United States
Department of
Agriculture

Grain Inspection,
Packers and Stockyards
Administration

Meeting Minutes
Grain Inspection Advisory Committee

July 15-16, 2014
National Grain Center
Kansas City, Missouri

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

National Grain Center
July 15-16, 2014

WELCOME

Larry Mitchell, Administrator, Grain Inspection, Packers and Stockyards Administration (GIPSA), welcomed everyone to the meeting and provided background information and introductions to the new members.

Gary Woodward, Deputy Under Secretary, Marketing and Regulatory Program, gave opening remarks that included information on his career. Mr. Woodward said that our mission is to provide customer service and that receiving feedback from our customers helps us to provide better customer service.

Tammy Basel, Chairperson, Advisory Committee, welcomed everyone and self-introductions were made.

ACCEPTANCE OF JUNE 18-19, 2013, MEETING MINUTES

The Advisory Committee approved the minutes of the June 18-19, 2013, meeting as presented.

REVIEW AND ACCEPTANCE OF JULY 15-16, 2014, AGENDA

The Advisory Committee approved the July 15-16, 2014, agenda, with a change to one presenter.

MEETING ATTENDEES

Committee Members

Scott E. Averhoff, Owner/Operator, Scott Averhoff dba SARA Farms
Tammy Basel, Past President, Women Involved in Farm Economics
Janice Cooper, Executive Director, California Wheat Commission
Omar Garza, Special Project Coordinator, University of Texas, Pan American
Arvid Hawk, President, Global Agricultural Consulting, LCC
Kent McAninch, Owner/Operator
Marvin R. Paulsen, retired Professor Emeritus, University of Illinois
Cesar Ramirez, Manager, Gavilon Grain LLC
Maria Reinitz, Manager, Gavilon, LLC
Todd E. Russom, Manager, Anheuser-Busch InBev
Jessica L. Wilcox, Farmer/Crop Insurance Agent, Wilcox Farms

GIPSA

Brian Adam, Chair, Board of Appeals and Review, Technology and Science Division (TSD), Federal Grain Inspection Service (FGIS), GIPSA
Mary Coffey Alonzo, Director, TSD, FGIS, GIPSA
Tandace Bell, Branch Chief, Biotechnology and Analytical Services Branch, TSD, FGIS, GIPSA
Cathy Brenner, Inspection Instrumentation Branch, TSD, FGIS, GIPSA
Rob Dorman, Policies, Procedures and Market Analysis Branch (PPMAB), Field Management Division (FMD), FGIS, GIPSA
David Funk, Chief Scientist, TSD, FGIS, GIPSA
Joe Han, PPMAB, FMD, FGIS, GIPSA
Terri Henry, Management Services Staff, GIPSA
Eric Jabs, Branch Chief, Quality Assurance and Designation Branch (QADB), Quality Assurance and Compliance Division (QACD), FGIS, GIPSA
Randall Jones, Deputy Administrator, FGIS, GIPSA
Kendra Kline, Assistant to the Deputy Administrator, FGIS, GIPSA
Pat McCluskey, Branch Chief, PPMAB, FMD, FGIS, GIPSA
Larry Mitchell, Administrator, GIPSA
Tim Norden, Chief, Analytical Chemistry Branch, TSD, FGIS, GIPSA
Byron Reilly, Acting Director, Departmental Initiatives and International Affairs, FGIS, GIPSA
Samantha Simon, Director, QACD, FGIS, GIPSA

Other Attendees

Dave Ayers, Champaign Grain
Catherine Bouchard, Cargill
Sarah Bowser, Sorghum Checkoff
Nick Friant, Cargill
Jess McClure, National Grain and Feed Association
Tom Meyer, Kansas Grain Inspection Service

ETHICS

Ms. Henry gave a brief overview of Federal Ethics as they pertain to Federal Employees which includes members of the Grain Inspection Advisory Committee. The overview covered: acceptance of gifts, prohibited sources, gifts between coworkers and supervisors, and the use of government property and time allowed and not allowed.

For additional details, please see the attached presentation, ***Ethics***.

MARKET UPDATE

Mr. Jones gave an overview of FGIS operations.

The year 2013/14 export inspection tonnage is on the rebound after last year's lows. Currently the total tonnage is approximately 60 percent greater than this time last year. If this rate continues the year-end total tonnage will be second only to 2007-08. The increase in the total export inspections is primarily due to the rebound in corn production and exports. The 2013 corn crop production was reported at 13.9 billion bu. and resupplied the market from 2012 drought which was reported at 10.8 billion bu. At this point in time within market year corn export inspections are 159 percent greater than Market Year 2012/13.

China continues to be the driving force in soybean exports. In Market Year 2013/14 the U.S. has exported more soybeans to China than any other year, nearly 8 percent more than China's old record in 2011. Wheat export levels are slightly above last year and the 5-year average. Sorghum export inspections are 139 percent higher than last year and substantially higher than the 5-year average. The large increase is primarily due to China becoming a big buyer. China's purchases make up nearly 74 percent of all sorghum exports.

FGIS Export Locations:

- New Orleans –
  - Total volumes for 2014 are 35 percent above last year and 22 percent above the 5-year average.

- League City –
  - Total volumes for 2014 are 27 percent above last year but 3.5 percent below the 5-year average.

- Portland –
  - Total volumes for 2014 are 25 percent above last year and 3.5 percent above the 5-year average.

- Toledo –
  - Total volumes for 2014 are 23 percent above last year and 30 percent above the 5-year average.
- State of Washington -
  - Total volumes for 2014 are 25 percent above last year and 14 percent above the 5-year average.

Domestic inspections are voluntary and primarily performed by Official Agencies (OA). Inspections are stable, pulse inspections are slightly better than last year. Exports are still driving the pea and lentil trade. Vegetable and Pulse production is projected to increase a .5 percent annually over the next decade. Rice inspections are very consistent over the last few years but expected to be slightly better than last year. This year's containerized grain inspections are slightly above last year and 5-year average.

Many are predicting that the number of bushels used for ethanol production will remain strong for crop year 2014/15 due to the recent dramatic decrease in corn prices. With these cheaper prices it has allowed ethanol production margins to range from 50 to 70 cents per gallon, or $1.50 to $2.00 per bushel. Because of the fantastic corn export year and the large 2013/2014 crop the percent of corn production that has went to make ethanol has decreased even though the bushels used for ethanol have increased.

For additional details, please see the attached presentation, ***National Program Overview***.

INTERNATIONAL ACTIVITIES

Mr. Reilly provided a briefing on several international trade and outreach initiatives.

Several are an update to issues discussed at the last meeting, but several are new. Briefings included the LibertyLink (LL) Rice issue, the U.S. China joint Soybean Vessel Comparison Study, Quality Complaints, Mexico detaining U.S. rail shipments, and China rejecting U.S. corn shipments.

LibertyLink (LL) Rice

Since the 2006 discovery of the inadvertent release of LL Rice in U.S. commercial rice channels, many of our buyers required pre-shipment testing for LL RICE. Commercial testing continued for 8 years, and according to the rice industry, the last positive detection was in 2008. In 2014, FGIS notified our customers that we had discontinued LL RICE testing in our Proficiency Study. On April 1, 2014, we begin issuing the letterhead statement: “There are no transgenic rice varieties for sale or in commercial production in the United States at this time.” On July 1, 2014, Japan’s Ministry of Agriculture, Forestry and Fisheries (MAFF) ended their requirement for pre-testing U.S. rice for the presence of LL Rice. Japan’s Ministry of Health, Labor and Welfare (MHLW) discontinued their pre-shipment testing in April 2014. For Russia to lift their ban on U.S. rice, they want to visit the U.S. to verify its disappearance. FGIS sent a letter back to Russia with supporting industry data, suggesting a site visit is not necessary.

Mexico Detains Rail Shipments

Since late 2013, SENASICA (Mexican Quarantine officials) in Piedras Negras and Nuevo Laredo have been detaining U.S. rail shipments of grain, oilseeds, and pulses for days up to weeks, due to the presence of soil in the grain. SENASICA found the largest number of soil clods in edible bean and lentil trains followed by soybeans and other grains. SENASICA has a phytosanitary law that establishes a zero tolerance for soil in commodities imported into Mexico. Unit trains are being detained, disrupting trade and costing exporters $100,000s in demurrage costs. In March 2014, FGIS and the Animal and Plant Health Inspection Service (APHIS) met with SENASICA officials in Mexico to discuss the issue. They showed us samples of small dirt clods they were finding. SENASICA accompanied the USDA team to tour FGIS’ National Grain Center. They also witnessed a corn train destined for Mexico loading in Kansas, and met with U.S. grain industry representatives. APHIS plans to continue discussions with SENASICA to find a solution to this issue.

China Rejects U.S. Corn Shipments

Syngenta's MIR 162 biotech corn event has been deregulated and commercialized in the U.S., but has not been approved in China. MIR 162 is still undergoing China's slow approval process and has a zero tolerance for unapproved events. Until such time that MIR 162 gains regulatory approval in China, they will continue rejecting any corn shipments testing positive for the MIR 162 event. This has caused huge and costly trade disruption for U.S. exporters. Even if China approves MIR 162 soon, problems may continue next crop year because Syngenta plans to commercialize Duracade, another transgenic corn event that has been deregulated in the U. S. but not China. A longer term issue is that China's regulatory framework precludes any tolerance for unapproved biotech events, even if they are approved in the country of export. China samples and tests according to protocols unknown to USDA, and rejects corn with any positive detection.

China – Soybean Vessel Comparison Study

In May 2014, representatives from FGIS and the Foreign Agricultural Service (FAS) traveled to Beijing, China, to discuss the U.S./China Joint Soybean Vessel Comparison Study with China's General Administration of Quality Supervision, Inspection and Quarantine AQSIQ. They agreed to continue the vessel comparison study (VCS) this coming shipping season. To allow enough time to sample two soybean ships, we asked if they could extend their stay in the United States. FAS is waiting for their reply. Realizing that our definitions of foreign material (FM) differ, we agreed to conduct a study on FM as well as a study comparing our grain probe to the Chinese probe and how it may affect factor results. The U.S. team then traveled to several Chinese ports to observer their sampling methods and visit their inspection laboratories. Their labs were modern and very impressive. The lab in Guangzhou is their National Provincial Lab where they conduct their research and development and training activities.

Quality Complaints

In 2011, GIPSA received 12 quality complaints. Egypt filed complaints on five corn shipments due to damaged kernels and China filed complaints on five soybean shipments due to treated seeds.

In FY 2012, GIPSA received only five complaints, two complaints involving three shipments to China alleged to contain treated seeds. These complaints accounted for 0.2 percent by weight of all the grain exported from the United States in FY 2012.

In FY 2013, GIPSA received only received one quality complaint on damaged soybeans to China. This accounted for less than 0.01 percent of all the grain exported from the U.S. in FY 2013.

For additional details, please see the attached presentation, ***International Activities***.

FIELD MANAGEMENT DIVISION

Mr. Goodeman briefed the Advisory Committee on a number of FMD issues.

FMD Overview

A brief overview of the functions and current staffing of FMD was given as the "service delivery" arm of FGIS. FMD performs original inspection and weighing service through a network of 8 Field Offices with over 400 full-time and part-time samplers, technicians, inspectors, and supervisors. FMD operates a network of Field Offices located in New Orleans, LA; League City, TX; Stuttgart, AR; Grand Forks, ND; Toledo, OH; Portland, OR; Olympia, WA; and the Domestic Inspections Operations Office (DIOO), Kansas City, MO. FMD also writes instructions and promulgates regulations for the grain inspection program through the Policies, Procedures, and Market Analysis Branch.

Pacific Northwest Labor Issues

FMD provided an update on the current situation in the Pacific Northwest (PNW). Two export grain elevators are involved in a dispute with a labor union, and picket lines have been established at two facilities.

Fall Protection and Safety

An overview of the Occupational Safety and Health Administration (OSHA) citation and new FGIS Program Directive addressing Rolling Stock Fall Protection was provided. The Directive stipulates that fall protection must be used if available, however GIPSA would continue to sample without fall protection if not available. It is now mandatory that all employees working in the field be trained in fall safety protection. The Directive release is pending.

Laboratory Modernization Project

Many of the inspection labs are over 30 years old and not adequate. Industry is working with FGIS on new lab spaces. Multiple labs are being redesigned or relocated to comply with FGIS Directive 9160.5, Official Inspection Laboratory Location, Design and Maintenance Requirements. In 2013, FGIS opened a new state of the art lab at Louis Dreyfus in Port Allen, Louisiana. The lab is equipped with new equipment, an ergonomic layout, efficient lighting and other aesthetic improvements. New labs are also planned for Portland, OR and Lake Charles, LA. Each of these new labs will be outfitted with new design and equipment features to improve safety, comfort, efficiency, and ergonomics. FGIS' goal is to link inspections electronically and sync with quality control system; FGIS is currently conducting a study to use new technology to link equipment.

For additional details, please see the attached presentation, ***Service Delivery.***

GRAIN STANDARDS AND MARKET NEEDS

Mr. McCluskey provided updates on rulemaking activities currently in the clearance process.

GIPSA is preparing two Notices of Proposed Rulemaking. "US Standards for Barley" has been cleared by the Office of the General Counsel and rests with the Department pending final clearance; "Fees for Commodity Inspection (Excluding Rice) Services and Processed Commodity Analytical Services" resides with the Office of the General Counsel, being reviewed for legal sufficiency.

GIPSA is preparing one Advance Notice of Proposed Rulemaking, asking for comments on current services and focusing on distillers dried grains. The document resides with the Office of the General Counsel.

One final rule published in 2013 "US Standards for Wheat" became effective on May 1, 2014.

Advance Notice of Proposed Rulemaking: Asking for comment on current services, and focusing on DDG's, Services currently offered or needed to facilitate the marketing of grain and related products. The Notice will be open for a 90-comment period.

For additional details, please see the attached presentation, ***Grain Standards and Market Needs*.**

QUALITY INITIATIVE AND COMPLIANCE ISSUES

Ms. Simon provided an update on the QACD quality project.

Last year, QACD reported on a quality pilot being conducted on inspection accuracy. The pilot concluded on September 30, 2013, and based on the results, FGIS revised the inspector performance standards to better serve as a quality measurement tool to evaluate certificate and inspection accuracy. Under the revised standards, one randomly selected sample of grain for each inspector for each week during which the inspector has performed inspection work is graded by the local Quality Assurance Specialist (QAS) for critical factors as defined for each field office. Inspection accuracy data from the first 3 months since rollout shows a national average of 95.5 percent factor accuracy from 1,478 samples. QACD continues to develop reports and analyze the data to verify certificate accuracy as well as to improve alignment between the QAS and inspectors, identify training needs, and improve inspector performance and accountability.

