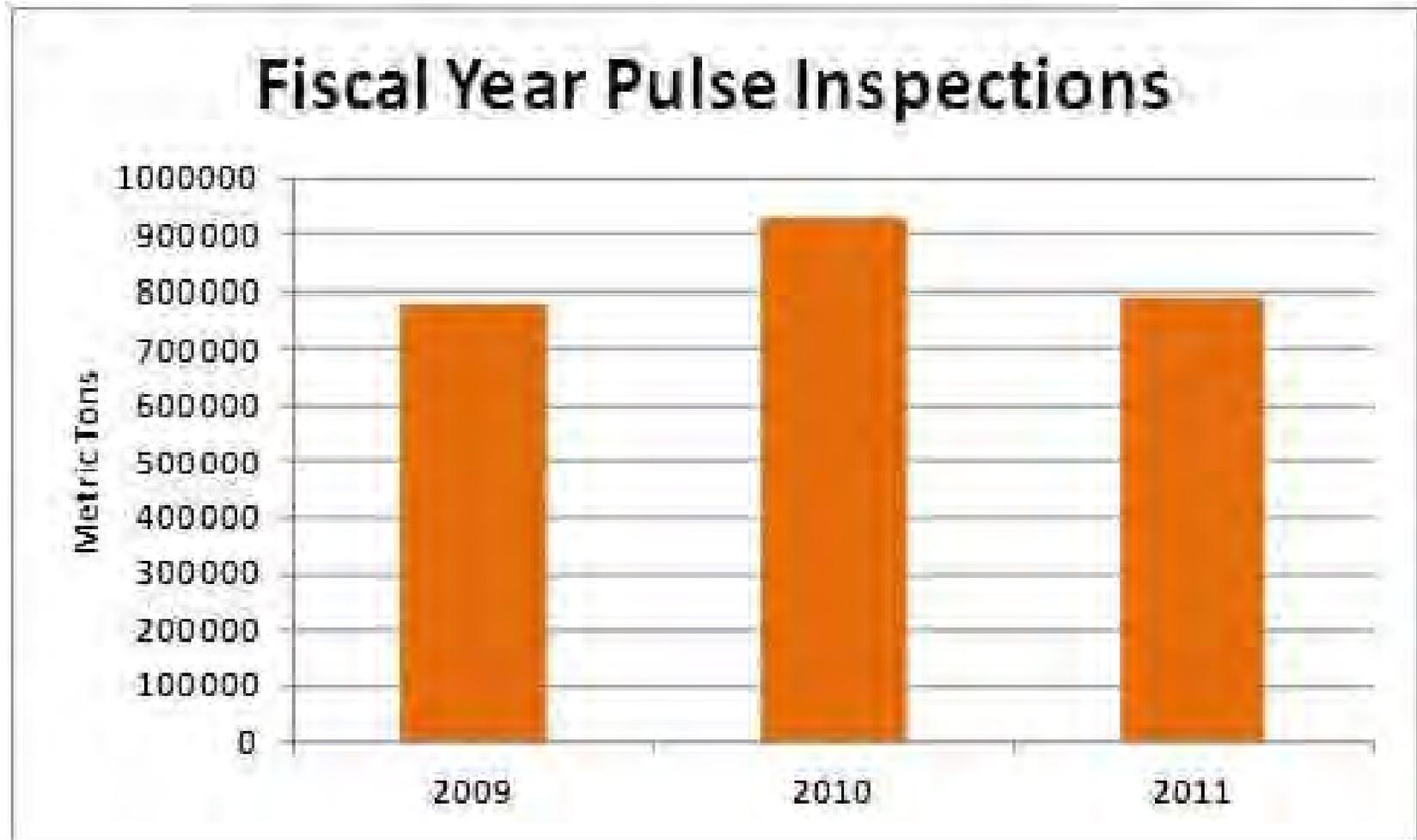


# Market Overview

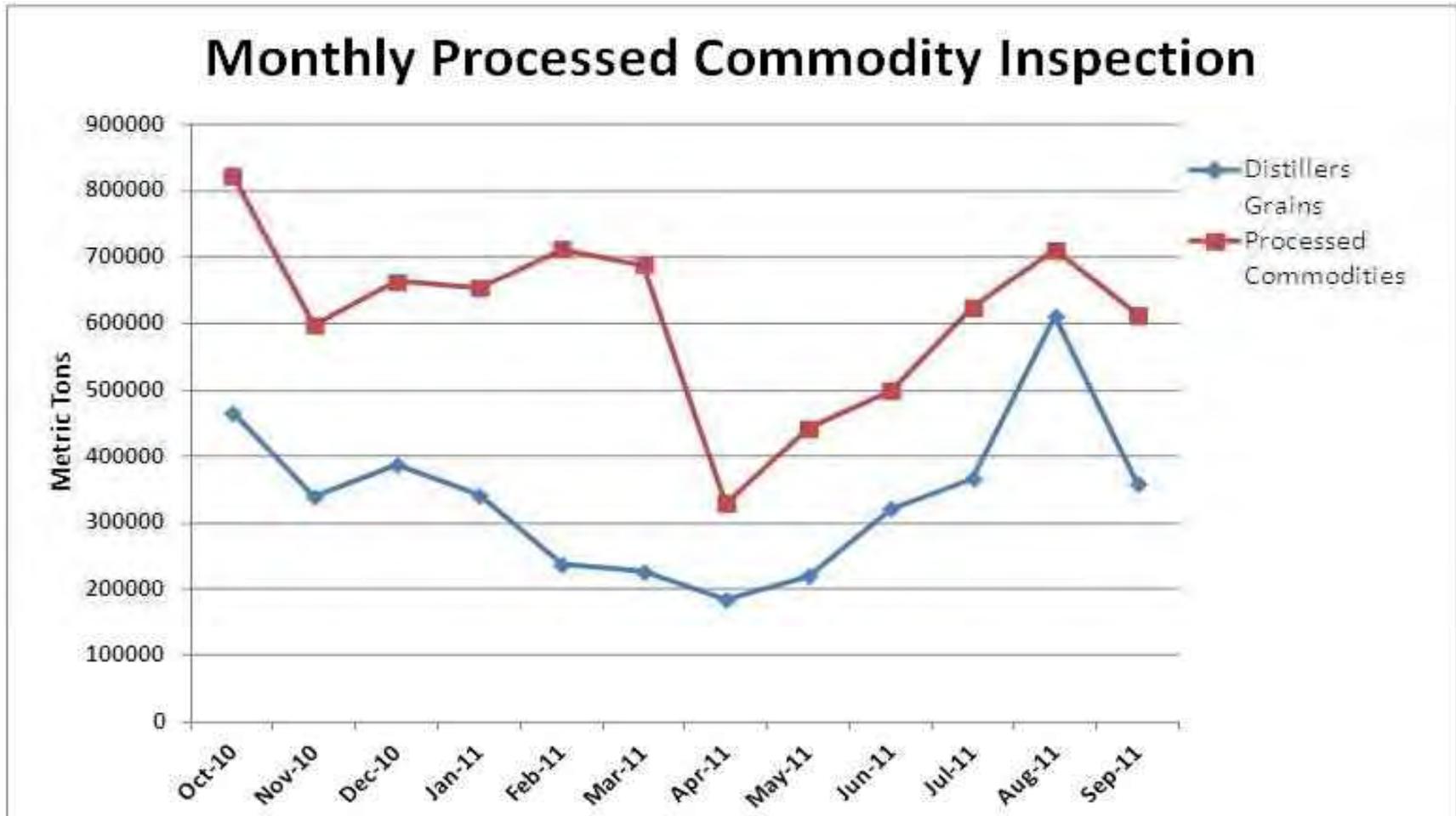
## Pulse Inspections



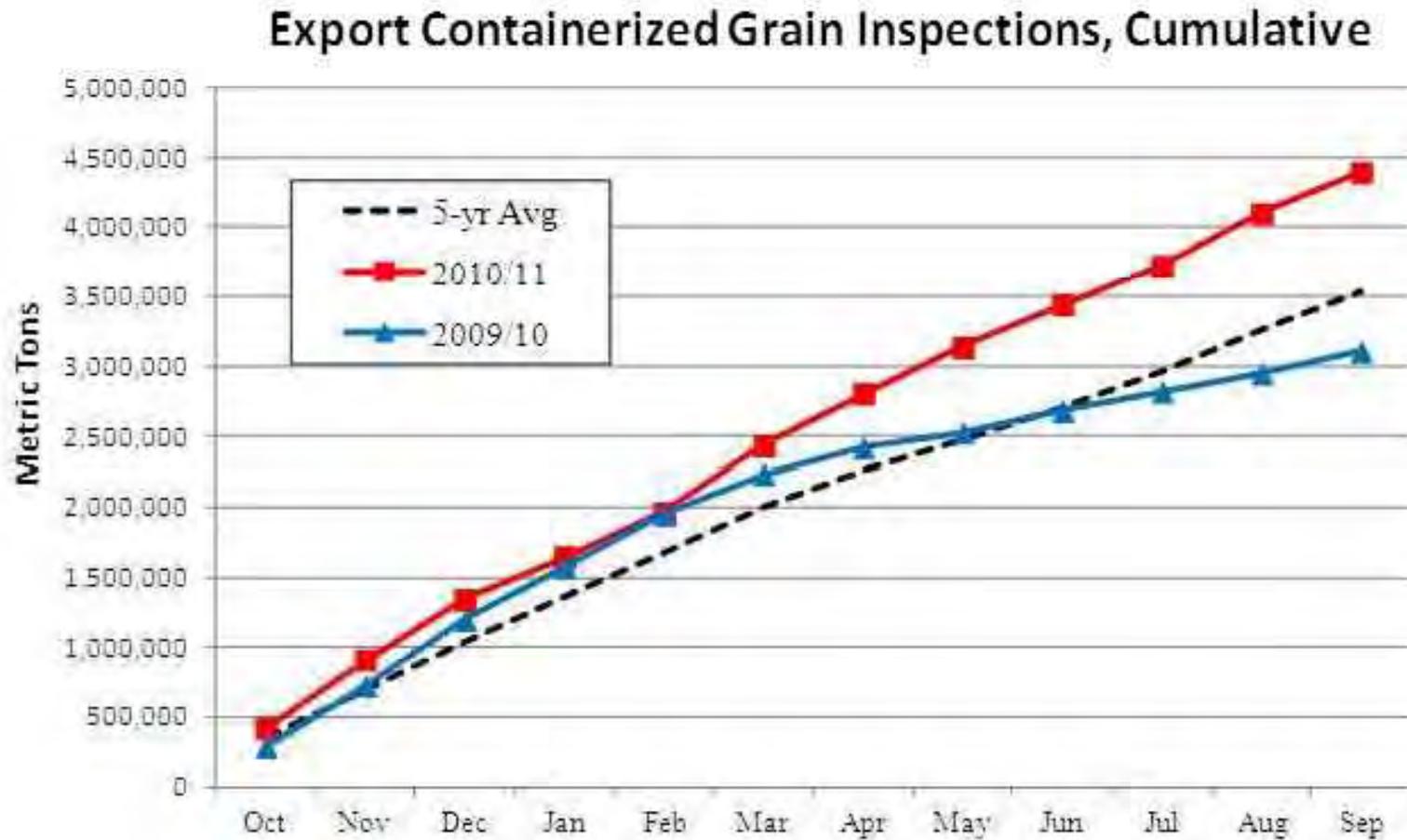
# Market Overview



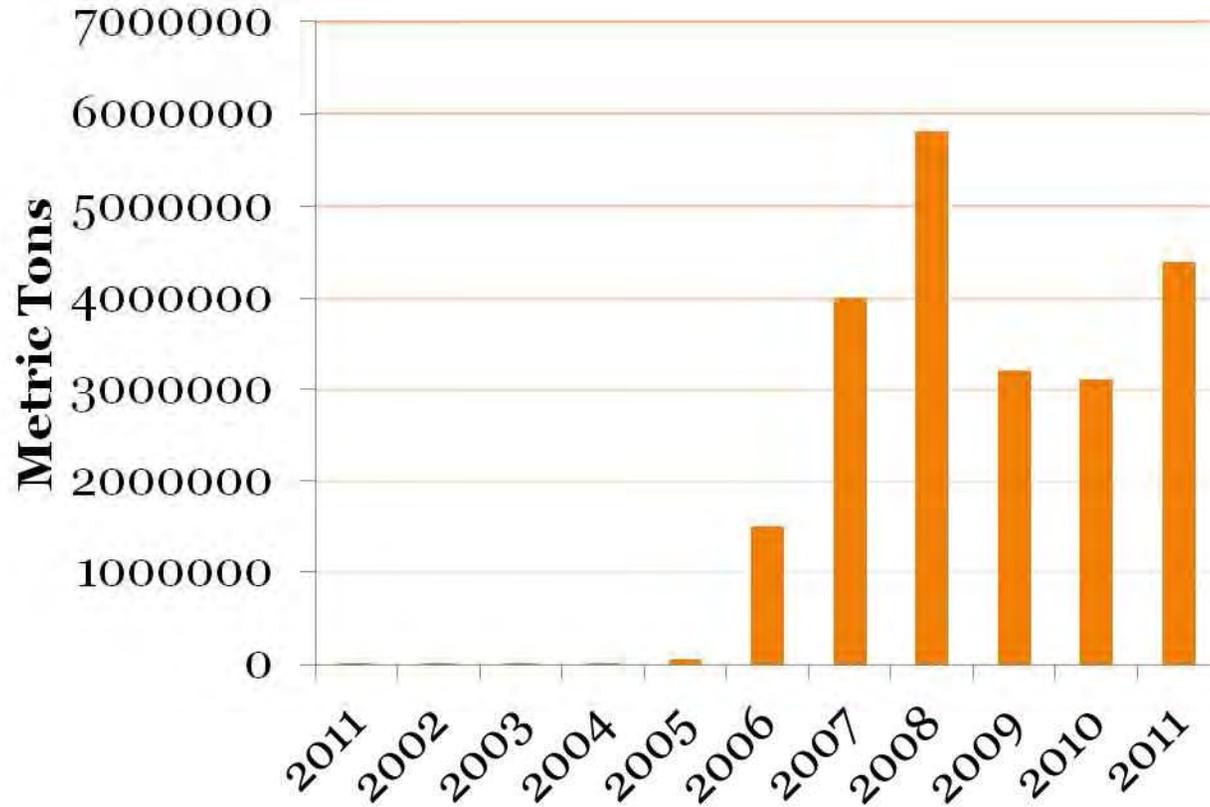
# Market Overview



# Export Containerized Grain Inspection



# Container Exports



- 1222 Lots/Original tests
- 188,581,484 lbs or roughly 85,540 metric tons
- 259 Retests
- 35 Appeals

#### Test Performed:

- Moisture
- Protein
- Fat
- Crude Fiber
- 3 Sieve Tests
- Bostwick (cooked and uncooked)
- Dispersibility
- Salmonella, Bacteria Plate Count, E. Coli, and Staph. Aureus Coagulase Positive





- Retained Earnings                      \$3.4M  
    Oct 2011
  
- Expenses                                      \$1.9M
- Revenue                                        \$2.5M
  
- Retained Earnings                      \$4.1M  
    Oct 2012

- Retained Earnings                      \$2.7M  
Oct 2011
  
- Expenses                                      \$4.4M
- Revenue                                        \$5.4M
  
- Retained Earnings                      \$3.6M  
Oct 2012

- Retained Earnings \$2.0M

Oct 2011

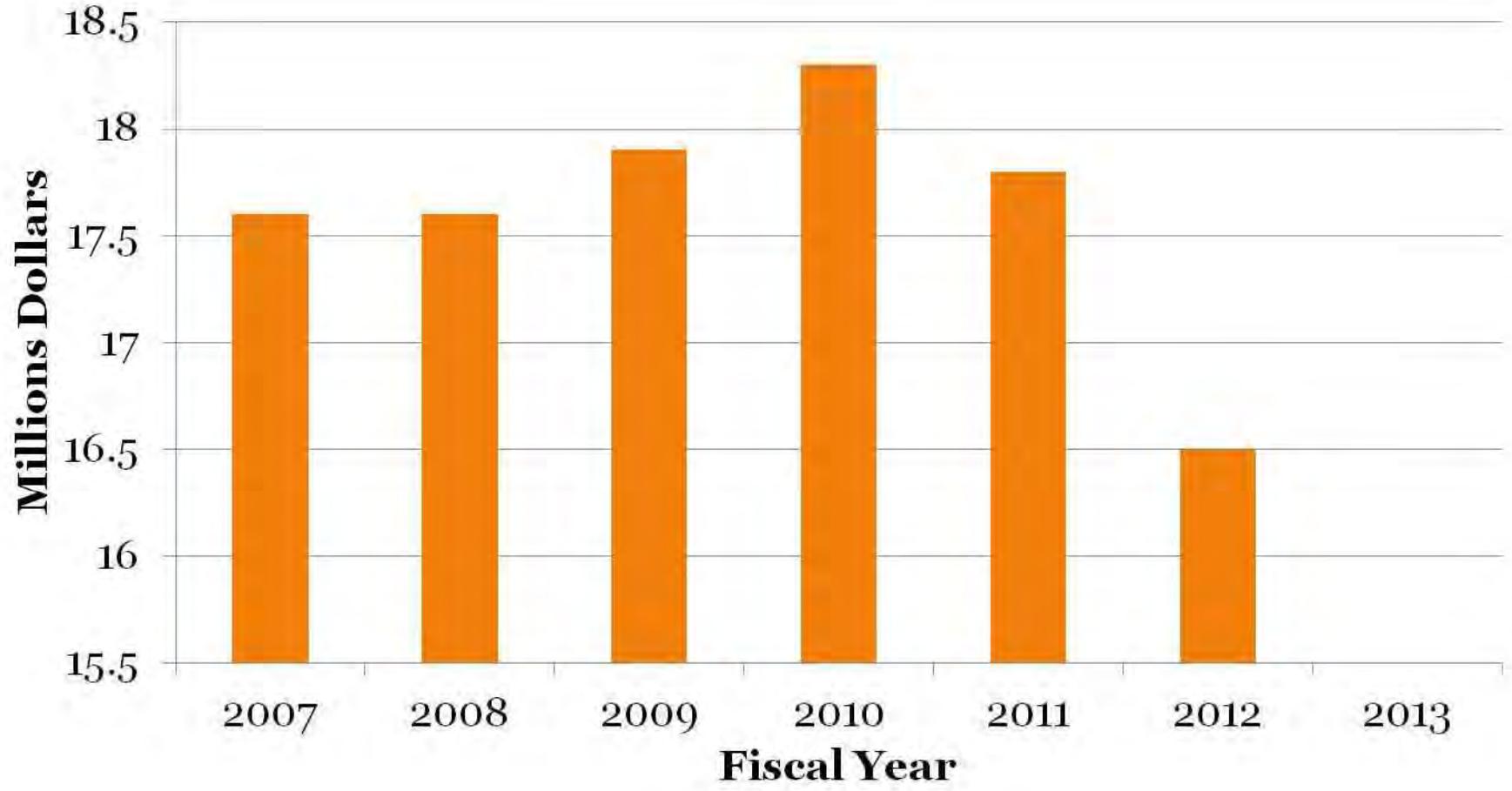
- Expenses \$2.8M

- Revenue \$2.8M

- Retained Earnings \$2.0M

Oct 2012

# Appropriated Funds



# International Trade and Outreach

**GRAIN INSPECTION ADVISORY COMMITTEE  
PORTLAND, OREGON  
DECEMBER 6, 2011**

John B. Pitchford, Director  
Departmental Initiatives and  
International Affairs

# Current International Trade and Outreach Issues

- Officer in Asia Program
- China - Soybeans
- Mexico Outreach
- Surveys
- Quality Complaints

# Officer in Asia Program

- Established Asia program in 2002
  - ✓ Temporary (1-4 month) regional assignments
  - ✓ Provides onsite and more proactive opportunities to work with overseas customers and USDA Cooperators
  - ✓ Increased regional presence

# Officer in Asia Program

- Last assignment -  
September 11-23,  
2011
- Visited CIQ offices
- Non-representative  
sampling
- Inconsistent grading  
procedures

# Officer in Asia Program

- Resolved: "The Advisory Committee suggests that the Agency work with industry, if possible and appropriate, to look at ways this may be accomplished."
  - ✓ Consulted with USDA Ethics Officer
  - ✓ Can accept funding from Foreign Agricultural Service
  - ✓ Cannot accept funding from industry OR USDA Cooperators (even if Federal source)

# Officer in Asia Program

- Resolved: "The Advisory Committee recommends that GIPSA continue to support marketing to Asian markets through the Collateral Duty Officer (CDO) program and explore ways to expand the program."