QACD is currently working on 3 additional projects under the Quality Programs:

- First are proposed changes to the Quality Management Program. The proposed changes are intended to ensure that all agency personnel meet the FGIS regulations, are adequately trained, and remain abreast of new developments.
- Second is an FY 2014 strategic goal to review all FGIS Quality Assurance Programs and determine how best to organize these functions within FGIS.

- Third is another FY 2014 strategic goal to create and implement Quality Assurance Dashboards to assist FGIS and official Agency managers and supervisors in the analysis of the effectiveness and efficiency of the delivery of services.

For additional details, please see the attached presentation, ***Quality Initiative and Compliance Issues.***

UNIFIED GRAIN MOISTURE ALGORITHIM (UGMA)-COMPATIBLE MOISTURE METERS

Ms. Alonzo provided an overview of the results of appeals filed during FY 2014.

The majority of appeals showed that moisture measurements made at the point of original inspection were confirmed by appeal, and that the DICKEY-john GAC 2500 UGMA meters that processed the original inspection did so within all FGIS performance expectations. FGIS' internal monitoring of moisture measurements on both approved moisture meters, the GAC 2500 UGMA and the Perten AM5200A, confirmed that meters were generally performing within FGIS performance expectations.

Action plans to address FGIS Sample Information Management System (SIMS) monitoring limits were discussed.

For additional details, please see the attached presentation, ***2014 Moisture Appeals***.

QUANTITATIVE RAPID TEST KIT PROGRAM FOR GENETICALLY (GE) TRAITS

Dr. Bell provided an overview of its existing Biotechnology Rapid Test Kit verification program.

At this point, all GIPSA approved test kits are for the qualitative detection of genetically engineered traits in grains.

To facilitate grain marketing and in response to emerging detection technology, GIPSA will initiate the implementation of a Quantitative Rapid Test kit Verification Program for the detection of genetically engineered traits in grains. The development requirements will include:

- Determine appropriate number of independent analyses, test lots, and individual samples;
- Develop accuracy requirements for test kits against reference standards;
- Design criteria for maximum RSD values and standard deviations;
- Implement appropriate positive and negative controls; and
- Finalize directive and initiate program.

For additional details, please see the attached presentation, ***Quantitative Rapid Test Kit Program for Genetically (GE) Traits***.

SORGHUM PROJECT 2014

Mr. Adam reviewed a recent collaboration between the BAR, Field Management Division, Official Agencies, and the industry to address concerns about sorghum odor alignment between origin and destination results.

Industry representative sought to reaffirm its confidence in FGIS' ability to align sorghum odor within the official system. FGIS outlined steps employed to harmonize origin and destination inspectors with the BAR. Feedback from industry regarding FGIS' ability to maintain consistency between origin and destination results has been universally positive.

For additional details, please see the attached presentation, ***Technology and Science Division***.

GLUTEN STRENGTH ANALYZER

Dr. Norden provided a briefing on Gluten Strength Analyzer.

Working with its stakeholders, GIPSA identified gluten strength as a key market need for which no test or instrumentation existed. GIPSA initiated a collaborative project to develop a market-relevant test for gluten strength that could be accomplished in 30 minutes or less for any wheat sample. GIPSA worked with the Agricultural Research Service, Cornell University, Oklahoma State University, and Perten Instruments to develop an instrument and a method to measure gluten strength.

Over the last 7 years, Perten Instruments has developed several prototype instruments and the final commercial prototype was tested using 48 hard wheat pure cultivar samples. The results of testing these samples as both flour and whole meal were presented. The discrimination power for the whole meal samples (6.8) was higher than that for the flour samples (4.3), but somewhat lower than the estimated discrimination power (11.2) of the well-established method of protein determination. There is a concern about a lack of correlation of the results of some flour samples with the corresponding whole meal samples. In addition, there is a relatively low correlation of the gluten strength recovery index with the Farinograph stability time, which should be a key measure of gluten strength.

Perten Instruments has taken the lead in doing a field test of four instruments in four key U.S. laboratories. The timeframe for this field test is 3-6 months and the results will determine whether Perten Instruments decides to commercialize the instrument.

For additional details, please see the attached presentation, ***Gluten Strength Analyzer***.

NATIONAL MYCOTOXIN QUALITY ASSURANCE PROGRAM

Dr. Norden briefed on the Advisory Committee on the status of a national QA program for mycotoxin testing that includes the existing rapid test kit evaluation program, inspection monitoring, check sample distributions, training, and technical assistance.

Since FY 2012, 73 rapid mycotoxin test kits have been evaluated by GIPSA, the majority for analysis of aflatoxins and DON. Aflatoxin check sample distributions in recent years suggested that additional procedures related to supplemental analysis could impact the accuracy of results. FGIS is considering increasing the concentration ranges in the GIPSA performance criteria for aflatoxin, DON, and fumonsins so that supplemental analysis procedures can be eliminated. Four water-based aflatoxin test kits were evaluated for accuracy on coarsely ground corn samples. Two test kits were found to give biased results and the GIPSA Certificates of Conformance were cancelled. The remaining two test kits were verified as accurate.

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

NATIONAL FALLING NUMBER QUALITY ASSURANCE PROGRAM

Dr. Norden briefed the Advisory Committee on the national QA program for Falling Number testing. The program is outlined in FGIS Directive 9180.84, National Falling Number Quality Assurance Program, on April 23, 2014.

The goals of this program are to provide information that assesses the level of accuracy among official service points and to validate and/or improve the accuracy of the official testing program. The inspection monitoring component of the QA program involves collecting and reanalyzing samples from official service locations on a weekly basis and providing rapid feedback of the results. The check sample component of the QA program will focus on troubleshooting system-wide issues. Results from the first check sample distribution were presented and showed good overall performance for all locations that participated. A second check sample distribution will occur in November of 2014. The warning and action limits for the monitoring program will be reviewed on an annual basis to determine if they should be tightened.

For additional details, please see the attached presentation, ***National Falling Number Quality Assurance Program***.

METHODS DEVELOPMENT RETROSPECTIVE

Dr. Funk presented a historical overview and a vision for the future of innovation in official grain inspection. Successful innovation in grain inspection has involved understanding of market needs, vision for what could be achieved, recognition of the confluence of technologies, research and development knowledge and skills, and a large measure of determination.

Innovation in grain inspection has been most significant in improving service for long-recognized needs rather than addressing new market needs. Other than tests that are deemed essential to keep from “being left holding the bag,” few new tests have emerged in the last 26 years that met the requirement for adding sufficient value to sustain measurements throughout the grain production and handling system. However, innovation has brought tremendous advantages to several official inspection programs such as NIRR/NIRT methods, moisture measurement, nuclear magnetic resonance (sunflower seeds), and wheat varietal identification for classification.

Current innovation projects include testing Light Emitting Diode (LED) lamps for use in grain inspection laboratories and the USDA Rice Studio. LED lighting technology is evolving rapidly and becoming dominant—as can be seen from a visit to one's local home improvement store. LED technology provides long life, high efficiency, and the convenience and safety of low-voltage wiring. Until recently, however, the quality of light available from LED lamps was rather poor. LED lamps have recently become available with light quality (Color Rendering Index and Color Temperature) rivaling that of FGIS' approved fluorescent inspection laboratory lamps. FGIS is testing their suitability for grain inspection.

A brief demonstration of the USDA Rice Studio illustrated how low-cost consumer photo scanner technology is expected to transform official inspection of broken kernels and milling yield in rice. This program, developed by Dr. Zoltan Gillay, Visiting Scientist, over the past year went through FGIS' pre-Beta testing (at three official inspection laboratories) with flying colors. It is being readied for a wider Beta test to gauge its acceptability for official inspection and applicability to unofficial users' special needs. USDA Rice Studio requires only a computer and a low-cost photo scanner for hardware. The software itself was developed using appropriated funds and will be provided to users free of charge.

Looking to the future, societal factors will continue to drive technological developments. These driving factors include: fear/need for defense (military/weapons), grand ideas (such as space) that capture the national imagination and commitment, globalization, the desire for instant communication and social media, mass consumerism, the Internet of Things, computer gaming, an incredible data explosion, cybercrime, medicine/health/nutrition, increasing standard of living, water shortages, and depletion of traditional energy sources.

Some of the major developing technological areas to watch for possible application to grain inspection include: computer processing (cloud/parallel/distributed/embedded), optics (sensors/displays/computing), drones and other remotely piloted vehicles, robotics, biotechnology, bioelectricity, biochemistry, wearable electronics (such as Google Glass), voice recognition and control, nanotechnology, and accurate, inexpensive sensors of all sorts.

Three points to remember regarding future innovation in official grain inspection.

1. Truly "new" market needs are rare. Concentrate on doing important things better, faster, cheaper.
2. Deeply understand current systems and market needs.
3. Continually study and apply the confluence of new and evolving applicable technologies to improve existing services as well as address new market needs.

For additional details, please see the attached presentations, ***Methods Development Retrospective and Enhancing Grain Inspection***.

REAUTHORIZATION

Ms. Kline gave an update on the Reauthorization of certain provisions of the United States Grain Standards Act.

On September 30, 2015, certain provisions of the United States Grain Standards Act expire. The provisions were added to the Act in 1976. The Secretary of Agriculture will notify congress about the expirations and congress will then vote on reauthorization of the provisions in the Act. The last reauthorization took place in 2005. The key points were private inspections firms at the export locations and reauthorizing for 10 years rather than 5 years. Currently for the 2015 reauthorization no major changes have been suggested.

For additional details, please see the attached presentation, ***Reauthorization***.

ELECTION OF VICE-CHAIRPERSON

Mr. Averhoff was elected as vice chair and will become the Chairperson during the first meeting of 2015.

NEXT MEETING

The Advisory Committee recommends the next meeting be held in November 2014 (date to be determined) at the National Grain Center in Kansas City, Missouri.

RESOLUTIONS

The following resolutions were introduced and passed by the Advisory Committee:

1. Whereas the U.S. Department of Agriculture is mandated under the U.S. Grain Standards Act to provide Official inspection and weighing services for exports of U.S. grains and oilseeds,

   Therefore be it resolved that the Advisory Committee urges in the strongest terms that FGIS take whatever actions are necessary to immediately restore Official grain inspection and weighing service wherever and whenever it is disrupted, either by immediately replacing absent inspectors with FGIS Official personnel or with inspectors from available qualified providers, including other designated or delegated Official Agencies.

2. The inspection and weighing services provided by FGIS are critical to the continued export of U.S. grain and oilseeds. In order to assure uninterrupted service, the Grain Inspection Advisory Committee strongly recommends the reauthorization of GIPSA for a minimum of 10 years.

3. The Advisory Committee recommends that GIPSA initiate the implementation of a Quantitative Rapid Test kit Verification Program for the detection of genetically engineered traits in grains.

4. It is known that moisture condenses onto cold grain. Because of the possible propensity for cold grain pneumatically delivered from a sampler to an inspection laboratory in a warm humid atmosphere to result in an apparent decrease in the TW result and an apparent increase in the moisture result, the Advisory Committee recommends that FGIS study this issue with an eye to finding a way to correct the results of measuring the two factors to account for this phenomenon.

5. Whereas GIPSA is exploring the possibility of expanding the concentration ranges in performance criteria for mycotoxin test kits, the Advisory Committee recommends GIPSA consider setting the following ranges for performance criteria:

   Aflatoxin - 5 to 700 ppb
   Vomitoxin - 0.5 to 30 ppm
   Fumonisin - 0.5 to 100 ppm
   Ochratoxin A - No Change
   Zearalenone - No change

6. The Advisory Committee recommends that GIPSA review and update all the quality assurance tolerances utilized in the official inspection system. Specifically, the Advisory Committee recommends that the first to be reviewed reflect the Unified Grain Moisture Algorithm (UGMA) technology for moisture measurement.

7. Whereas the Test Weight module/apparatus that is integrated in the current official moisture meters is capable of testing for the test weight of grain; the Advisory Committee recommends that GIPSA complete and report its research regarding the feasibility of changing the official method for determination of test weight from the kettle method to the test weight apparatus integrated in the official moisture meters.

8. The Advisory Committee recommends that GIPSA continue its work with updating inspection lab lighting standards. Lab lighting is crucial for proper visual quality analysis. Advancements in LED technology and lower overall cost should prove this technology a suitable replacement for current approved lighting technology.

9. The Advisory Committee recommends that GIPSA continue its work to utilize technology enhancements to advance efficiencies for grain inspections. For example, GIPSA should continue its work with the USDA Rice Studio (rice scanner project) by connecting with industry stakeholders for feasibility of using the technology for further evaluations: including rice brokens sizing, color, and potential uses with other grains.

10. The Advisory Committee supports continued focus on water-based quantitative mycotoxin test kits. Industry efforts to be "green" by reducing use of hazardous chemicals and associated waste are becoming commonplace. Encouraging manufacturers of testing methodology to develop the water-based methods should be continued.

11. The Advisory Committee recommends two face-to-face meetings annually as there are many important issues to address.

12. The Advisory Committee recommends continued work in verifying the accuracy of mycotoxin test kits for Distillers Dried Grains with Solubles (DDGS).

13. The Advisory Committee recommends FGIS explore the needs with animal producers for DDGS quality measurement of key amino acids for animal nutrition.

14. The Advisory Committee recommends that GIPSA suspend scheduled export grain inspection and weighing fee increases when the retained earnings exceed the 3-month reserve level.

15. The Advisory Committee recommends that GIPSA post financial information for FGIS user fee accounts on a monthly basis to their website for access by users.

Ethics

WHAT **ALL** FEDERAL EMPLOYEES SHOULD KNOW

Gifts from Outside Source

The Federal Regulation governing this is 5 CFR Part 2635, Subpart B (Acceptance of Gifts from Outside Sources). This regulation provides that you, as a Federal employee, may not solicit or accept, directly or indirectly, a gift from any prohibited source. Further, you may not accept a gift because of your official position. This rule applies whether you are on or off duty. This regulation is based on two criminal statutes, 18 U.S.C. § 201 (prohibiting bribes and illegal gratuities) and 18 U.S.C. § 209 (prohibiting compensation by outside sources for the performance of your government duties — "Supplementation")

Gifts from Outside Source cont.

A "prohibited source" is any person, company, or organization that:

Is seeking official action from your agency.

Has business with your agency.

Seeks to do business with your agency.

Conducts operations regulated by your agency.

Seeks to influence your agency's policies or regulations.

Has interests that may be affected by your official duties.

Is an organization, a majority of whose members are prohibited sources.

These prohibitions protect you and USDA from undue criticism and protect you from potential prosecution or disciplinary action.

Gifts from Outside Source cont.

A "gift" may be any tangible or intangible item of value, such as:

Cash.

Service.

Entertainment, hospitality, gratuity, or favor.

Travel or travel-related expenses.

A discount, loan, or forbearance (forgiveness) of a loan, offered as a result of your official position.

Gifts from Outside Source cont.

A "gift" is not:

Snacks such as coffee or donuts that are not part of a meal.

Greeting cards or items of little intrinsic value such as plaques, certificates, and trophies.

Loans or credits from banks or other financial institutions at rates available to the public.

Anything for which you paid fair market price.

Gifts from Outside Source cont.

There are a few exceptions to the gift prohibitions that apply to most Federal employees. You may accept:

Unsolicited gifts valued at $20 or less, per occasion, per source, with an aggregate value of $50 per year. (This means that during the calendar year, you may not accept gifts totaling more than $50 from any one source.) (FSIS employees covered under the Meat Inspection Act are not permitted to accept gifts under this exception. See your Ethics Advisor for more information.)

Gifts given based on a personal relationship and it is the giver, not the giver's company, that pays for the gifts.

Gifts based on outside affiliations, outside work, or clubs (provided the gift is not being given because of your Federal official position).

Gifts from Outside Source cont.

You may also accept:

Non-cash awards valued at $200 or less or honorary degrees from sources not affected by your performance or non-performance of duties. (Cash awards, or other awards valued at more than $200, are permissible under special circumstances; but they require prior approval from your Ethics Advisor.)

A waiver of conference fees or acceptance of meals when you are speaking in your official capacity or attending a widely-attended event. (See also our training module entitled "Invitations from Outside Entities.)

Gifts, in the form of travel expenses or admission fees, in connection with permissible political activity.

Gifts from Outside Source cont.

It is never inappropriate and frequently prudent for you to decline a gift if you believe it would give the appearance of favoritism or loss of impartiality — even though it meets the exception criteria.

Agency, not personal, acceptance: Once you have accepted a gift on behalf of your Agency, you must turn it in to your property officer as it is Federal property. Your property officer may allow you to be custodian of the item and display it in your office or it may be displayed in a public showcase.

Gifts Between Employees

Federal laws and regulations govern gifts between Federal employees:

5 U.S.C. § 7351: Gifts to Superiors

5 C.F.R. § 2635: Gifts between Employees

Both statute and regulation address gift-giving between employees who are in a subordinate to official-superior relationship.

An official-superior is not limited to your immediate supervisor. This includes any employee who directs or evaluates you or your supervisor.

These regulations prohibit any action on your part that may influence, or appear to influence, an official-superior's impartial conduct toward you.

Gifts Between Employees cont.

You may NOT:

Give a gift to your official-superior, directly or indirectly.

Donate money for a gift to official-superiors, even voluntarily.

Solicit a contribution from another employee for a gift to an official-superior (either yours or theirs).

Coerce the offering of such a gift.

Gifts Between Employees cont.

On an occasional basis, you MAY give:

- **A gift to one making more than you if there is a personal relationship justifying the gift <u>and</u> the recipient is not your "official-superior."**
- **Items, other than cash, with an aggregate market value up to $10.00 per occasion.**
- **Food and refreshments to be shared at the office.**
- **Hospitality gifts.**
- **Leave under an approved Agency leave sharing plan except to an immediate supervisor.**

Gifts Between Employees cont.

Also, gifts suitable to the occasion may be given or exchanged:

In recognition of infrequently occurring occasions of personal significance such as marriage*, illness, or the birth or adoption of a child.

For occasions that end a subordinate/official-superior relationship, such as retirement, resignation, or transfer.

Gifts Between Employees cont.

You may not accept a gift from an employee receiving less pay than you UNLESS:

There is no subordinate-official relationship; <u>and</u>.

There is a personal relationship between you and the less-paid employee that would justify the gift.

USING GOVERNMENT PROPERTY AND TIME
(OR: MAY I FAX MY PARTY INVITATIONS FROM THE OFFICE?)

Long Ago, in the 20th Century...

Rules forbade use of...

(1) Government time and

(2) Government Equipment

for other than approved purposes.

USING GOVERNMENT PROPERTY AND TIME Cont.

In the New Day of the 21st Century

The rules still forbid use of Government time and equipment for other than approved or authorized purposes. *

* But with a twist...

USING GOVERNMENT PROPERTY AND TIME Cont.

The Following Policies and Rules Apply To Use of Government Office Equipment and Time:

Executive Order 12674 of April 12, 1989 (as modified by E.O. 12731)

Standards of Ethical Conduct for Employees of the Executive Branch, 5 CFR Part 2635

Departmental Regulation (DR) 3300-1 of the USDA Chief Information Officer (CIO)

USING GOVERNMENT PROPERTY AND TIME Cont.

Executive Order 12674 of April 12, 1989
(as modified by E.O. 12731), § 101(e)

Employees shall put forth honest effort in the performance of their duties.

This means, as a minimum, that employees are required to work during their official duty hours (i.e., put in an honest hour of work for an hour's pay).

USING GOVERNMENT PROPERTY AND TIME Cont.

Executive Order 12674 of April 12, 1989
(as modified by E.O. 12731), § 101(e)

Employees shall protect and conserve Federal property and shall not use it for other than authorized activities.

Don’t throw your PC out a window. It is not authorized.

USING GOVERNMENT PROPERTY AND TIME Cont.

The Office of Government Ethics (OGE)

Governmentwide rules:

5 CFR § 2635.704, Use of Government Property
An employee has a duty to protect and conserve Government property and shall not use such property, or allow its use, for other than official purposes.

USING GOVERNMENT PROPERTY AND TIME Cont.

The Office of Government Ethics (OGE)

Rules continued:

5 CFR § 2635.705, Use of Official Time
Unless authorized in accordance with law or regulations to use such time for other purposes, an employee shall use official time in an honest effort to perform official duties.

USING GOVERNMENT PROPERTY AND TIME Cont.

USDA Policy

The Office of the Chief Information Officer (OCIO) has published:

Departmental Regulation (DR) 3300-1, Telecommunications & Internet Services and Use, dated March 23, 1999.

From the DR, we will focus on rules on telephone and internet use by employees.

USING GOVERNMENT PROPERTY AND TIME Cont.

What Office Equipment?

The rules on use of Government office equipment refer to items to which an employee may have daily access on the job, including but not limited to:

Copiers and Printers

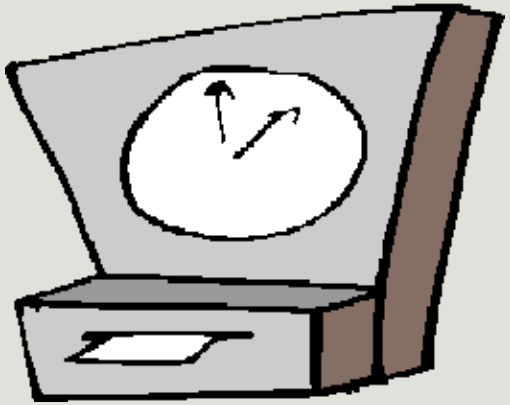
Fax Machines

Computers

Telephones

USING GOVERNMENT PROPERTY AND TIME Cont.

What Government Official Time?



Government official time is the time for which you are paid.

USING GOVERNMENT PROPERTY AND TIME Cont.

When is "Personal Use" of Telephones Authorized?

Doesn’t prevent an employee from performing his/her duties;

Reasonable duration and frequency;

If on official time, could not reasonably be done at another time; or

Is a privilege provided by collective bargaining.

USING GOVERNMENT PROPERTY AND TIME Cont.

Telephones: "Authorized Uses" Include

Scheduling doctors appointments.

Notifying family of a schedule change while traveling on Government business.

One call home per day while traveling on Government business.

Calls to make alternate transportation or child care arrangements.

USING GOVERNMENT PROPERTY AND TIME Cont.

Telephones: "Authorized Uses" Include

One call daily to check on those with whom the employee has a "family relationship."

Brief calls in the local commuting area to local government agencies, physicians, car repair shops, or home repair companies.

Long distance calls that are not charged to the Government.

Prohibited: Any calls that significantly interfere with Government business.

USING GOVERNMENT PROPERTY AND TIME Cont.

What Is "Acceptable Use" for the Internet?

Limited personal use that:

Does not affect performance of official duties by the employee;

Is of reasonable time and frequency, whenever possible on personal time;

Is not of a commercial nature (e.g., no day trading);

USING GOVERNMENT PROPERTY AND TIME Cont.

What Is "Acceptable Use" for the Internet?

Limited personal use that:

Does not reflect adversely on USDA or you (such as pornography and games); and

Does not overburden the telecommunications system (as with large group mailings).

USING GOVERNMENT PROPERTY AND TIME Cont.

Impermissible Personal Use of Government Office Equipment

Sexually explicit materials

Remarks or materials ridiculing others on the basis of race, creed, religion, color, sex, handicap, national origin, or sexual orientation.

Use that interferes with Government work.

Use that results in more than minimal expense to the Government.

Use that is more than "limited."

USING GOVERNMENT PROPERTY AND TIME Cont.

Impermissible Personal Use of Government Office Equipment (cont.)

Use that is more than "occasional."

Illegal activities.

Fundraising.

Lobbying.

Political activities.

USING GOVERNMENT PROPERTY AND TIME Cont.

Impermissible Personal Use of Government Office Equipment (cont.) **Use to earn outside income or otherwise to obtain financial gain. For example:**

Stock trading

Real estate activities

Loan applications

USING GOVERNMENT PROPERTY AND TIME Cont.

Fax Machines and Photocopiers Apply the policies in the Department Regulation.