- ✓ Recommendations for FY '12 solicited from USDA Cooperator organizations
- ✓ Will formulate plans this month

# China Soybean MOU Update

- Sept. 17-27 six AQSIQ officials toured U.S.
  - ✓ Visited seed producers, farmers, country and river and export port grain elevators
  - ✓ Met in Washington, D.C., to discuss the trip and convene the Technical Working Group
  - ✓ Next steps: U.S. to visit China

# Mexico Outreach

- APPAMEX-NAEGA 18<sup>th</sup> Annual Grain Forum
- ASA-IM-Mexico
  - ✓ Request for soybean grading workshop in Merida, Mexico, CY 2012

# Grain Surveys

- 2006-2010 Sorghum farm gate survey
- 2007-2011 Soybean farm gate survey
- 2008-2011 Soybean export survey

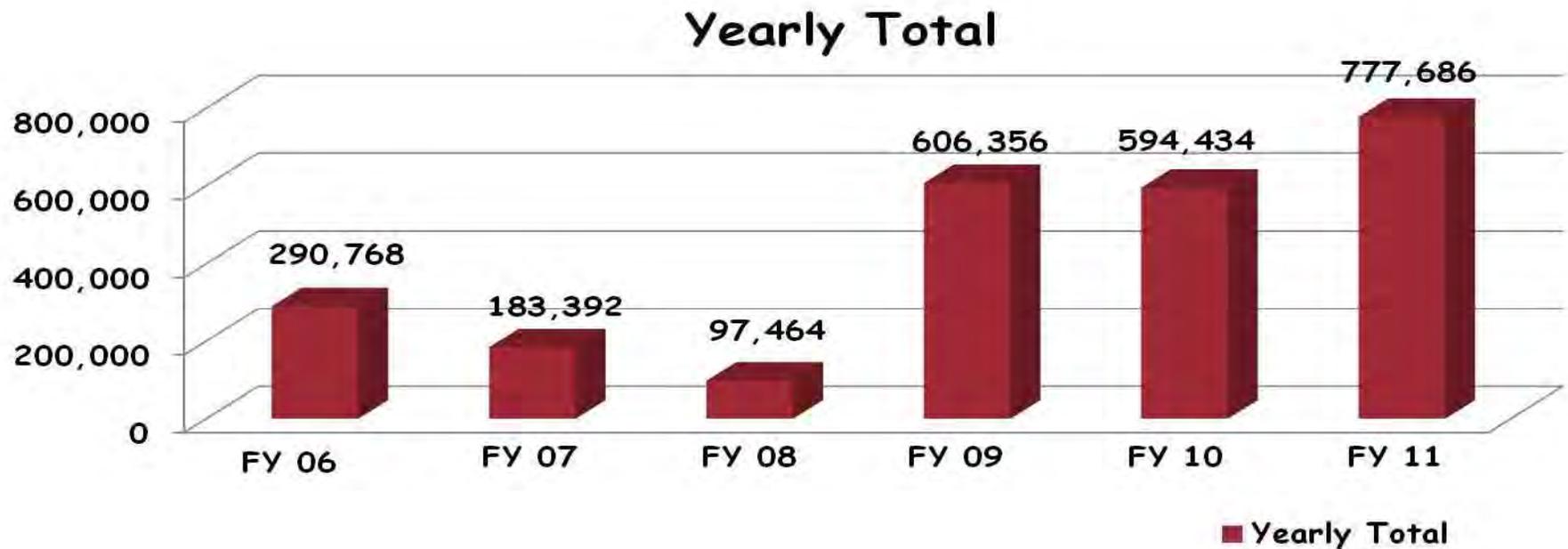
# Grain Surveys

- Wheat export cargo sampling project
  - ✓ Began in 1985
  - ✓ Results published by USWA in the annual crop quality report
- Wheat weed seed survey

# Grain Surveys

- Japan wheat and barley residue survey
- USSEC export soybean residue survey
- USGC export corn quality survey

# Importer Complaints Metric Tons



# FY 2011 Complaints

9 Complaints from 6 countries

- China - treated soybeans 43%
- Egypt - corn damage 30%
- Other issues 27%

# **Field Management Division**

## **Grain Inspection Advisory Committee December 6, 2011**

**Robert Lijewski  
Director**



# Outline

- OSHA Citation
- CuSum:
  - Increasing subplot size, cutoff on sublots, transferring material portions
- Reconditioning grain to reduce aflatoxin
- Rulemaking:
  - Container Regulations, Fees, Wheat, Barley
- Drop Sample Test Update

# OSHA Citation

- **June 24:**
  - OSHA Compliance Officer visits Corpus Christi sub-office;
  - questions employees regarding FGIS policy on probing rail cars; gives a verbal warning
  - rejects GIPSA interpretation of Miles Memorandum
- **July 11:**
  - OSHA request in writing for 19 documents
  - GIPSA responds on July 18
- **October 14:**
  - FGIS cited for alleged violation of fall protection regulations
- **November 8:**
  - Informal Conference: OSHA Corpus Christi Director and others

# OSHA Citation

## The Miles Memorandum (October 18, 1996)

- **John Miles, Director of Compliance Programs**
  - Enforcement policy of Agency (OSHA) is that falls from rolling stock would not be cited under fall protection standard.
  - Not appropriate to use the standard to cite exposure to fall hazards from tops of rolling stock unless stock is inside of or contiguous to structure where fall protection is feasible.

# OSHA Citation

- OSHA never witnessed any FGIS employee on a railcar without fall protection
- No one from the League City Field Office is on a railcar doing sample probing
- FGIS has requested Informal Conferences with OSHA Dallas regional office and Washington, DC national office.

# CuSum: Increasing Sublot Size

Requested by industry

Reviewed with FGIS statistician

No statistical implication

Maintain sampling frequency

Maximum component size

Minimum number of component checks

Handbook revision

Implementation into FGIS *online*--ITW

# CuSum: Increasing Sublot Size

## CURRENT SUBLLOT RESTRICTIONS

<u>Carrier</u>	<u>Lot Size</u>	<u>Minimum Number of Sublots</u>	<u>Maximum Size of Each Sublot</u>
Vessels and Lash Barges	80,000 bushels or less	1	-----
	80,001 to 160,000 bushels	2	80,000 bushels
	Over 160,000 bushels	3	80,000 bushels**
Unit Trains	Less than 200,000 bushels (Less than 50 cars)	2	5 cars
	200,000 bushels or more (50 cars or more)	5	10 cars

\*\* 160,000 bushels when component sample analysis is requested.

# CuSum: Increasing Sublot Size

- Vessels and lash barges:
  - Minimum lot size of shipments eligible for 100k bu. sublots TBD
  - Maximum sublot size increases to 100k/200k\*\*
  - Maximum component size capped at 40k to ensure uniformity
- Unit trains:
  - No proposed changes to sublot sizes

# CuSum: Increasing Sublot Size

<b>Sublot Size (bu)</b>	<b>Number of Components per Sublot</b>
Up to 80,000	2 - 8 components
80,001 – 120,000	3 - 5 components
120,001 – 160,000	4 – 6 components
160,001 – 200,000	5 - 8 components

**Minimum Component Size: 10,000 bu.**

**Maximum Component Size: 40,000 bu.**

# CuSum: Cutoff on Sublots

- Cutoff may be requested to end inspection in order to receive certification on a portion of a shiplot, unit train or lash barge inspected under CuSum
- Cutoff may be requested at any time by the applicant provided there is grain on board the carrier
- FMD issued FGIS Policy Bulletin Board #241 to clarify this policy to the trade.

# CuSum: Cutoff on Sublots

- First subplot is not eligible for a cutoff as no grain is on board
- A material portion in the first subplot will be documented and CuSum values calculated
- CuSum loading plan could be circumvented by starting a new inspection log by resetting CuSum values

# CuSum: Transferring Sublots

- Request by industry
- Reviewed policy with FGIS statistician
- Material portion sublots or extra grain sublots may be transferred to an Average quality or combination Average/CuSum lot loaded under the CuSum plan.
- FMD issued FGIS Policy Bulletin Board #240 to clarify this policy to the trade.

# CuSum: Transferring Sublots

- Current handbook language is restrictive on transferring MP's and extra grain
- Provides more options for grain handlers
- Current handbook language does not allow such a transfer; policy modified to accommodate Average Grade contracts.
- Example: a US No.3 o/b YC CuSum ship has an MP on 3.8% BCFM: the lot may be transferred to a ship with Average Grade All Factors US No.3 o/b YC

# Reconditioning Grain

- Industry requested multiple attempts at reconditioning grain with actionable aflatoxin content
- Currently: FDA & FGIS permit one attempt to recondition grain with actionable aflatoxin content, & one analytical aflatoxin test after reconditioning
- Applicable to lot or bins of grain
- FMD considering amended policy

# Reconditioning Grain

- Reconditioning must be done in a continuous manner on the entire lot
- Representative sample of reconditioned grain must be obtained
- Accounting for screenings
- Only one analytical test after reconditioning
- Discuss options with trade in New Orleans market and FDA
- Update the Aflatoxin handbook as needed

# Rulemaking: Wheat

- GIPSA published an Advance Notice of Public Rulemaking in 2009, asking stakeholders whether current wheat standards and grading procedures needed to be changed.
- GIPSA prepared a Notice of Proposed Rulemaking based on comments received. The Proposed Rule is in Departmental clearance.
- When the Proposed Rule is published in the Federal Register, GIPSA will notify stakeholder groups regarding the start of the comment period.

# Rulemaking: Barley

- Resolution from GIAC meeting to open barley standards for review (June, 2011)
- Advance Notice of Proposed Rulemaking prepared; in clearance (July, 2011)
- Published in *Federal Register* October 4, 2011 with comments due January 3, 2012
- After comment review, GIPSA will prepare a Notice of Proposed Rulemaking

# Rulemaking: User Fees

## Advance Notice of Proposed Rulemaking

- Drafting: March '09 – April '09
- GIPSA Clearance: April '09 – June '09
- Departmental Clearance: July '09 – November '09
- Publication: November '09

## Notice of Proposed Rulemaking

- Drafting: March '10 – October '10
- GIPSA Clearance: October '10 – January '11
- Departmental Clearance: April '11 - ongoing
- Publication: Anticipated-??

## Final Rule

- GIPSA will draft after 60-day comment period closes
- Effective Date: October 2013

# Rulemaking: Containers

- GIPSA determined a need to harmonize regulations pertaining to grain exported in ships, trains, barges, and containers. GIPSA published Notice of Proposed Rulemaking on July 18, 2011. The Proposed Rule:
  - Limits to **20** the number of containers that may be averaged or combined to form a single lot.
  - Requires Continuous Loading Operation (88 hour rule).
  - Restricts inspection/weighing to agency's area
  - 60 day file retention period
- Final Rule being prepared for clearance.

Summer 2011  
Proposed Rule

Winter 2012  
Publish Final Rule

Spring 2012  
Implement changes to  
program

Timeline is estimated.

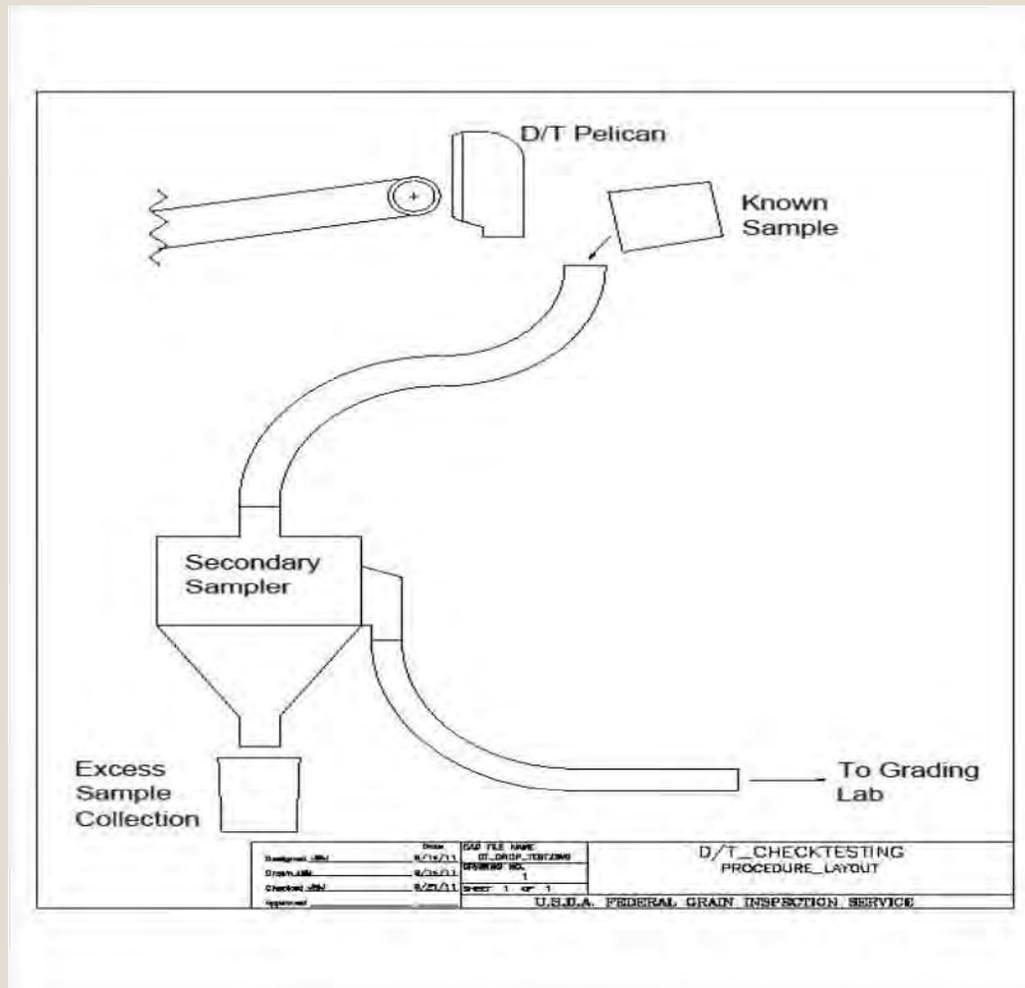
# Drop Sample Testing

- D/T check-testing was based on pelican sampler
  - Safety issues
  - Grain volume per time issues
- D/T not rechecked unless altered/ repaired
- FGIS investigated Drop Sample test
  - also used by Canadians
- Drop Sample Test is approved for authorizing D/T samplers
- Program Notice being prepared.

# Drop Sample Testing

- **Export Elevator**
  - FGIS tested D/T samplers at new elevator in Longview, Washington;
  - Reviewed drawings and inspected installation
  - Determined drop test was effective-samplers approved
- **Domestic Facilities**
  - FGIS staff conducted tests at 3 elevators in Midwest
  - Determined drop sample test was effective
  - Each facility unique so requires individual details
  - Official agencies will be given instructions on test
  - FGIS staff in W-DC will review drawings