No interference with official business

Minimal additional expense to the Government

Employee's personal time

National Program Overview

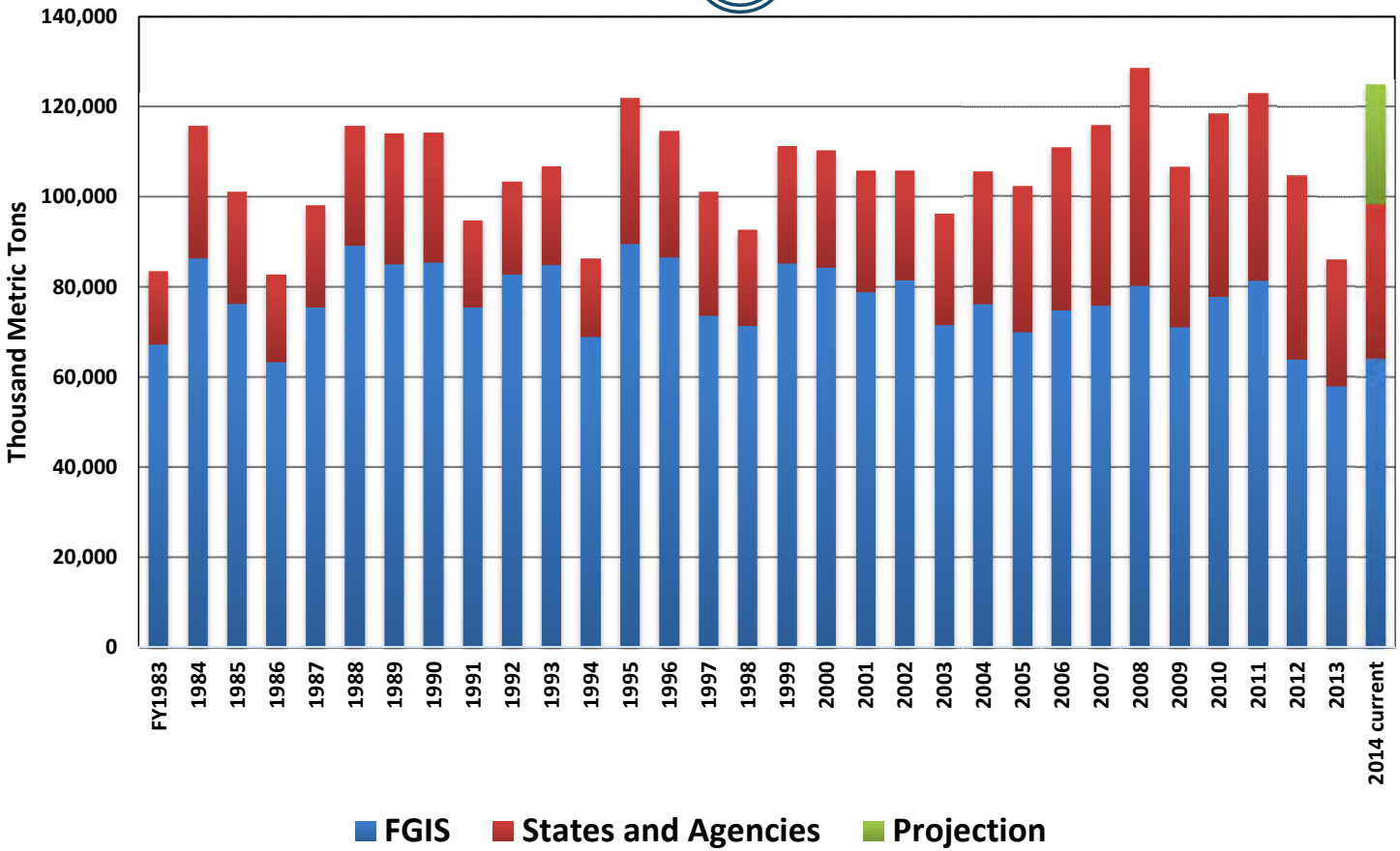
GRAIN INSPECTION ADVISORY COMMITTEE

RANDALL JONES
DEPUTY ADMINISTRATOR
JULY 15, 2014

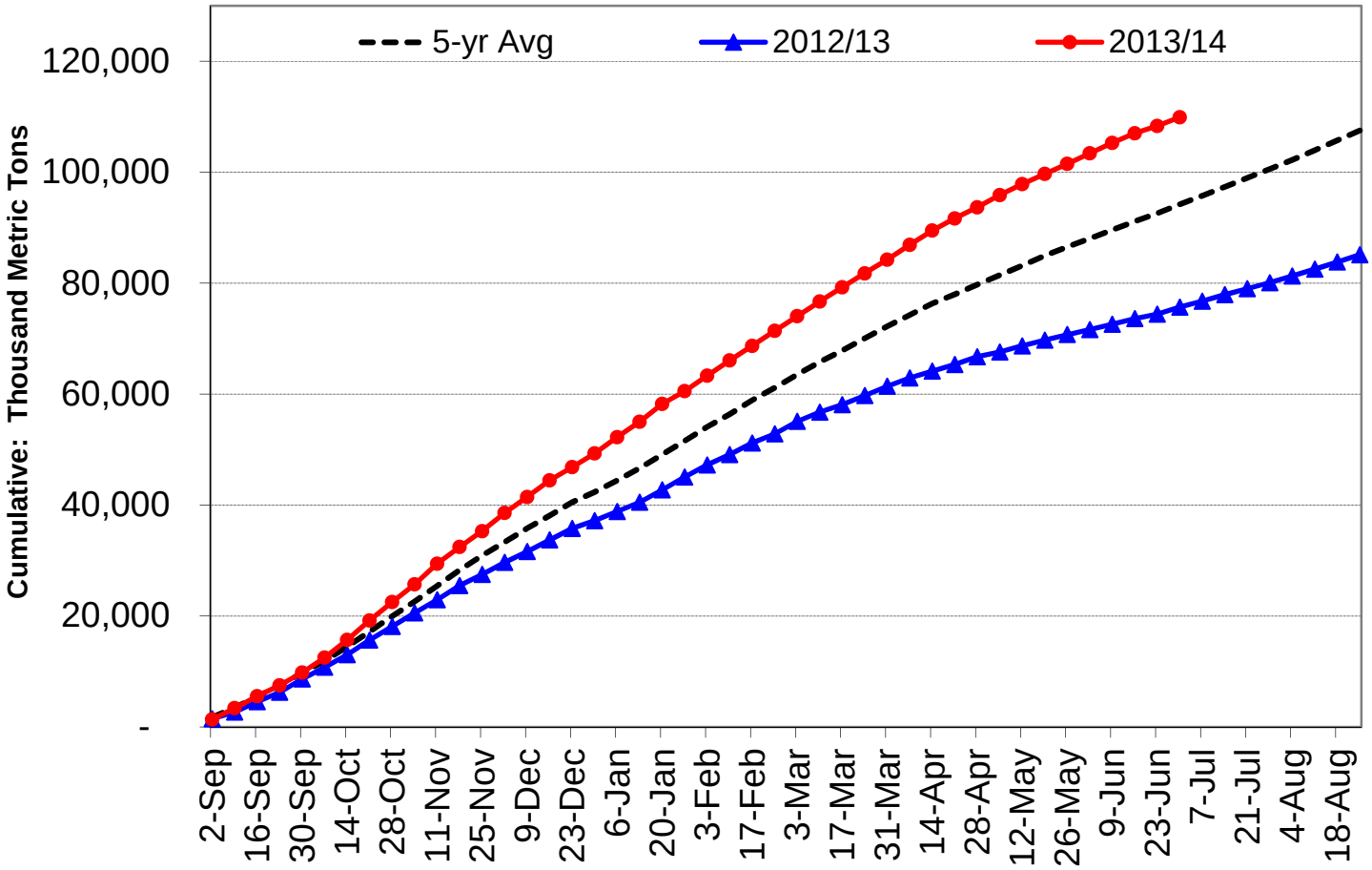
Agenda

- International Activities
  - Byron Reilly
- Service Delivery
  - Robert Lijewski
- Grain Standards and Market Needs
  - Pat McCluskey
- Quality Assurance Program
  - Samantha Simon
- Technology and Science Division Update
  - Mary Alonzo

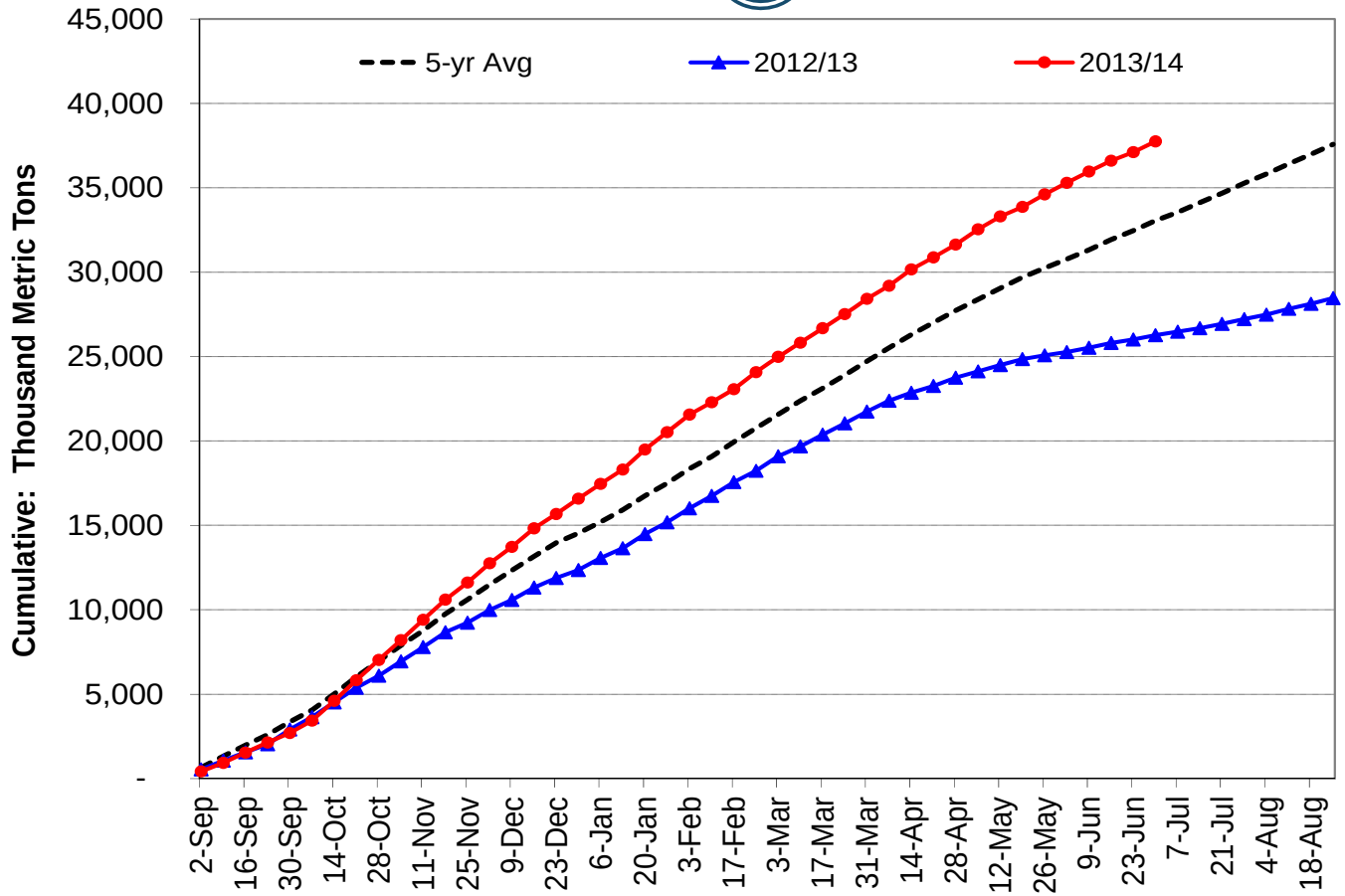
Export Inspections



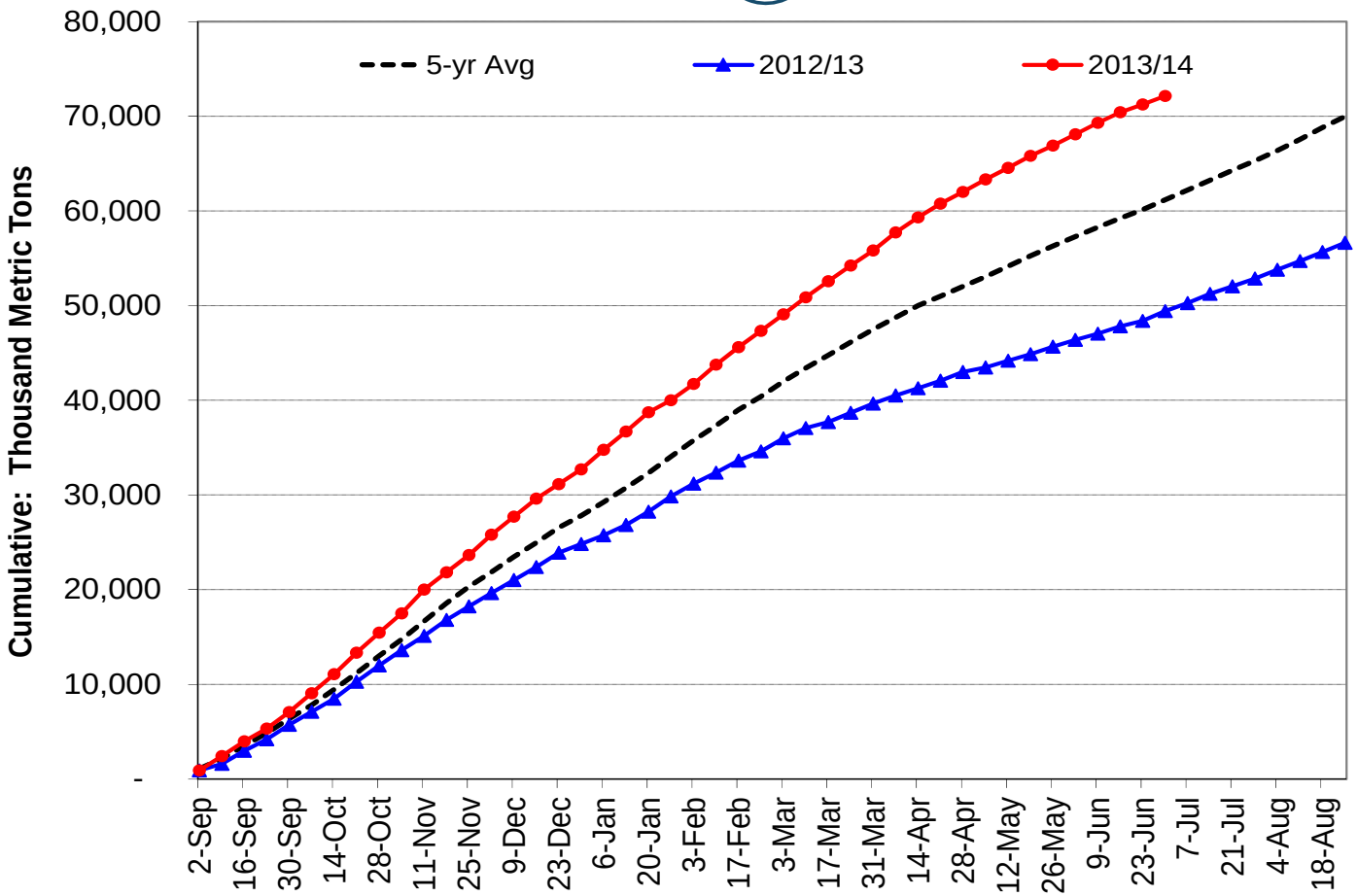
Export: All Grains-FGIS, States & Agencies