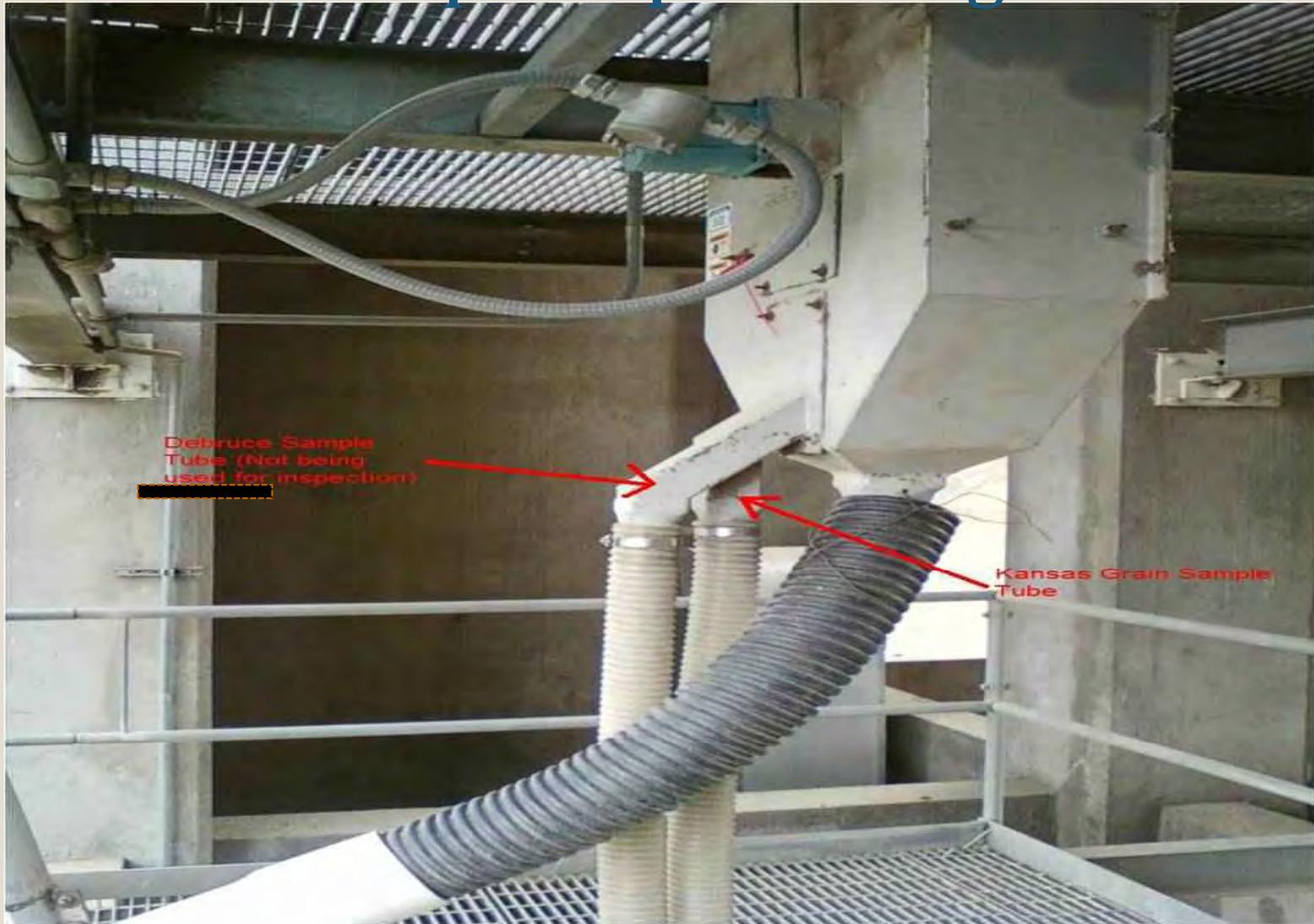
# Drop Sample Testing



# Drop Sample Testing



# Drop Sample Testing



Quality Assurance and  
Management Program  
December 2011

**THOMAS C. O'CONNOR**  
**DIRECTOR**

**QUALITY ASSURANCE AND COMPLIANCE DIVISION**

# A View of Quality Assurance (not ours)



# Presentation Outline

- **Quality Assurance and Control**
  - Historical Perspective
  - Structure
  - Challenges & Opportunities
- **Quality Management Program**
  - Status/Updates
  - Integration
- **Issues moving forward**

# Historical Perspective

- **Quality Handbook (1996)**
- **Quality Assurance/Quality Control and Oversight Study (2002)**
- **Instrument and Personnel Quality Assurance Review Team (2005)**
- **Quality Assurance/Quality Control Program for USDA (2006)**
- **Quality Roundtable (2009)**
- **Quality Assurance and Control (2011)**

# Initiatives (continued)

- Reorganize structure
- Evaluate current quality assurance and control activities
  - Quality Assurance and Control Meetings
    - ✦ ODA, FMD, TSD, BAR/GSL, and QACD
    - ✦ Identify current structure
    - ✦ Identify quality activities and data sources
    - ✦ Identify goals, challenges, and recommendations for quality assurance and control moving forward
    - ✦ Evaluate staffing and other resource needs

# Structure

- FGIS Quality Handbook provides overall structure for the program (Anchor Agreements, STEP Samples, SIMS, Referee and Exchange Program)
- FGIS supervises all original inspections at a rate of approximately 1%
- Generally, local Quality Assurance Specialists review 40% and BAR/GSL reviews 60% of supervision samples
- Original program called Quality Assurance and Quality Control (QAQC)
  - New Orleans and Stuttgart still use QAQC

## Structure (continued)

- New *FGIS Online program* called **Quality Assurance and Control (QAC)**
  - Randomly selects samples for the BAR to review
  - BAR reviews all local and national supervisions

# Structure (continued)

Old Structure	New Structure (Reorganization)
Quality Assurance and Control Staff (QACS): Ken Critchfield	Quality Assurance and Compliance Division (QACD)/Quality Assurance and Designation Branch (QADB): Eric Jabs
	QACD/Investigation and Enforcement Branch (IEB): Greg Tomas
Field Operations and Support Staff (FOSS): Diane Palecek	Domestic Inspection Operations Office (DIOO): Ron Metz
Technical Services Division/Grading Services Lab (GSL): Don Kendall	Technology and Science Division: BAR; GSL reassigned under the BAR.
Technical Services Division/Board of Appeals and Review (BAR): David Lowe	
Quality Assurance and Quality Control (QAQC)	Quality Assurance and Control (QAC)

# Challenges & Opportunities

- **Monitoring Rate**
  - What is the appropriate selection rate?
  - How do we select samples? Type of grain, inspection results of interpretive factors, performance/accuracy of licensed inspectors/ACG's, separations?
- **Anchoring Agreements**
  - Are they still relevant with QAC and Quality Management Plans?
- **Oversight**
  - What are the roles and responsibilities of MD, TSD, BAR/GSL, and QACD within the new structure?

# Challenges & Opportunities (continued)

- **QAC Report Capability**
  - Are current reports adequate and relevant?
  - Are there other reports that will help facilitate management of the quality program? What do service providers need to help manage their business?
  - What about the remaining field offices on QAQC?
- **QAC Data**
  - How do we capture official commercial inspections, individual rail loaded under cu-sum, individual containers from an average grade booking, and rice round lot inspections.
    - ✦ Currently. limits supervision selection
- **Falling Number and Mycotoxin Monitoring**
  - What are the critical factors?
  - Do we include these data in the monitoring program?

# Quality Management Program (QMP)

“...melds modern quality management principles with the legal and regulatory requirements under the U.S. Grain Standards Act (USGSA) and Agricultural Marketing Act of 1946, as amended (AMA), to create an overarching program to drive progress within the official system ... key component for evaluating the performance of official service providers in meeting their legal and regulatory obligations...”

*(Quality Management Program Directive 9180.81)*

# QMP: Status/Updates

- Completed 17 QMP reviews in FY 2011; 18 scheduled for FY 2012.
- Objective metrics for measuring performance
  - QACD is reviewing scoring criteria used by reviewers
- Transparency
  - Program structure should be transparent to official agencies
- Review Reports
  - Using Lean Six Sigma to complete the review report and briefings within 30 days from the end of the review

# QMP: Status/Updates (continued)

- **Internal Audits**

- Received 44 one-year audits and 13 two-year audits in FY 2011
- Expect 45 two-year audits in FY 2012
- A standardized template is being developed to facilitate uniform and thorough internal audits to ensure that all elements of the QMP are reviewed and to ease GIPSA's review process.
- Sending email confirmations to confirm whether internal audit review meets FGIS's qualifications (AAGIWA)

# QMP Integration

- Fully integrate with the quality assurance and control program into quality assurance program
- Utilize FGIS *OnLine* to assist in conducting on-site reviews of local quality plans
  - Example: Information on the status of some local quality program elements can be accessed through FGIS *Online*
- Enhance information sharing among FMD, TSD, and BAR/GSL to facilitate QMP reviews

# Issues Moving Forward

- QACD will work with DA, FMD, TSD, and BAR/GSL to define, implement, and monitor a comprehensive quality assurance and control system
  - Develop a comprehensive quality assurance and control strategy that balances resources with the integrity of the official system
- Evaluate current programs conformance to the elements of the Quality Handbook (1996); what's active; what's not; suggest revisions or new activities

## Issues Moving Forward (continued)

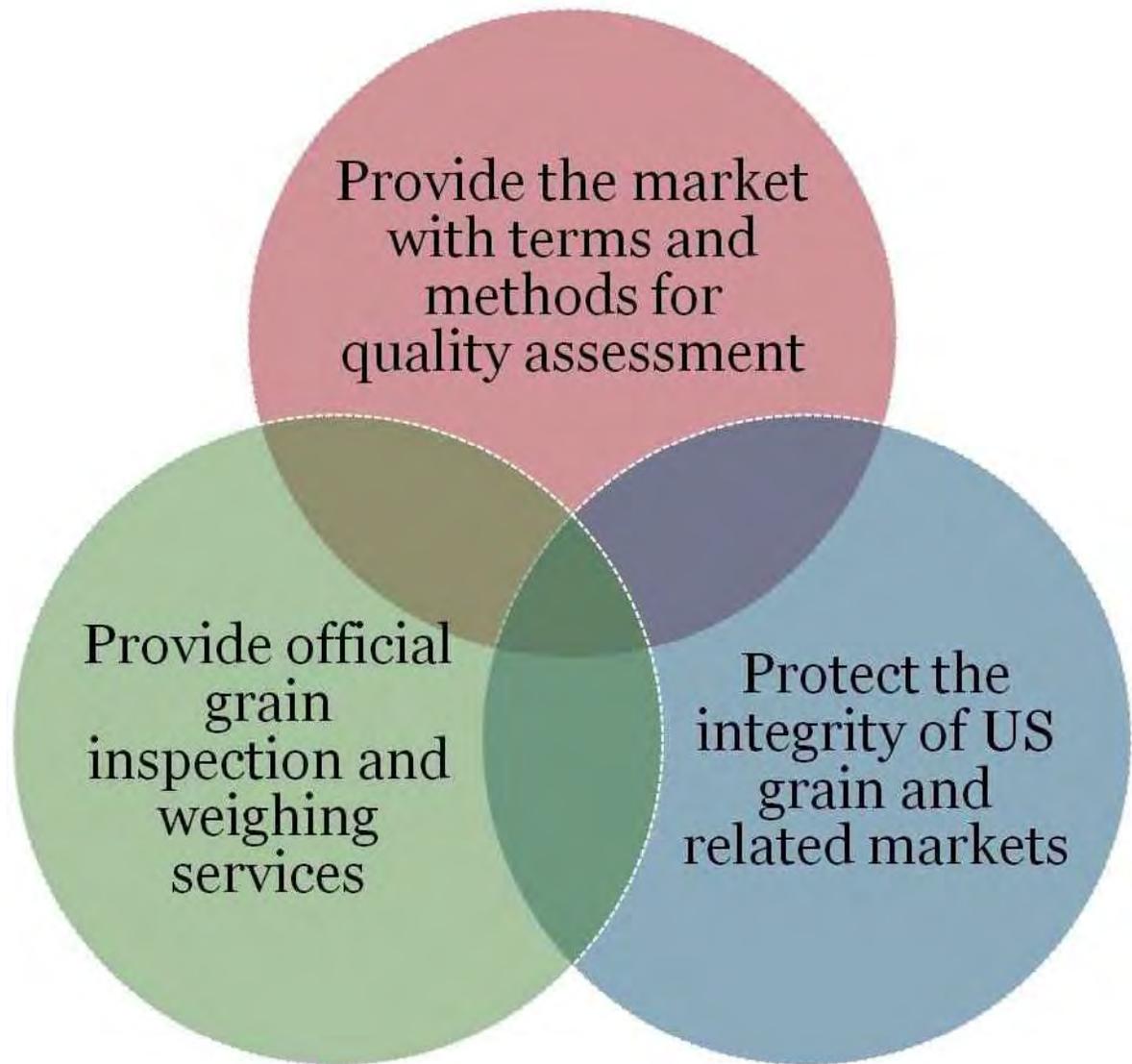
- Analyze successful quality assurance programs (other agencies; private sector) and glean best practices
- Utilize the Lean Six Sigma framework to evaluate all quality assurance and control activities to minimize variation and maximize efficiency
- Consider what additional data are desirable to monitor – OCI; composite; average grades
- Take advantage of the reports capability of QAC to dynamically manage the quality assurance and control program
  - Target less/more supervisions for high/low performing agencies

# Issues Moving Forward (continued)

- **Consider establishing a national quality assurance and control map**
  - FGIS management and others can quickly assess the proficiency of the official system.
- **Facilitate cross-functional communication**
  - Data generated by FMD, TSD, BAR/GSL, and QACD available on a real-time basis to facilitate QMP reviews and ensure that all deficiencies are documented and quickly resolved

# FGIS Management Initiatives for 2012

**STEPHANIE BROWN**  
**OFFICE OF THE DEPUTY ADMINISTRATOR**



# Presidential Executive Order 13571:

## Streamlining Service Delivery and Improving Customer Service

- **Challenges agencies to:**
  - improve the customer experience by adopting proven customer service best practices and coordinating across service channels (such as online, phone, in-person, and mail services);
  - streamline agency processes to reduce costs and accelerate delivery, while reducing the need for customer calls and inquiries; and
  - identify ways to use innovative technologies to accomplish the customer service activities above, thereby lowering costs, decreasing service delivery times, and improving the customer experience.

# Continuous Process Improvement

- Continuous Process Improvement (CPI) is a means of identifying and implementing initiatives which continually improve the performance of an organization and create sustainable business change.
- CPI results are typically measured using the following metrics:
  - Improved Performance (Process Quality, Reliability, and Security)
  - Reduced Process Cycle Times
  - Improved Safety
  - Improved Workplace Quality of Life
  - Improved Affordability
  - Improved Flexibility or Ability to Meet Emergent Requirements
  - Improved Customer Satisfaction



# Improve the Customer Experience

- Increase the timeliness and efficiency of stowage inspections
- Enhance website content to improve customer satisfaction and service delivery

# Focus on Quality

- **Develop a comprehensive strategy for the FGIS quality program moving forward.**
  - Utilize continuous process improvement methodologies to identify opportunities and re-engineer selected quality processes
  - Provide quality assurance and control reporting tools for Official Service Providers

# Modernize Service Delivery

- Prepare for adoption and implementation of new moisture meter technology
- Transition delegated States to FGIS*online's* Inspection, Testing and Weighing system

# Be the Employer of Choice

- Develop goals and guidelines to enhance service delivery, safety and efficiency in future laboratory designs
- Recruit the next FGIS intern class using the Office of Personal Management's Pathways Program
- Implement an enhanced recruitment strategy to increase diversity of the FGIS talent pool
- Develop and implement a mentoring program to support employee development and continued learning



# National Grain Center

**MARY ALONZO  
DIRECTOR, TSD, FGIS  
DECEMBER, 2011**

# National Grain Center

- Construction challenges resolved
- Space increase from 34,832 to 55,000 SF
- Increased training and meeting space
- Personnel located in NGC from 70 to 110
- Includes staff from:
  - Quality Assurance and Compliance Division
  - Technology and Science Division
  - Field Management Division
  - Information Technology Staff



# Completion Anticipated in FY 2012



# Phase I Complete



- 
- 
- 
- 
- 



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# General Wet Chemistry Lab



# Trace Analysis Lab



# BAR/GSL Work Area





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- 
-

# Renovation Improvements



## South View – Phase II





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# **Inspection Method Updates**

**David Funk**

**Grain Inspection Advisory Committee Meeting  
Portland, Oregon  
December 6-7, 2011**

# Topics

- Newly approved rice sheller
- Sorghum “storage musty” odor reference
- Proposed OIML project to create a “global” moisture reference method
- Report on “green grain” studies for new Official moisture measurement technology

# New Rice Sheller for California MGRR & SGRR

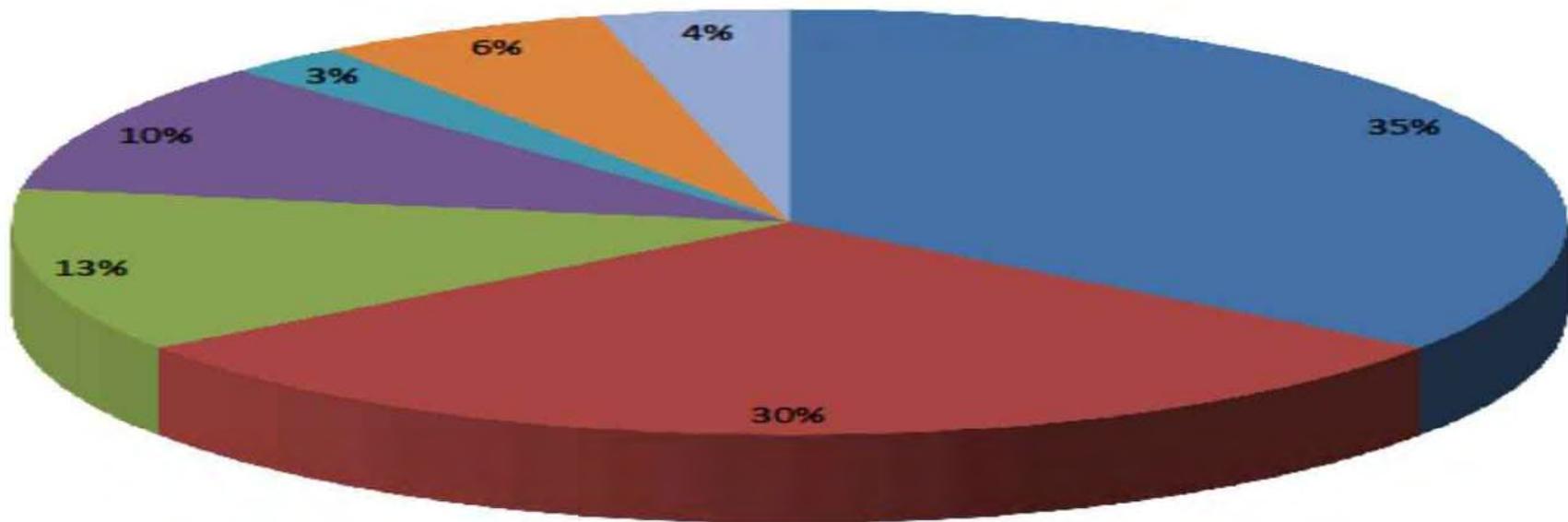


# Sorghum “Storage Musty” Odor

## **June 2011 GIAC Resolution:**

“The Advisory Committee recommends that GIPSA continue working on sorghum odor. In continuing this effort, reach out for industry and end-user feedback to set a storage musty sorghum odor reference that refers to end uses.”

# Sorghum Usage



■ Exports      ■ Ethanol      ■ Beef      ■ Swine  
■ Poultry/Pet      ■ Food AID      ■ Industrial

Based on USDA/FAS and Industry Surveys

# Export Data (May 2011)

<b>Country</b>	<b>% of US Exports</b>	<b>Predominant Industry</b>
MEXICO	54%	Livestock, swine, cattle, poultry
SPAIN	22%	Livestock
JAPAN	10%	Livestock
ISRAEL	5%	Livestock, poultry, dairy
MOROCCO	4%	Livestock, poultry, dairy
FRANCE	2%	Livestock
NETHERLANDS	2%	Livestock
ITALY	1%	Livestock
CHILE	< 1%	Livestock
TAIWAN	< 1%	Liquor
KOREA, REPUBLIC OF	< 1%	Liquor
CANADA	< 1%	Swine
PHILIPPINES	< 1%	Livestock

# End-User Survey

- Locations visited:

- |                          |               |
|--------------------------|---------------|
| ○ Pork Producers Council | Pork          |
| ○ Seaboard Foods         | Pork          |
| ○ Bonanza Bioenergy      | Ethanol       |
| ○ Windriver Grain        | Ethanol       |
| ○ ADM Milling            | Drywall, Food |
| ○ Hills                  | Pet Food      |

# Reference Sample Specification

- Base Sample : Stored sorghum with “okay” odor
- Chemicals Added:
  - Geosmine (0.0125 mg/kg)
  - 1, 2, 4–Trimethoxybenzene (12.5 mg/kg)
- Sample Size : 500 grams
- Applicability: “Storage Musty” odor in sorghum

# Project Timeline

- **October 2011.** Initiated a new shelf-life study
- **November 2011.** Started training official inspection personnel
- **January 2012.** Complete shelf-life study
- **February 2012.** Prepare reference samples
- **March 2012.** Distribute reference samples and implement
- **March 2012 – June 2012.** Conduct follow-up training at Quality Assurance Seminars

# OIML “Global” Moisture Reference

- Metrologists from several nations have proposed standardizing on a “globally acceptable” moisture reference method
- Seeking input on whether industry stakeholders would favor adopting a single reference method to define moisture in grain
- Change in moisture reference methods was considered & rejected by US grain industry in 1980’s

# OIML “Global” Moisture Reference

- **Pros:**
  - Remove inconsistencies in international trade
  - Establish traceability to one “globally accepted” definition of moisture content
- **Cons:**
  - Cause significant disruptions in trade due to the need to change production, handling, drying, and pricing practices
  - Significant changes in value of grain stocks
  - Simultaneous “global” adoption of moisture reference method: “inconceivable”

# **New Official Grain Moisture Technology**

- **June 2010:** Grain Inspection Advisory Committee (GIAC) passed resolution supporting adoption of new Official moisture measurement technology.
- **August 2010:** Agency made decision to pursue new Official moisture technology.
- **November 2010:** GIAC passed resolution urging testing new technology with “Green” rough rice.

# New Official Grain Moisture Technology

- **May 2011:** Completed initial assessments of sensitivity to “Green” rough rice and soybeans.
- **June 2011:** GIAC passed resolution urging continued evaluation and adoption of 149 MHz technology as new official standard.
- **July 2011:** FGIS procured updated Impedance Analyzer to support adoption of UGMA for Official moisture technology.

# New Official Grain Moisture Technology

- **Sept. – Nov. 2011:** Conducted “green” grain studies for soybeans and rough rice
- **February 2012:** Target for decision regarding adoption of 149 MHz technology
- **May 2013:** Implementation for most spring/summer harvest grains
- **August 2013:** Implementation for most fall harvest grains

# “Green” Grain Studies

- **Rebound:** Moisture error due to rapid drying of outer kernel layers
  - Typically observed when harvesting on warm sunny day after cool wet weather
- **Mixtures:** Wide moisture variations between kernels in the sample
  - Typically observed when harvesting grain with kernels at different levels of maturity

# Rebound Experiment

- **Collected high moisture grain**
  - Up to 29% for LGRR
  - Up to 21% for soybeans
- **Dried rapidly to target moistures**
  - 15-27% for LGRR
  - 12–13% for soybeans
- **Air-cooled**
- **Tested with moisture meters**
- **Allowed to equilibrate (2-7 days)**
- **Retested with moisture meters**

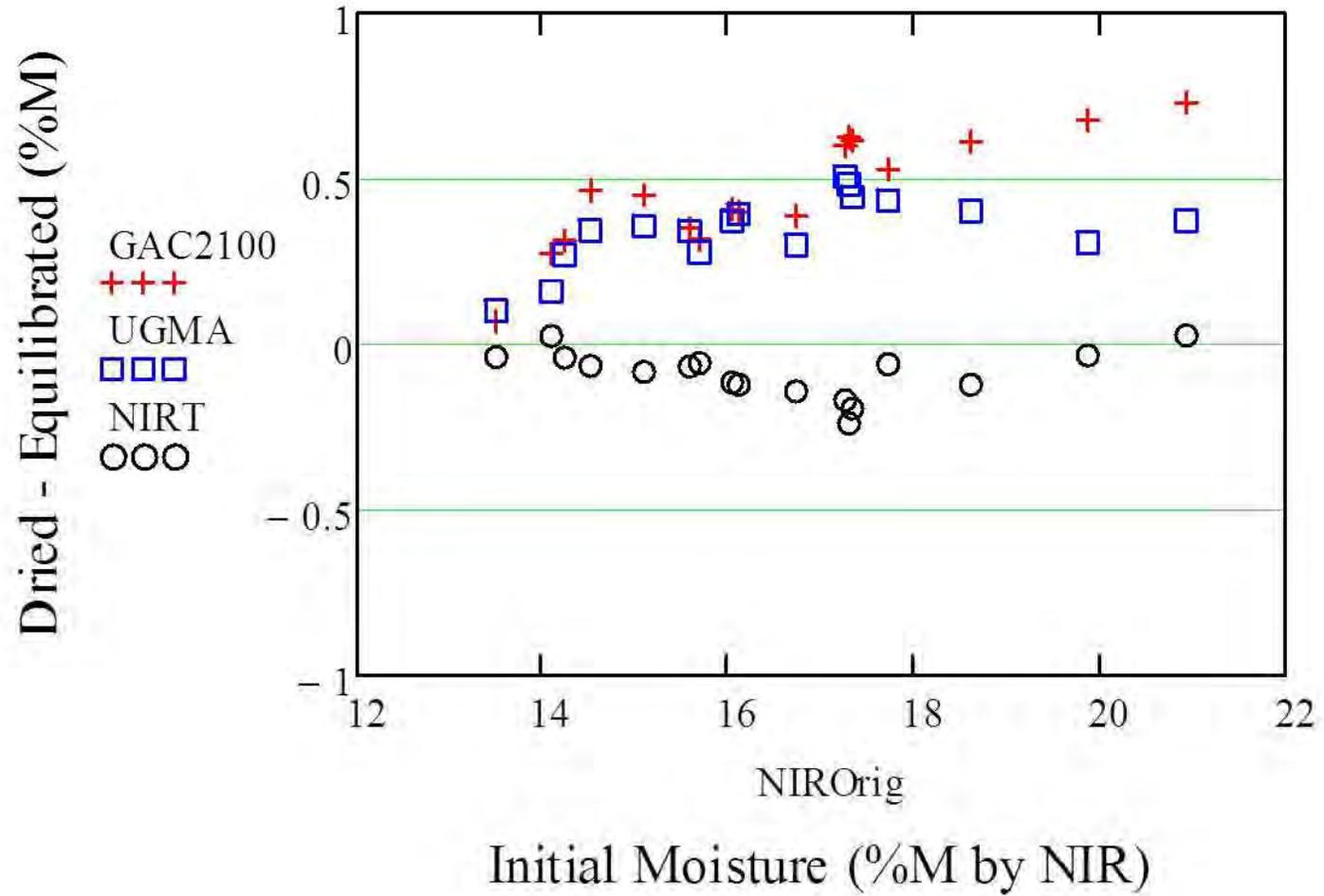
# Mixture Experiment

- Collected dry and wet grain
  - LGRR 12%, 20-30%
    - ✦ All naturally moist
  - Soybeans 9%, 14-27%
    - ✦ Soybeans above 21% were artificially moistened
- Prepared mixtures of dry and wet grain to achieve target moistures
  - 16-19% for LGRR
  - 12-13% for soybeans
- Tested on moisture meters
- Allowed to equilibrate (2-7 days)
- Retested on moisture meters