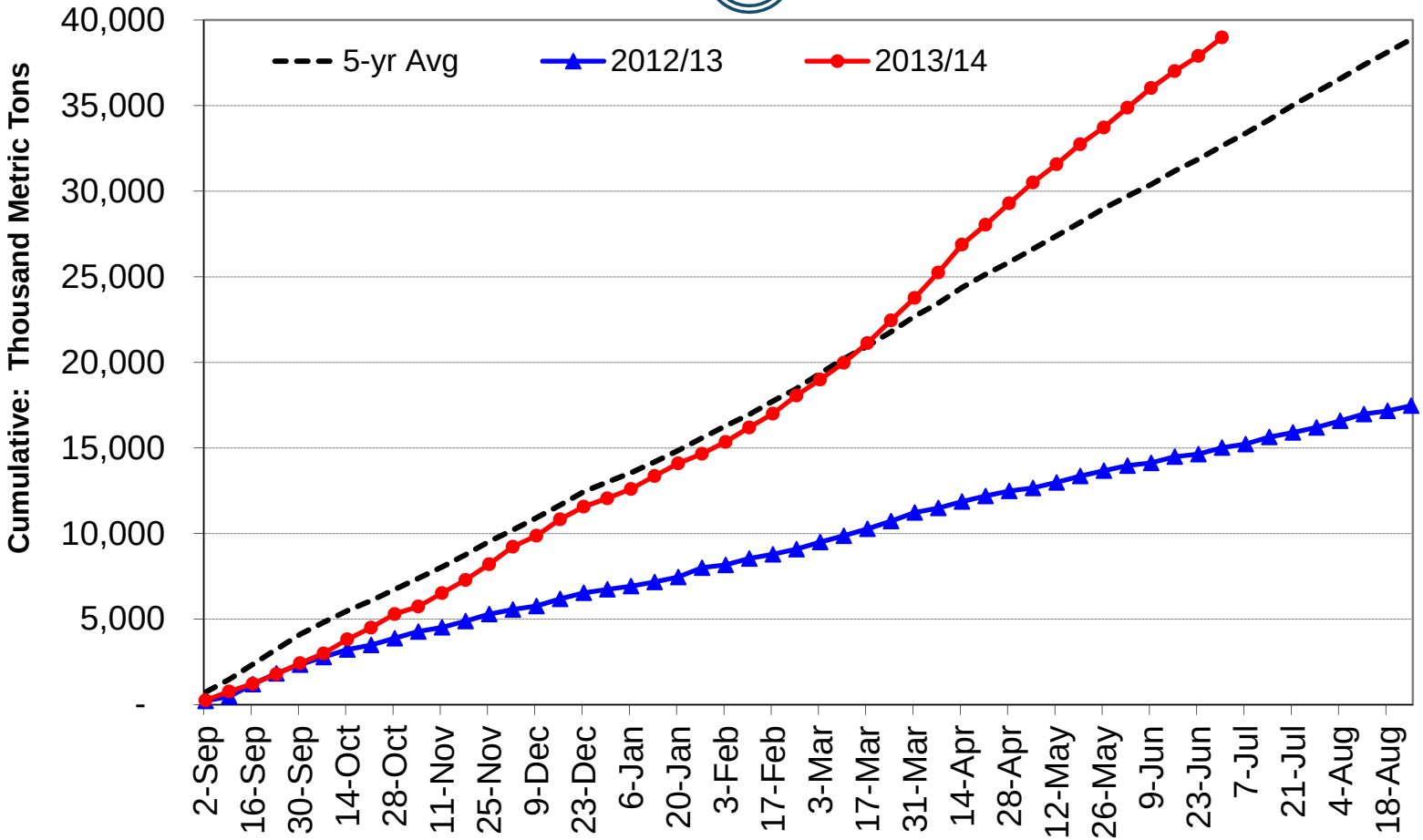
Exports: All Grains – States & Agencies



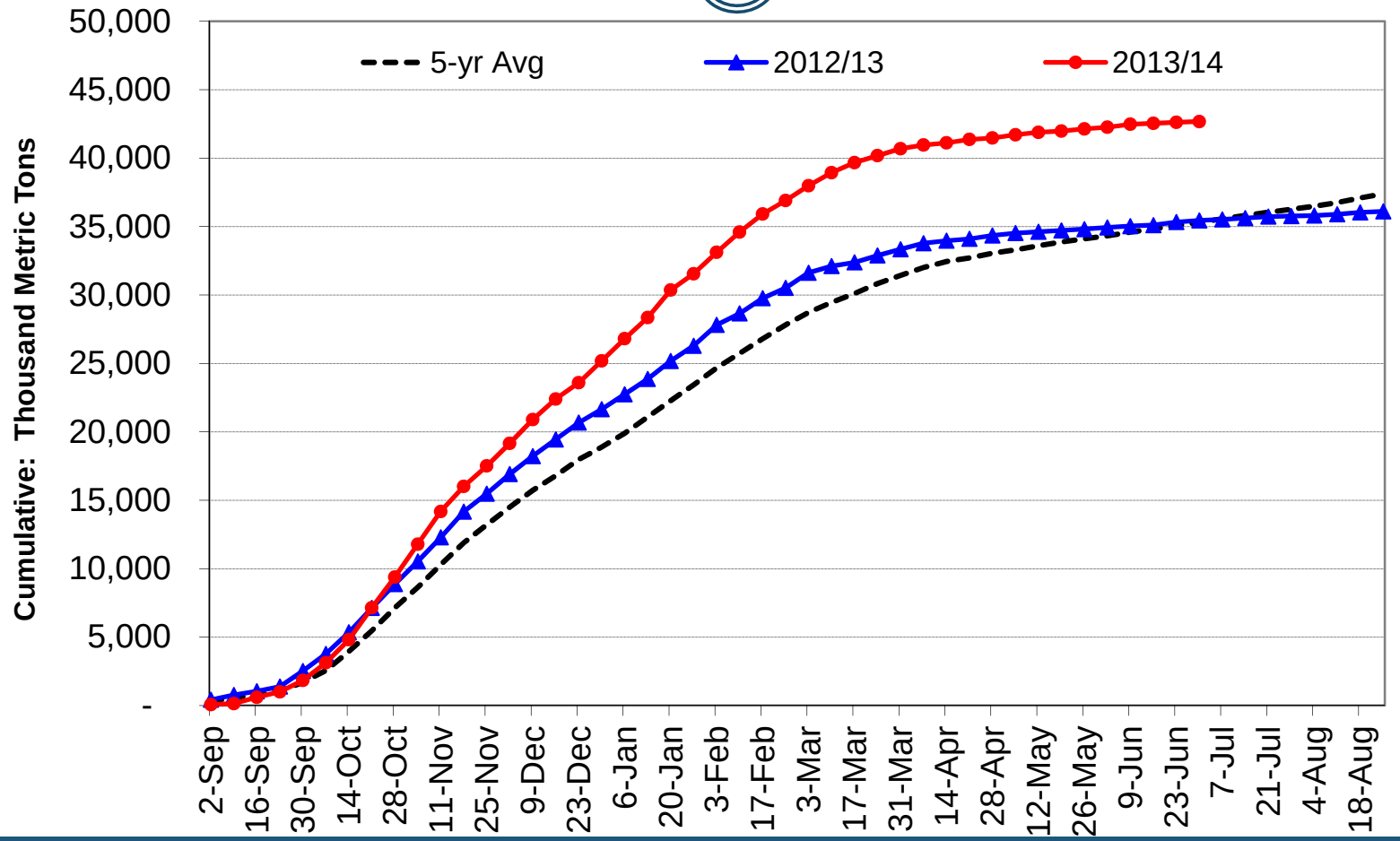
Export: All Grains – FGIS Only



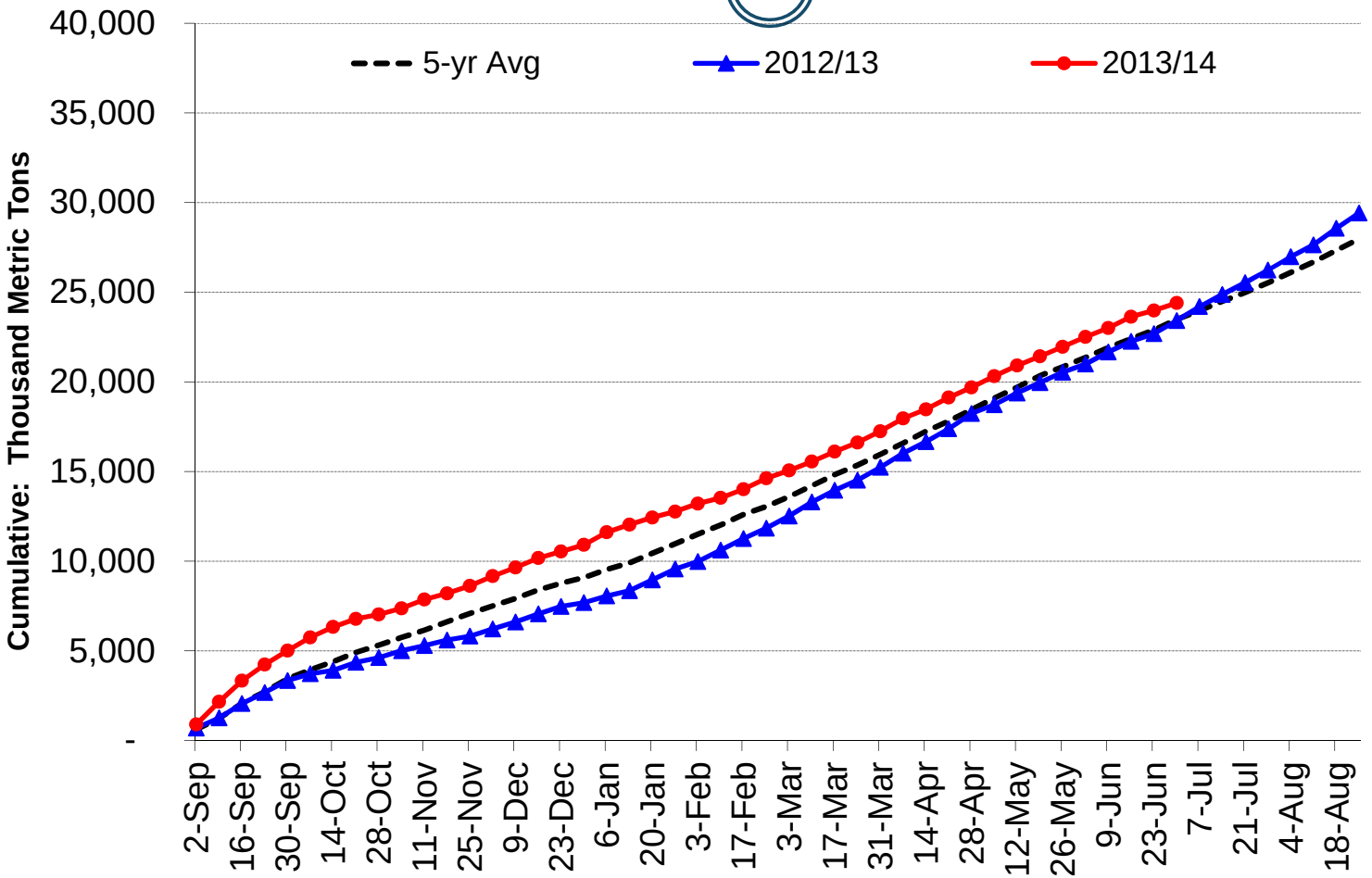
Export Corn : FGIS, States & Agencies



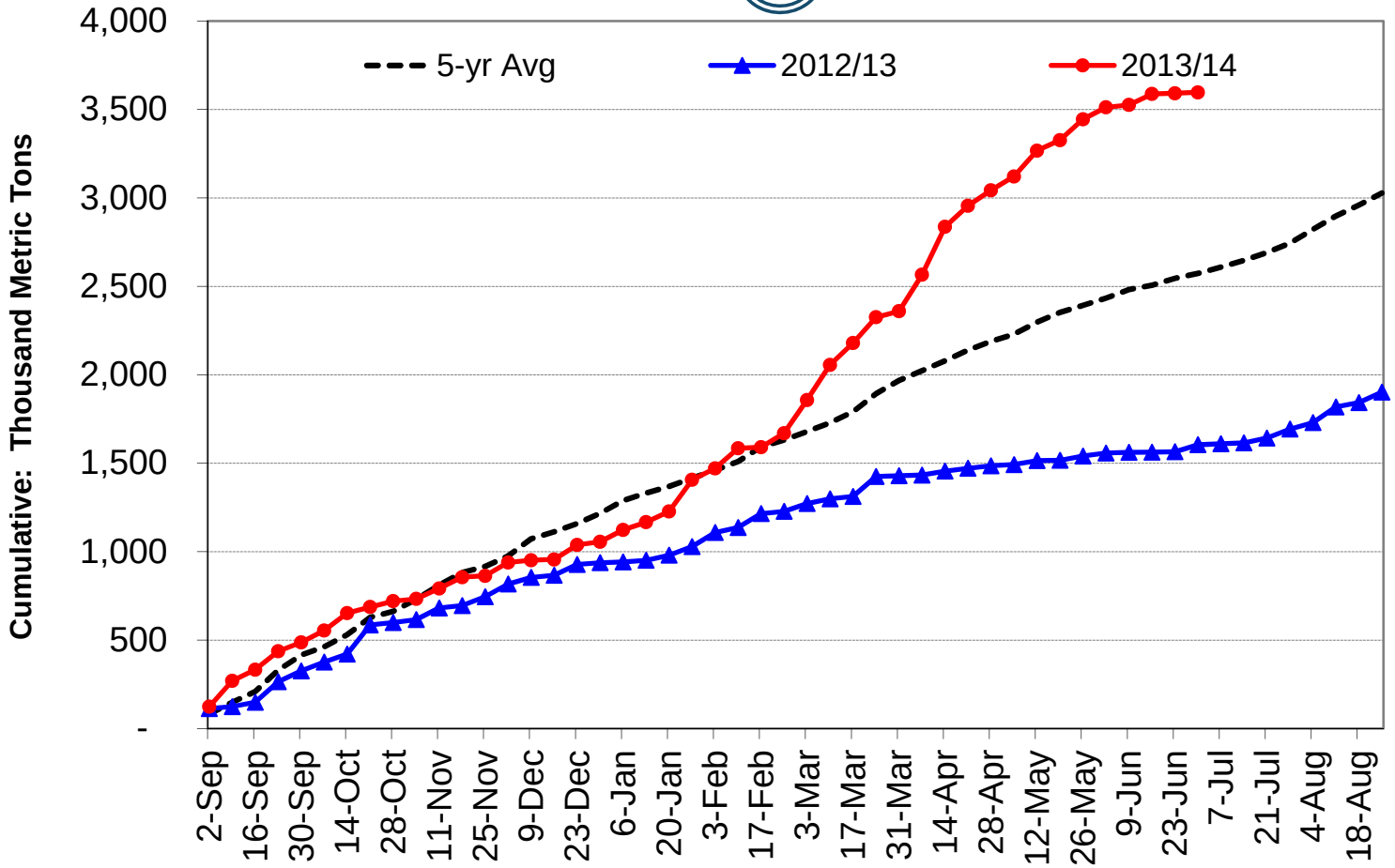
Export Soybeans : FGIS, States & Agencies



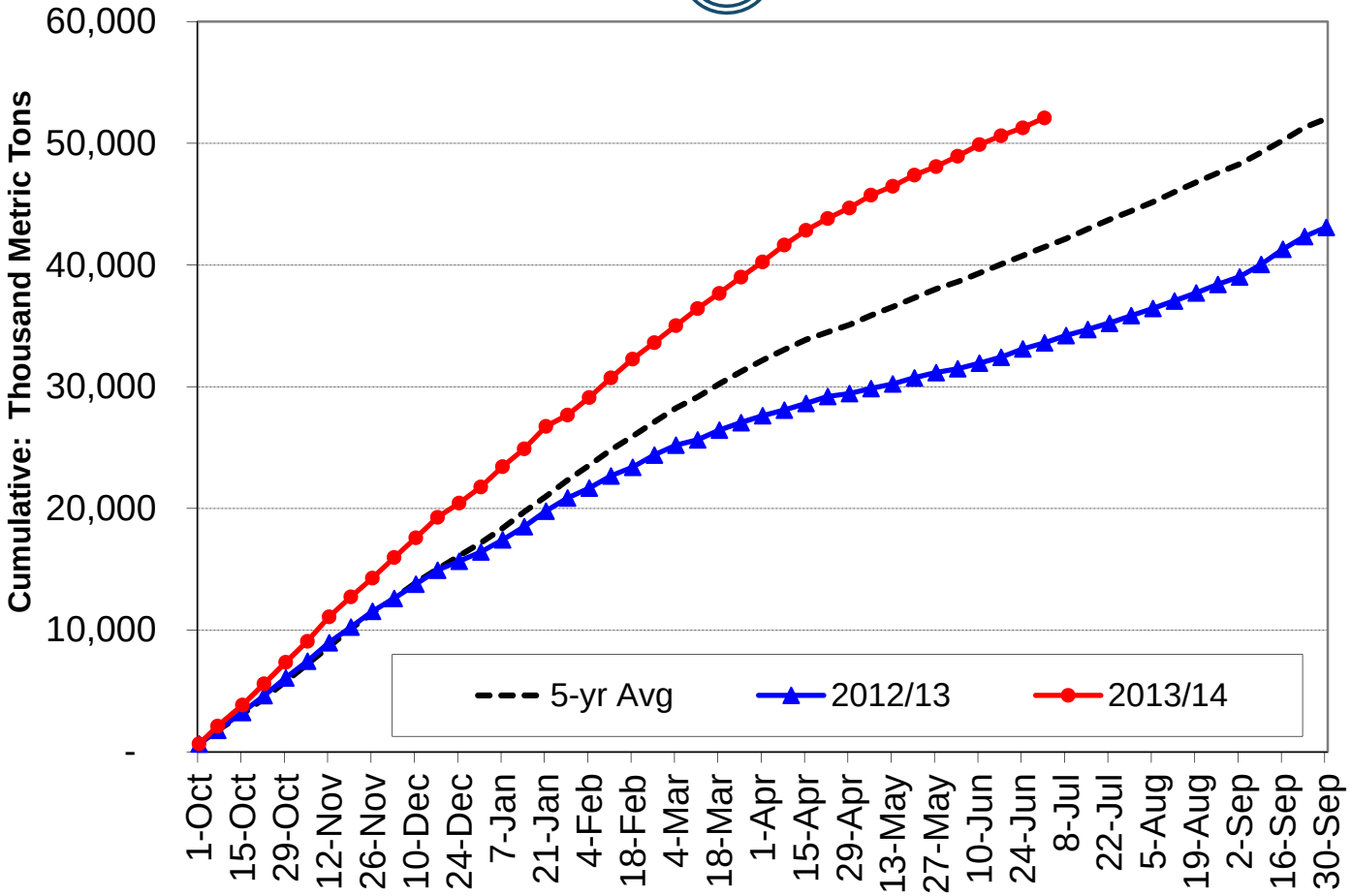
Export Wheat : FGIS, States & Agencies



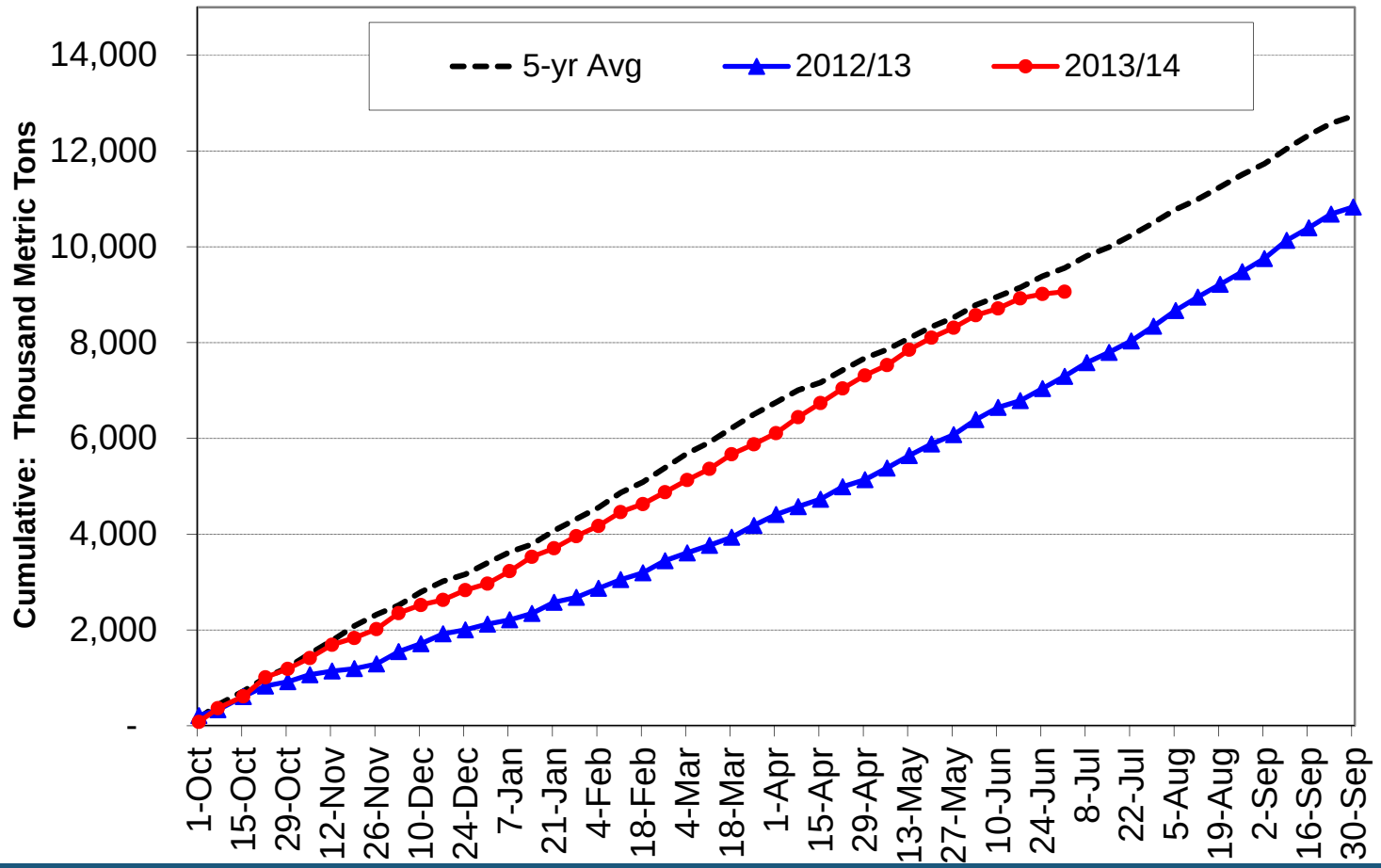
Export: Sorghum-FGIS, States & Agencies



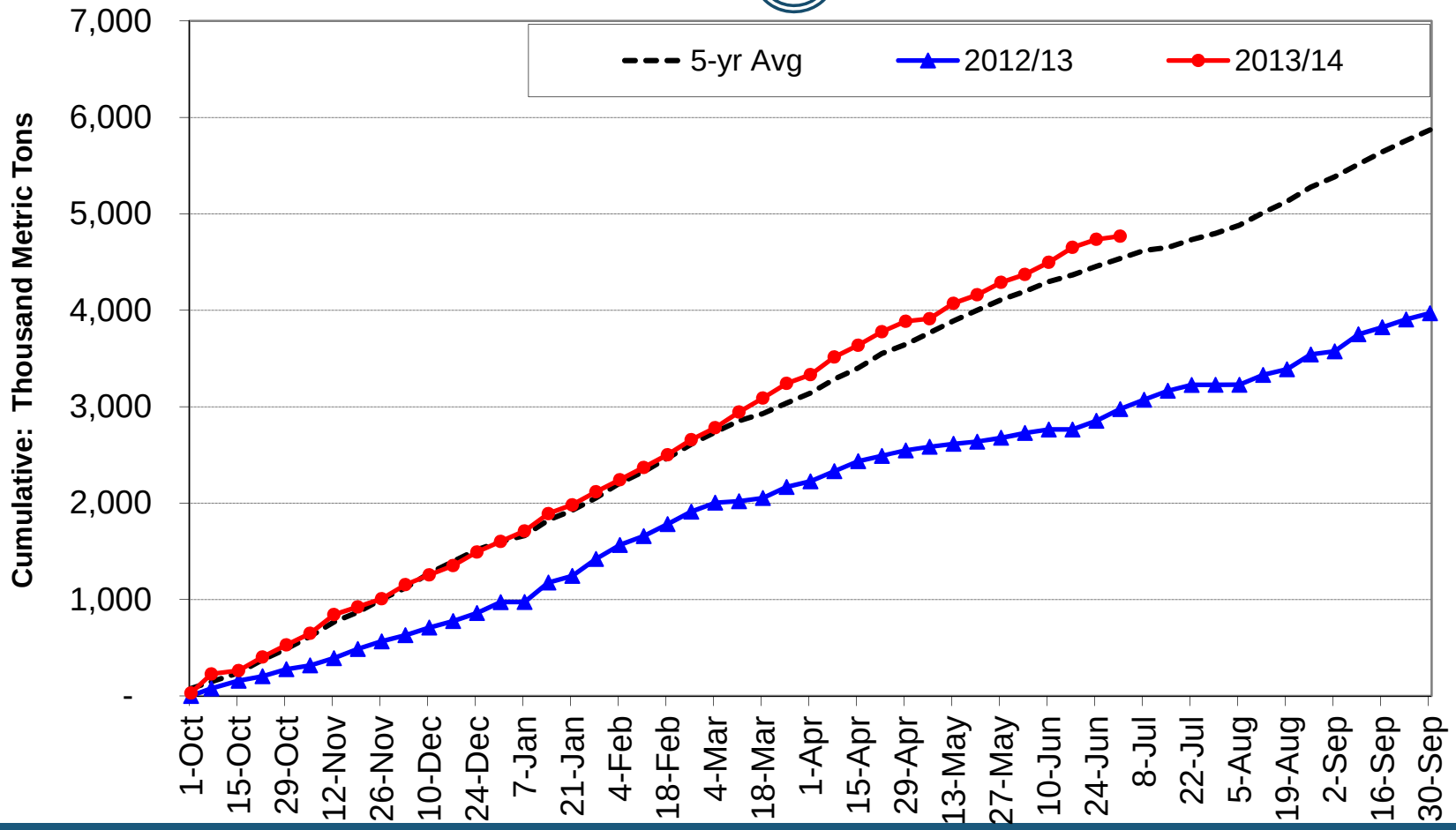
Export: All Grains - New Orleans



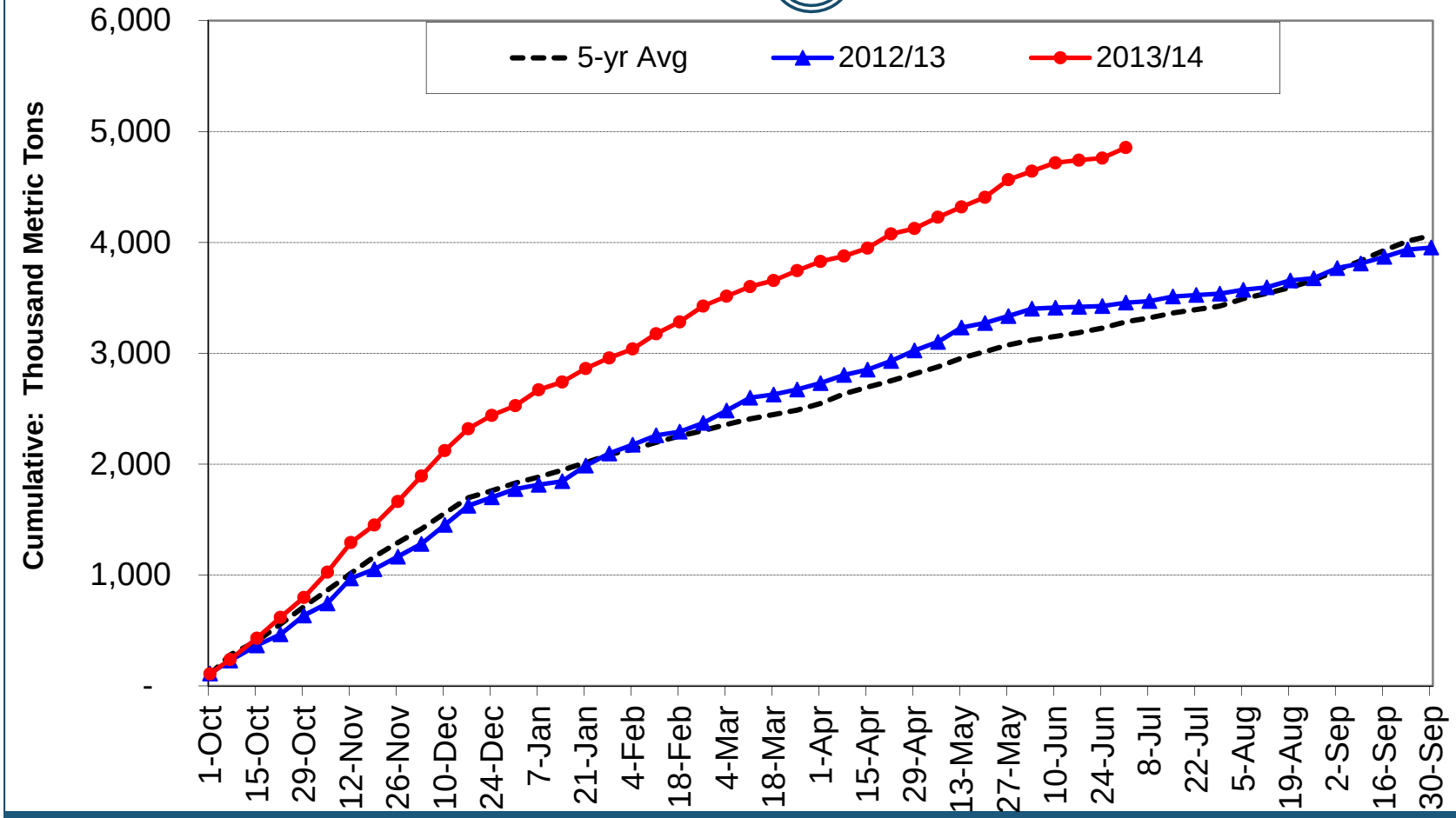
Export: All Grains - League City



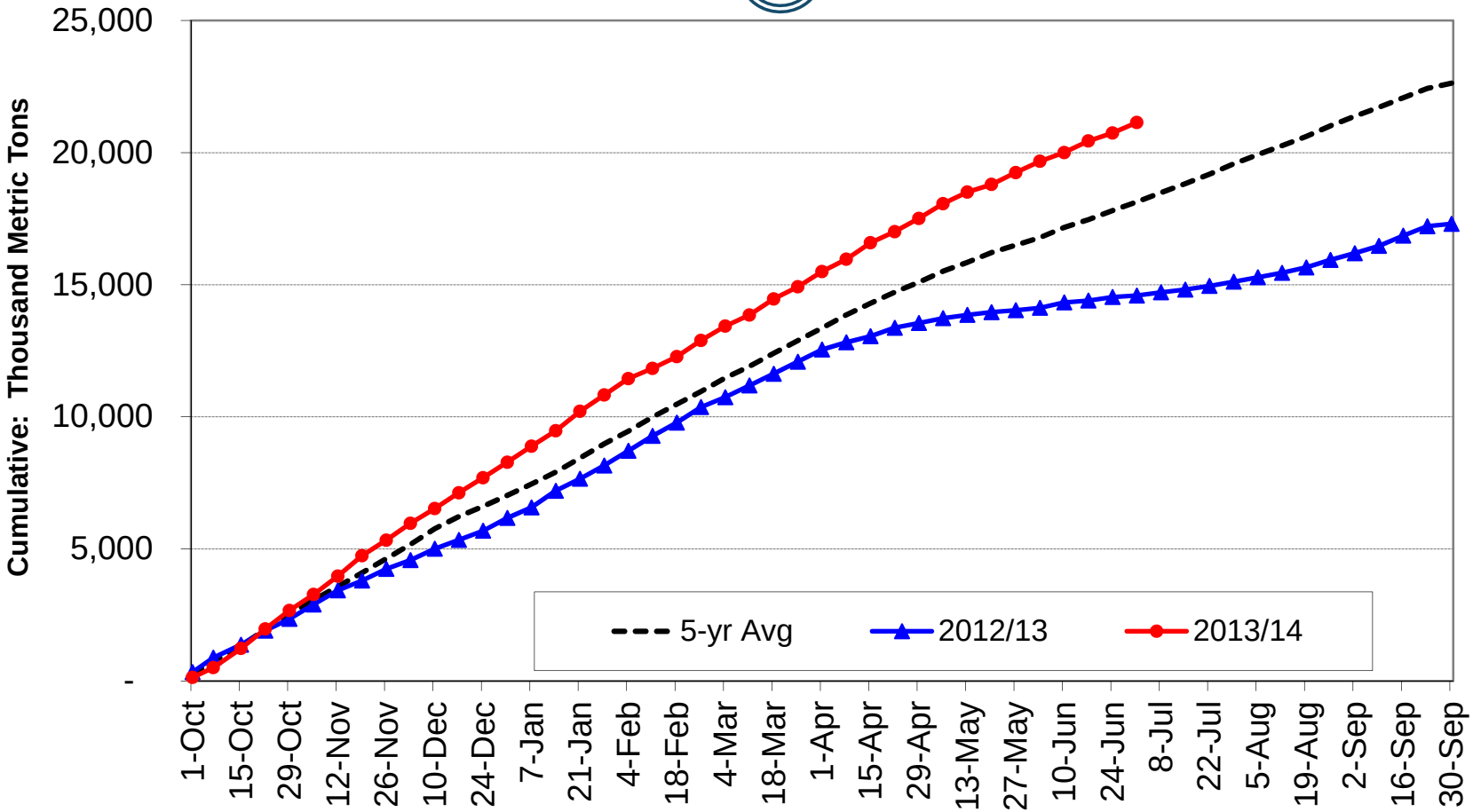
Export: All Grains - Portland



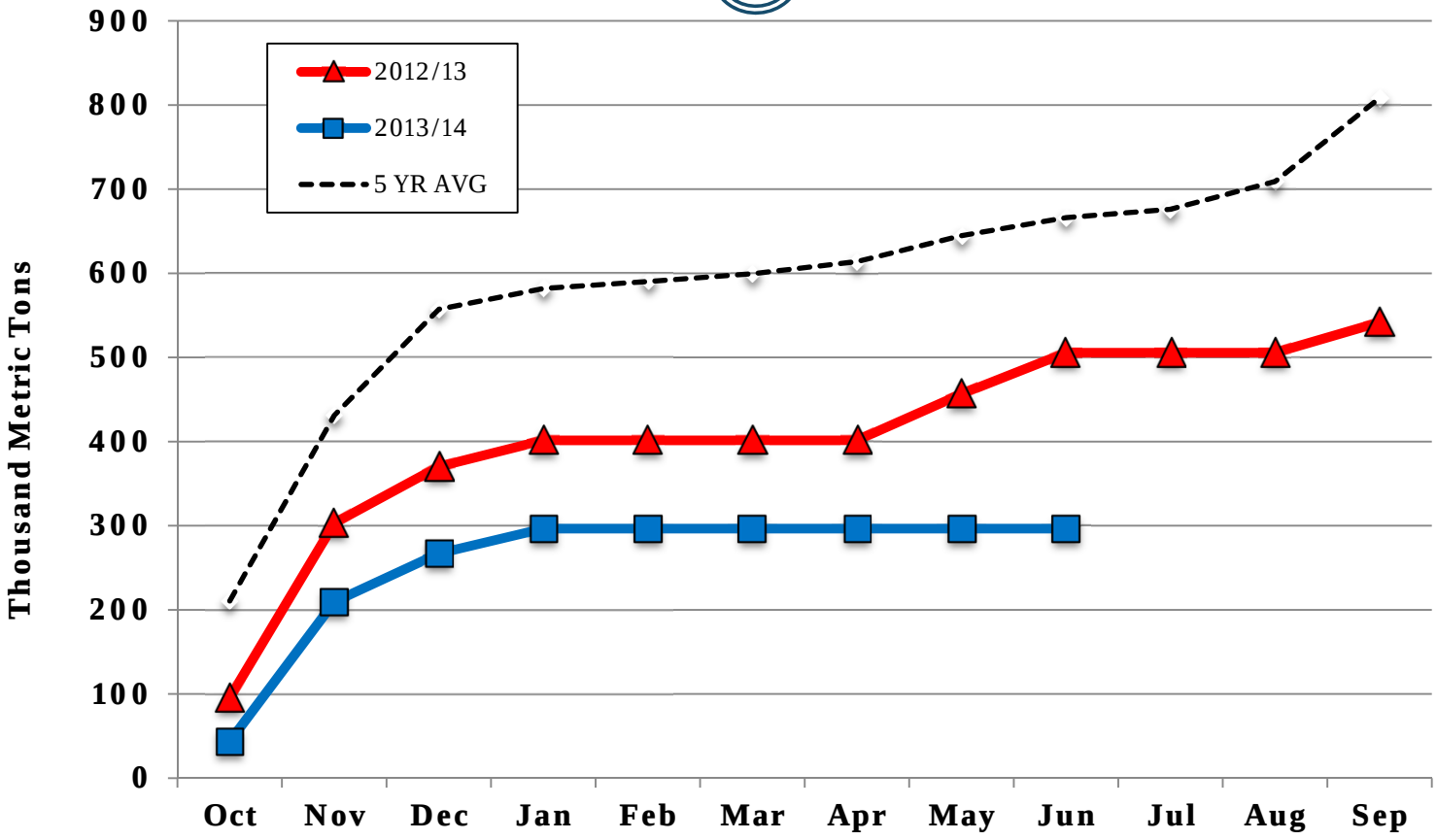
Export: All Grains - Toledo



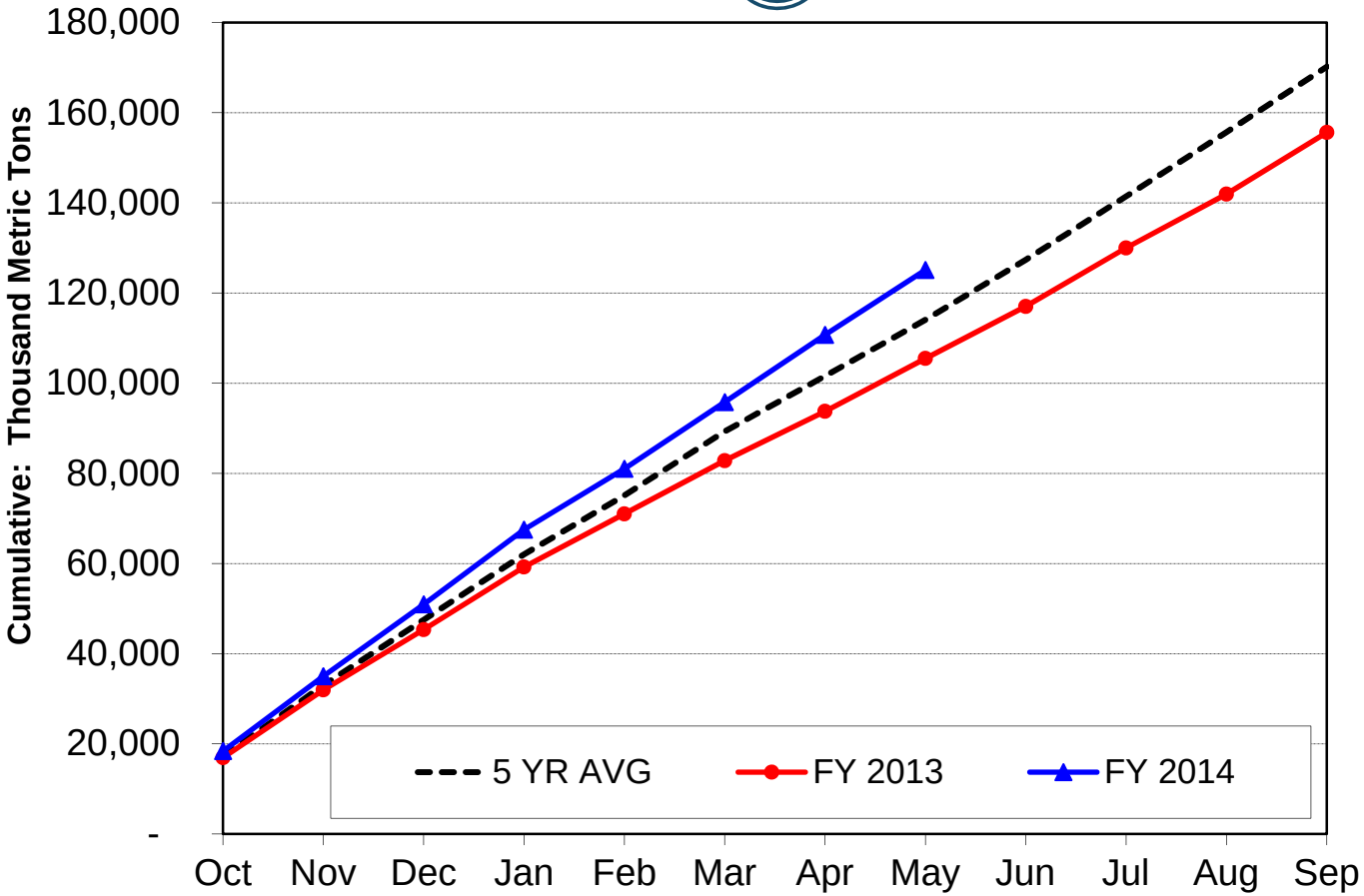
Export: All Grains - Washington