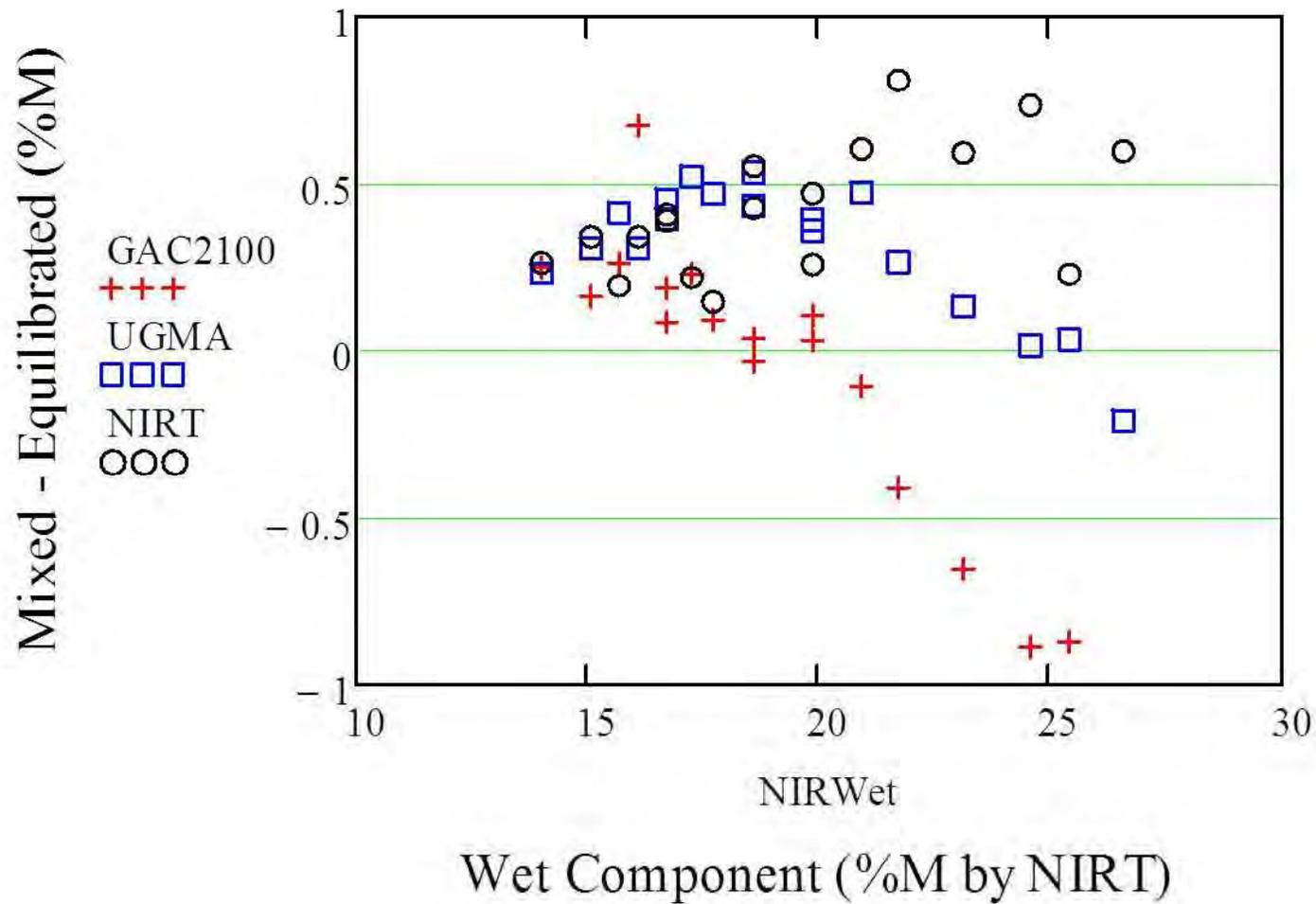
# Moisture Equipment Used



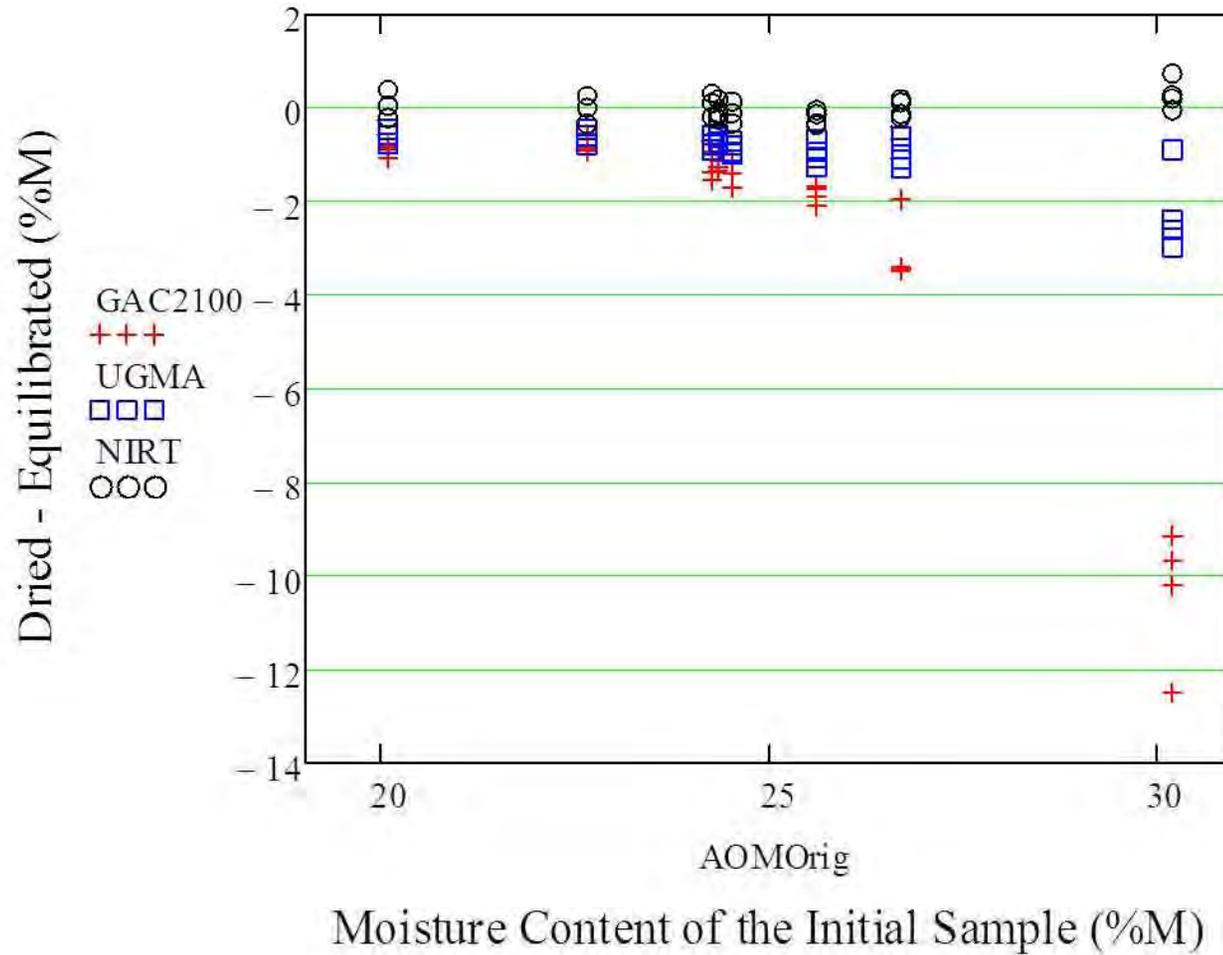
# Soybean Rebound Results



# Soybean Mixture Results



# Rice Rebound Results





# Conclusions

- All three moisture measurement methods showed some sensitivity to these extreme cases of moisture rebound and mixtures.
- In most, but not all, cases, NIRT was least sensitive of the three to rebound and mixtures.
- In all cases, GAC2100 was the most affected by rebound and mixtures.
- Rice rebound showed the most significant errors.
- UGMA (149 MHz technology) was significantly less affected than the GAC2100.

# Acknowledgments

- Ben Lackey, Riceland Foods, provided an excellent set of LGRR samples for this experiment and gave valuable advice on moisture levels for the rice tests.
- Fred Seeber, Shore Measuring, provided valuable guidance on setting the moisture levels for the soybean tests.
- Zoltan and Biborka Gillay designed and conducted the experiments and analyzed the data.