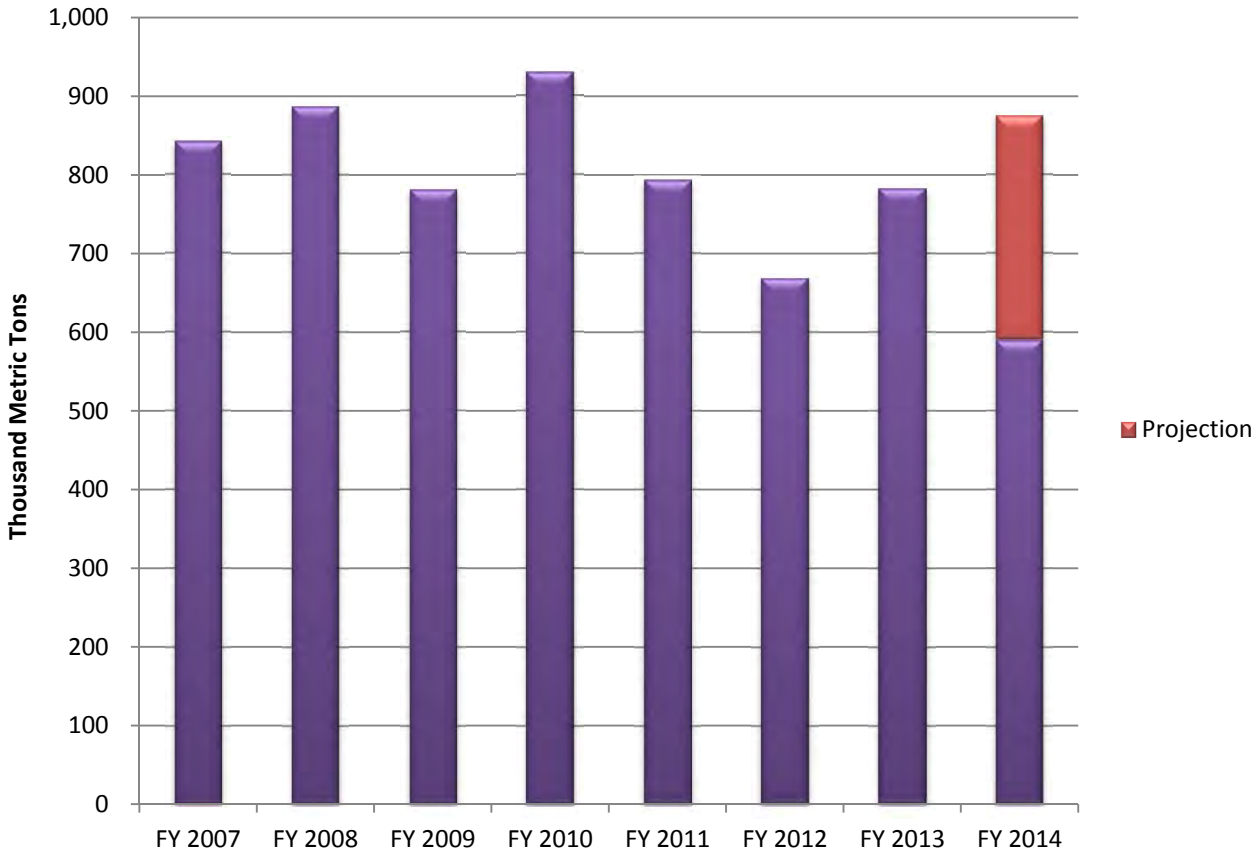
Export: All Grains - Canadian Ports



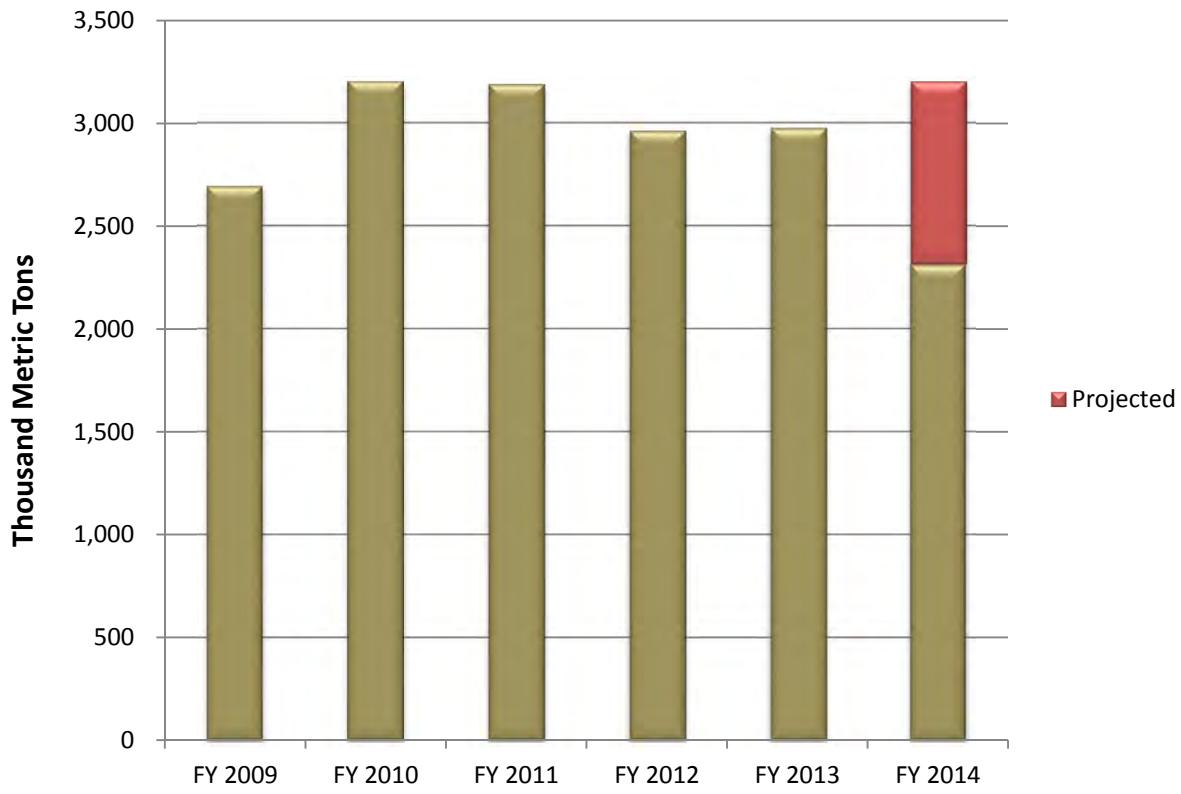
Domestic Inspections - States and Agencies



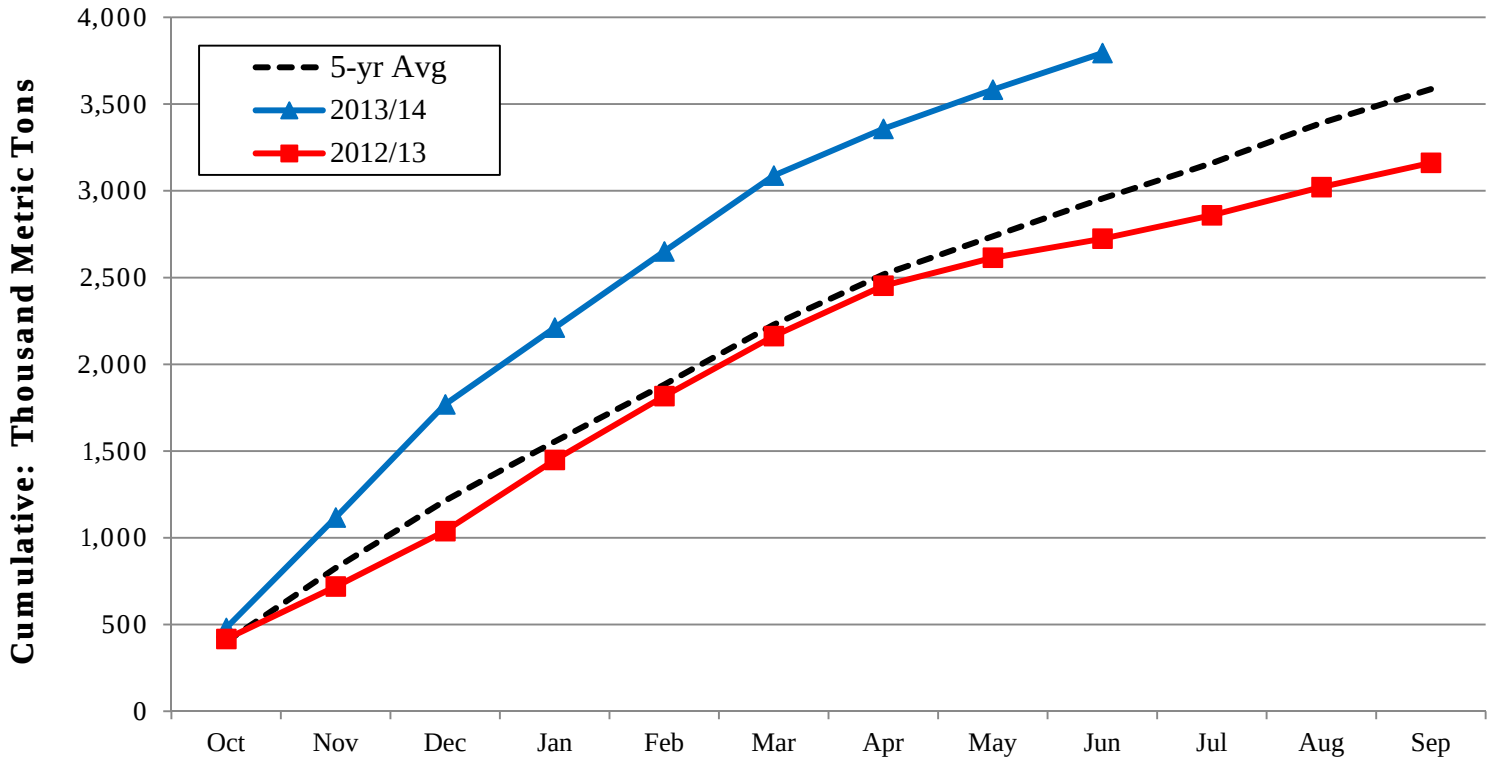
Pulse Inspections



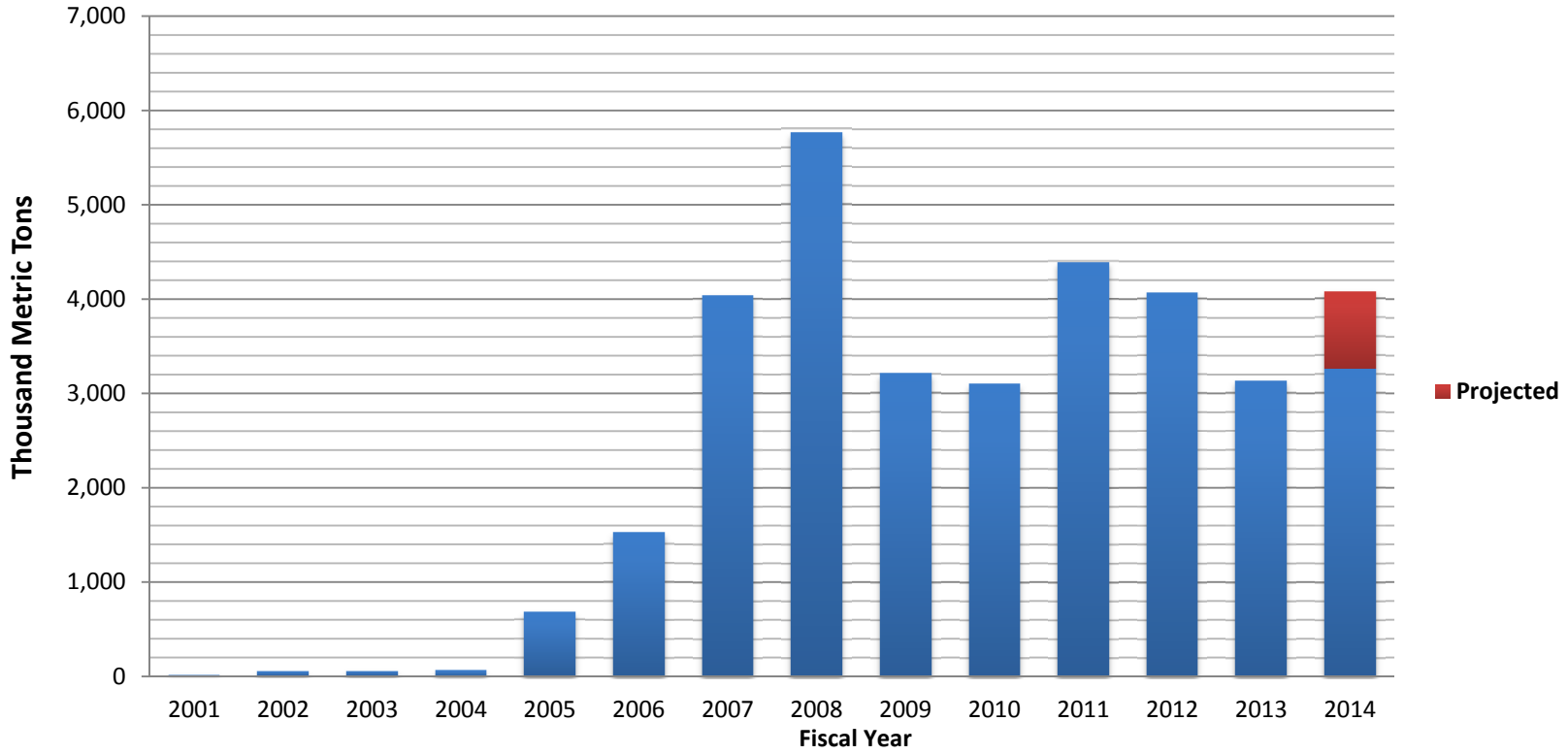
Rice Inspections



Containerized Grain Inspections



Containerized Grain Inspections



Market Overview

U.S. Planted Acreage (Millions of Acres)

	2008	2009	2010	2011	2012	2013 (Projected)	2013 (Actual)	2014 (Projected)
Corn	86	86.4	88.2	91.9	97.2	97.3	95.4	91.6
Soy	75.7	77.5	77.4	75.1	77.2	77.2	76.5	84.8