# Density Correction Effects for Corn with UGMA and GAC 2100

**DAVID FUNK**

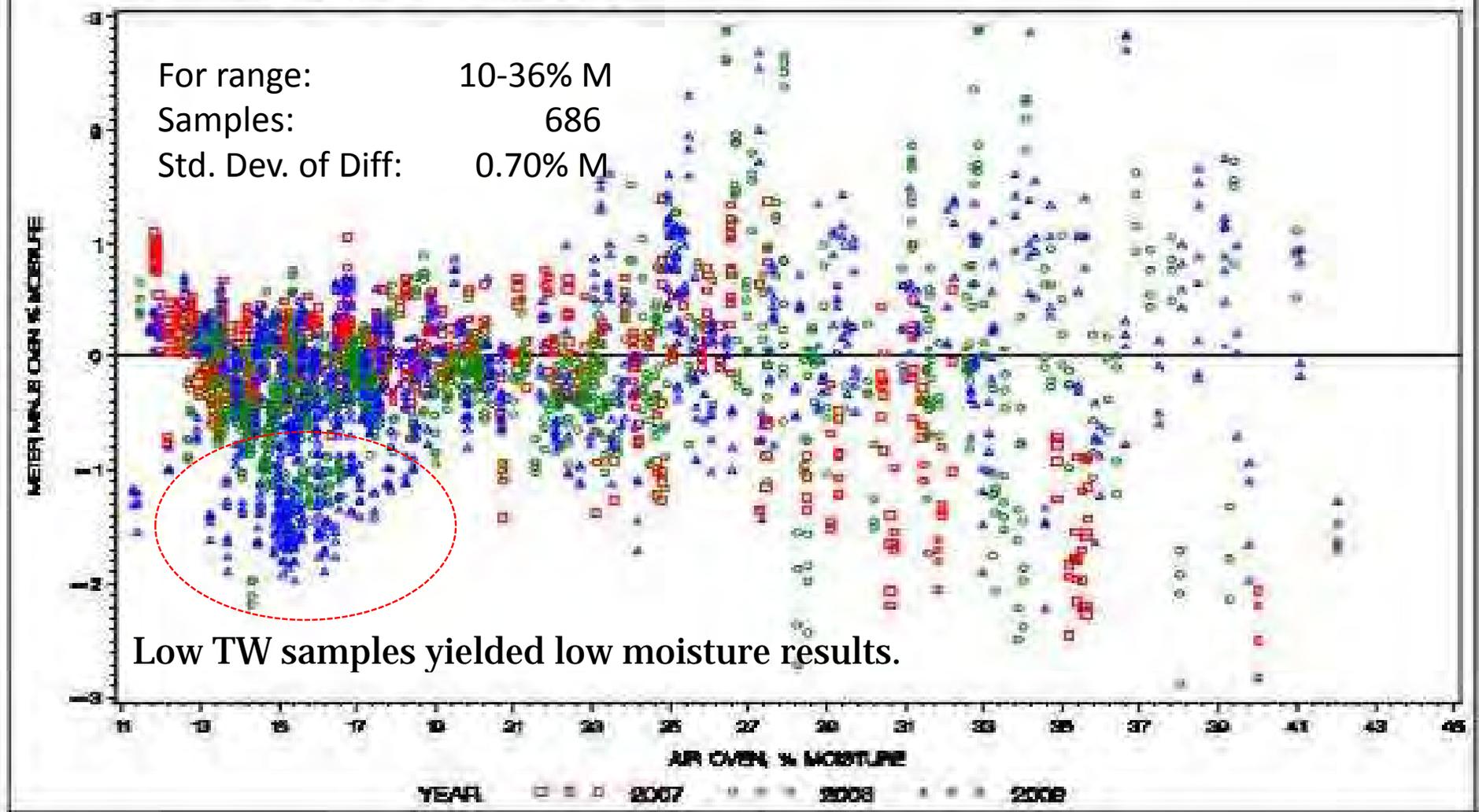
**DEPUTY DIRECTOR & CHIEF SCIENTIST  
TECHNOLOGY AND SCIENCE DIVISION**

**GRAIN INSPECTION ADVISORY COMMITTEE  
PORTLAND, OREGON  
DECEMBER 7, 2011**

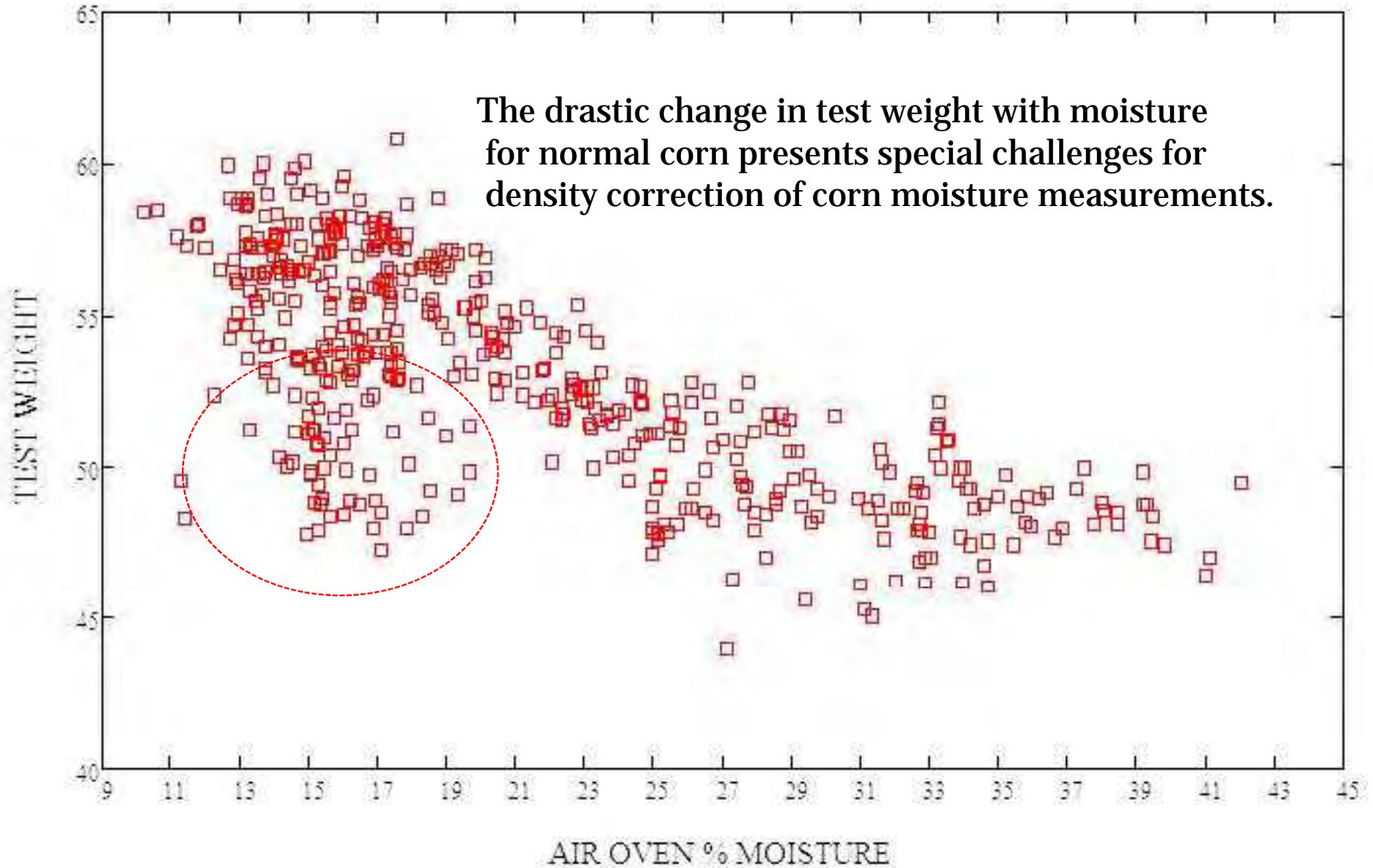
# GAC 2100 Corn Results—Density Issue

## Accuracy for 2007-2009 Crops

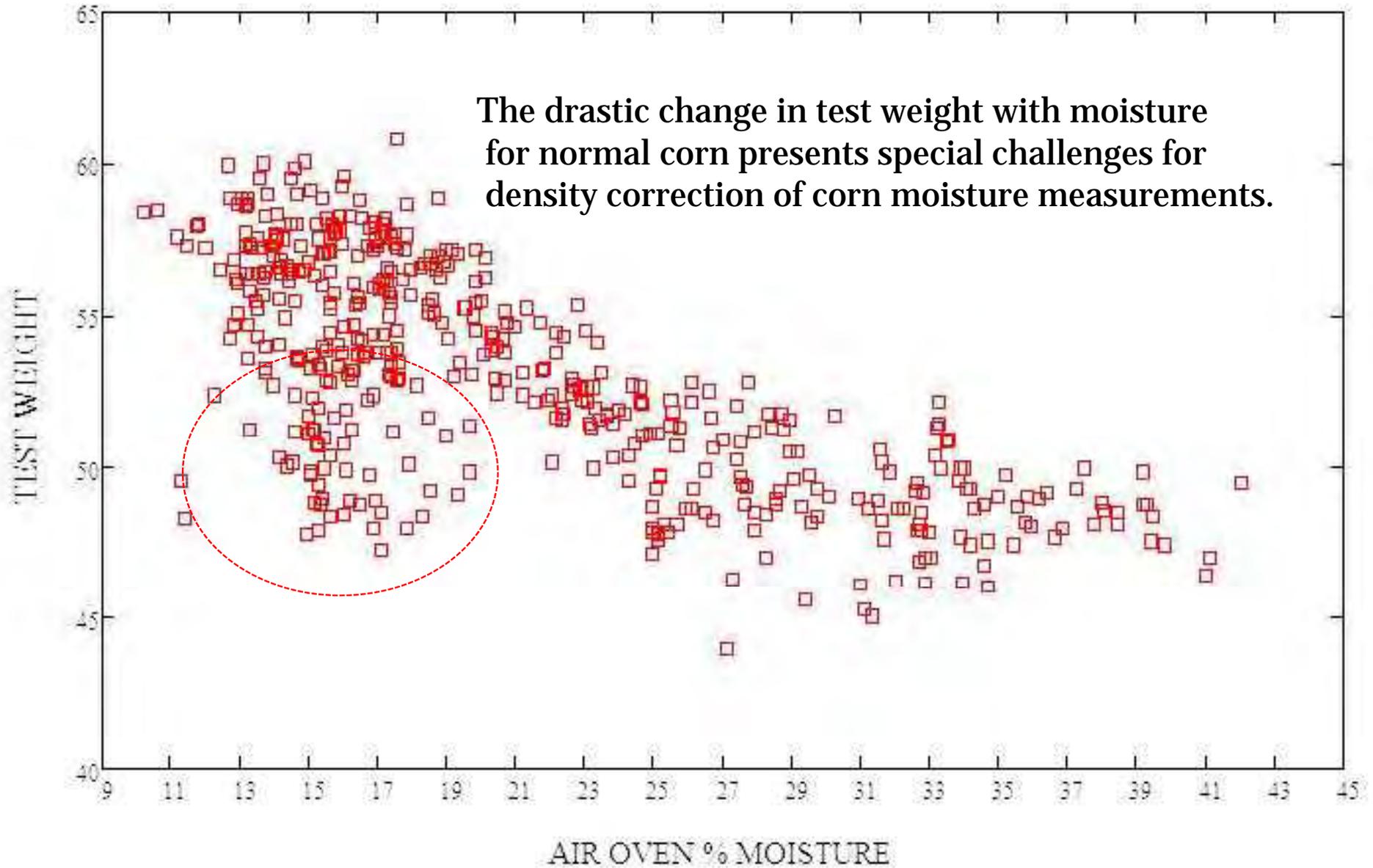
A. Plot of GAC2100 Accuracy vs. USDA Air Oven Moisture, Room Temperature Data Only



# Corn: Official Test Weight vs. Air Oven Moisture

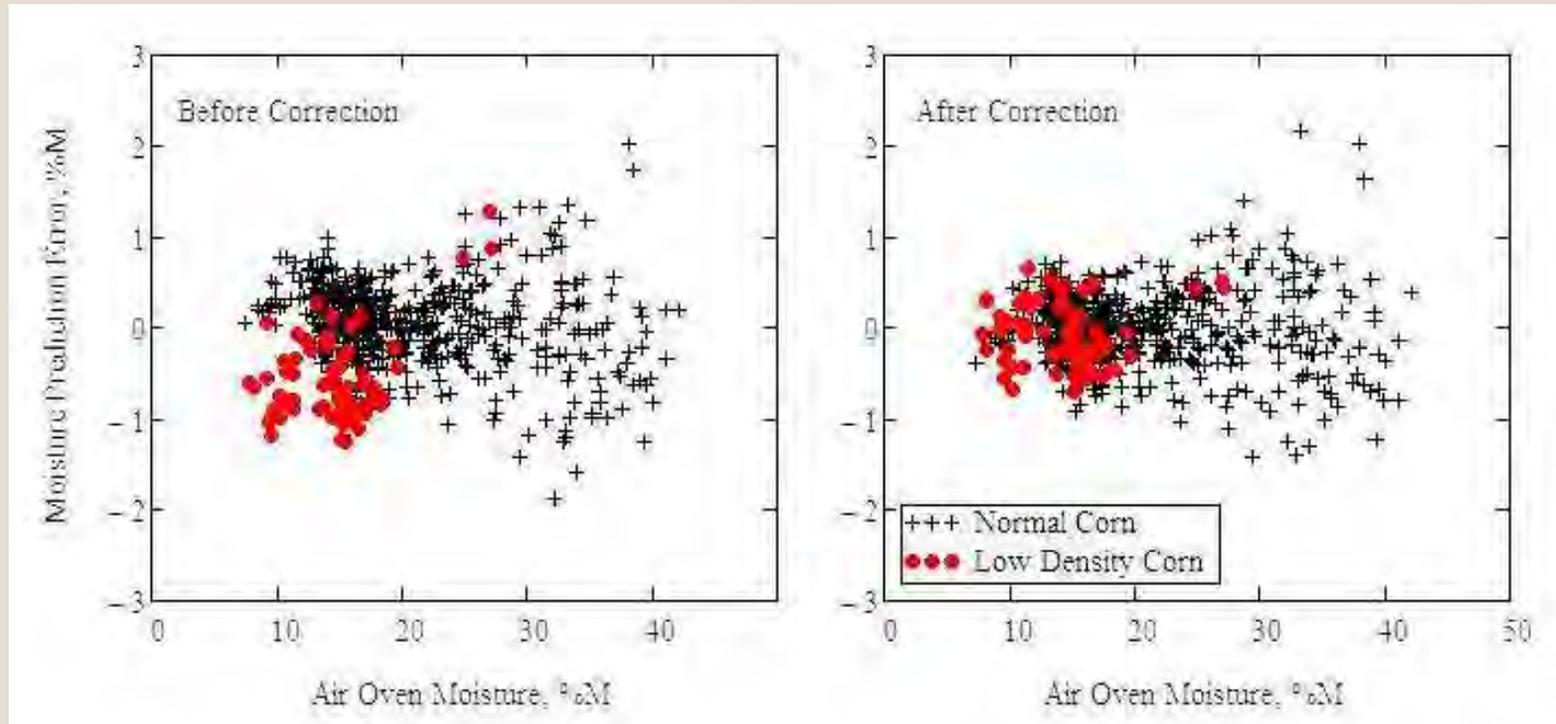


# Corn: Official Test Weight vs. Air Oven Moisture



# Secondary Density Correction

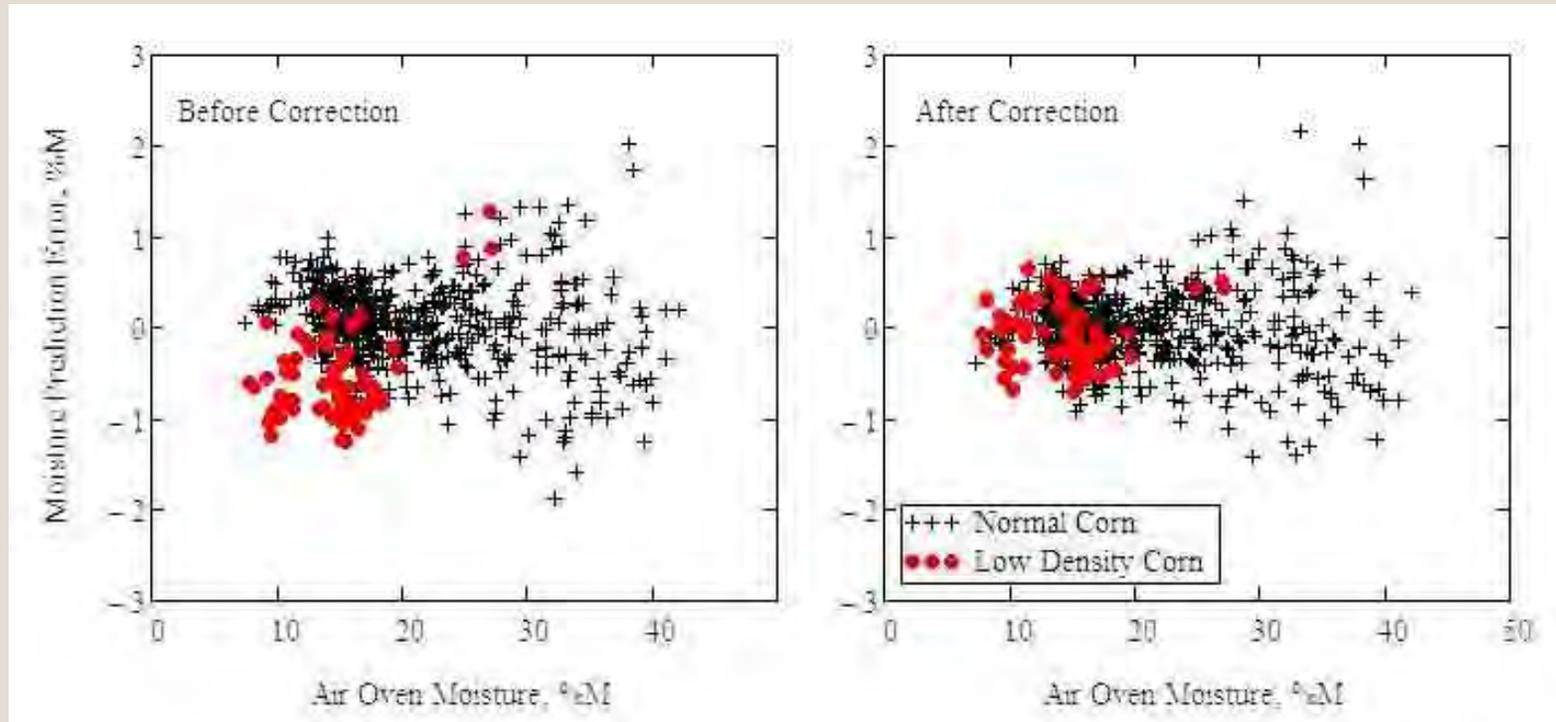
## 149 MHz Corn Results for 149 MHz (UGMA)



	<b>Before</b>	Bias	STD	Slope	<b>After</b>	Bias	STD	Slope
All Samples		-0.04	0.46	-0.01	All Samples	-0.01	0.31	-0.01
Low Density		-0.66	0.34	0.00	Low Density	-0.11	0.32	-0.03
Normal		0.09	0.36	-0.04	Normal	0.01	0.30	-0.01

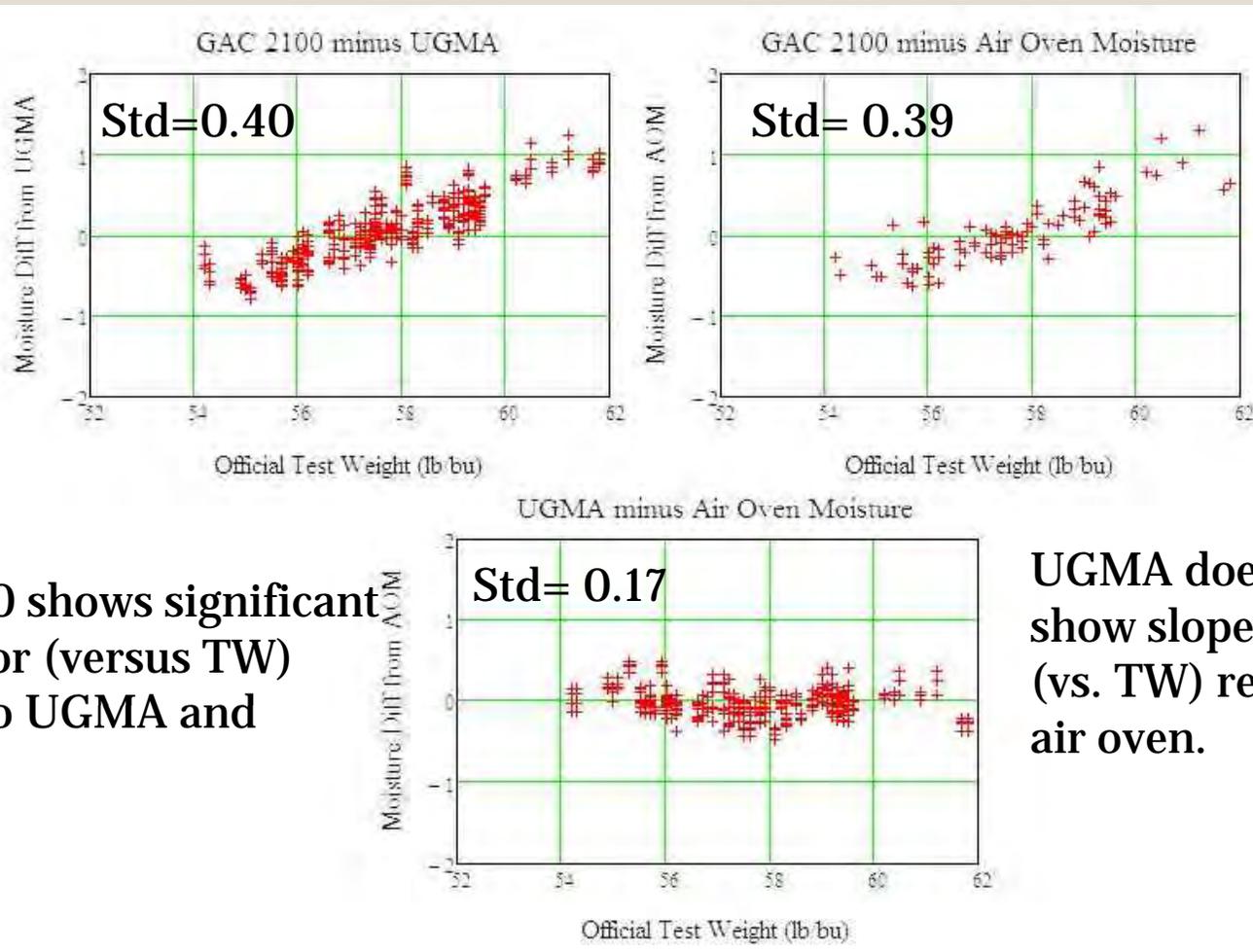
# Secondary Density Correction

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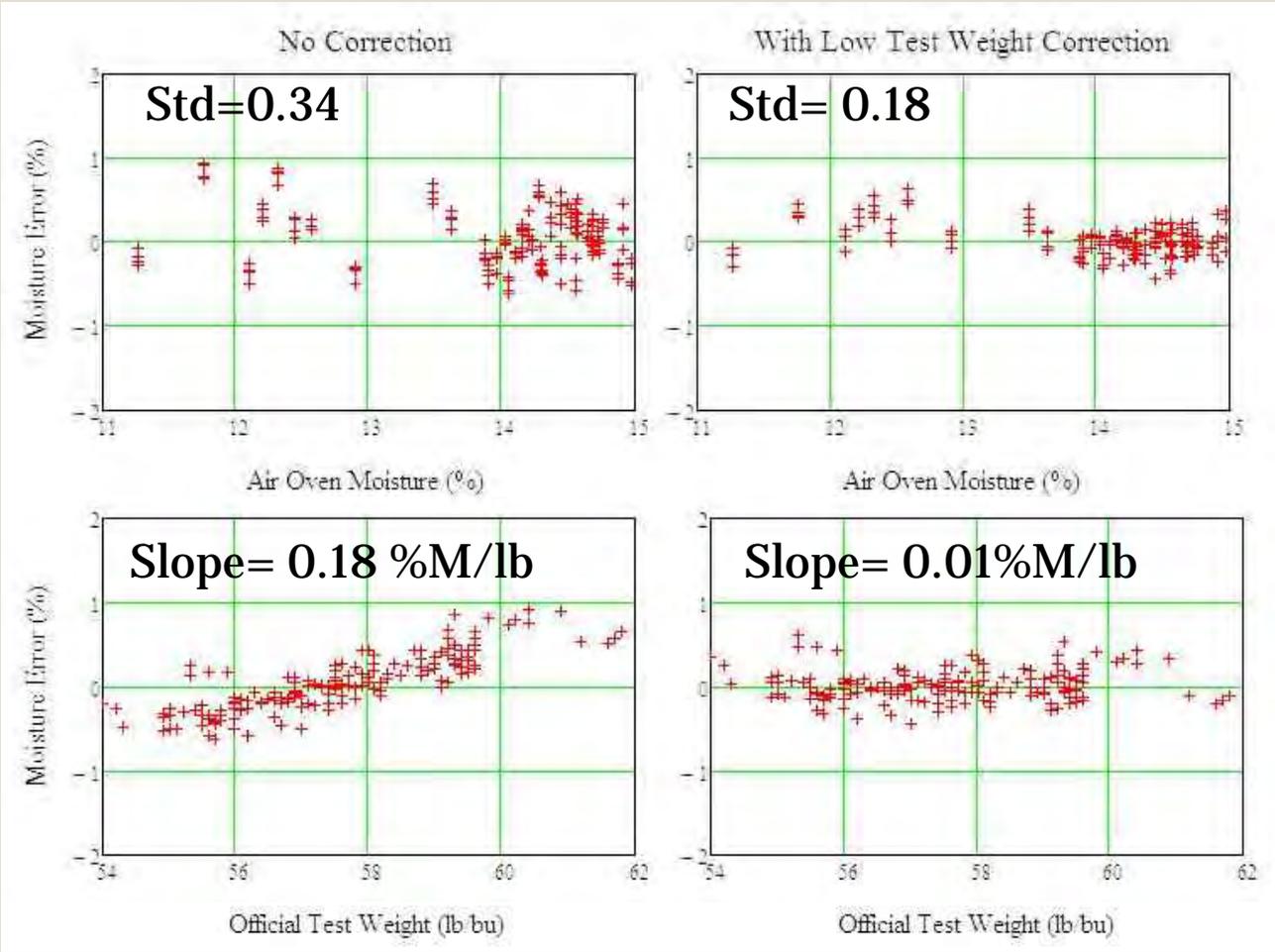
# GAC 2100 and UGMA (<15%)



GAC 2100 shows significant slope error (versus TW) relative to UGMA and air oven.

UGMA does not show slope error (vs. TW) relative to air oven.

# GAC 2100 (<15%M)



## Conclusions Regarding Secondary Density Correction for Corn

- Corn samples with very high or very low densities show significant moisture prediction errors with GAC 2100.
- Secondary density correction for UGMA successfully reduced the moisture prediction error due to density differences—not only for the extreme density samples.
- A mathematical secondary density correction would be effective for the GAC 2100, but implementation is impractical.
- Expediting implementation of UGMA would minimize market disruptions from density-dependent moisture measurements.

# Benefits of 149 MHz Technology

- Improved accuracy (including density effects)
- Provide competition
  - Control costs
  - Equivalent results from multiple instrument models
- Expanded cold temperature range (down to 0 °F)
- Faster operation
- Better stability over time and crop conditions
  - Fewer calibration changes to cause market disruptions
  - Avoid density-induced discrepancies
- Easier calibration development

# Costs of New Moisture Technology

- **Replacement costs**
  - 104 units owned by FGIS
  - 627 units total in Official inspection system
- **Temporary market disruptions during changeover**