Wheat	63.2	59.2	53.6	54.4	55.7	56.4	56.2	56.5
Sorghum	8.3	6.6	5.4	5.5	6.2	7.6	8.1	7.5
Rice	3	3.1	3.6	2.7	2.7	2.6	2.5	3

Market Overview

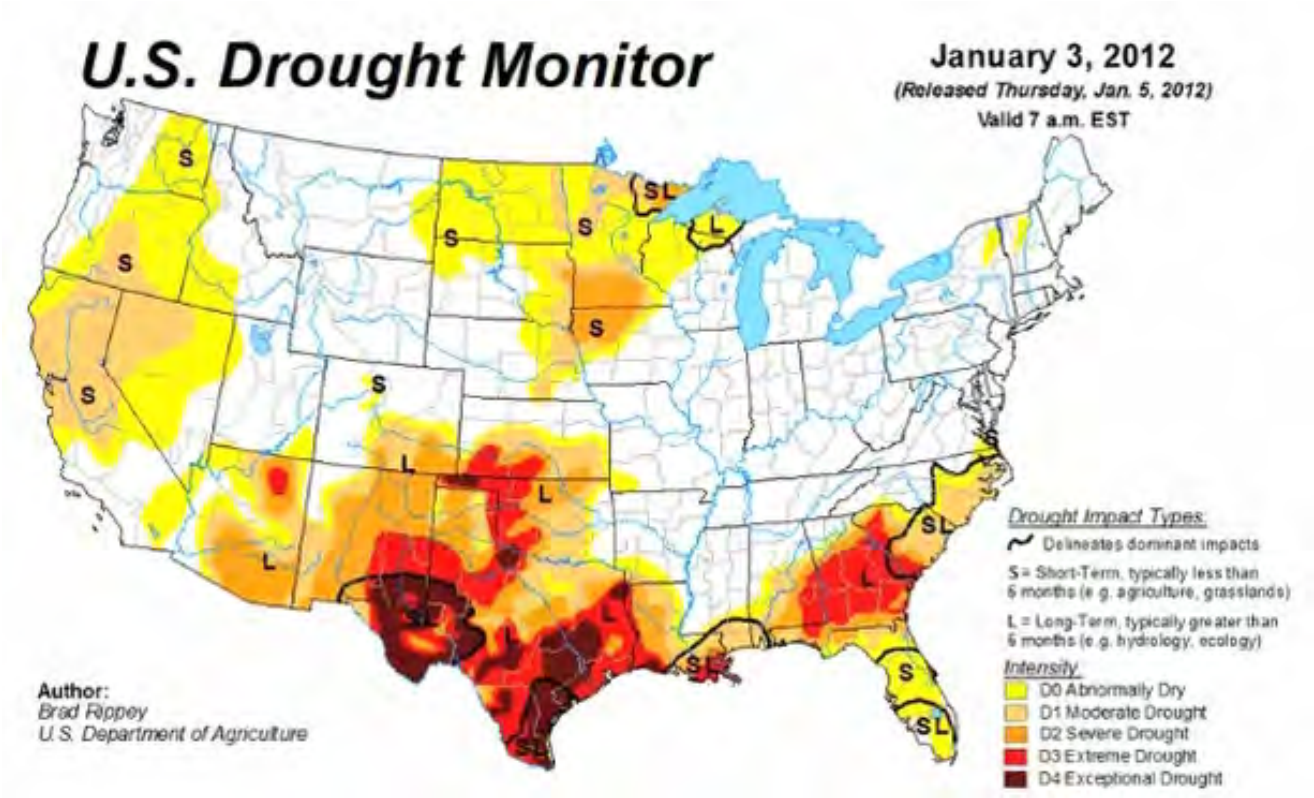
U.S. Production (Million Metric Tons)

	2008	2009	2010	2011	2012	2013 (Projected)	2013 (Actual)	2014 (Projected)
Corn	307	333	316	313.9	273.8	369.1	353.7	354.0
Soybean	80.7	91.4	90.6	84.2	82.1	92.7	89.5	98.9
Wheat	68	60.4	6.01	54.4	61.8	57.2	58.0	52.9
Sorghum	12	9.7	8.8	5.4	6.3	11.5*	9.9	9.1
Rice	9.2	10	11	8.4	9	8.7	8.6	9.7

*Based on average yield on 7.62 MAc

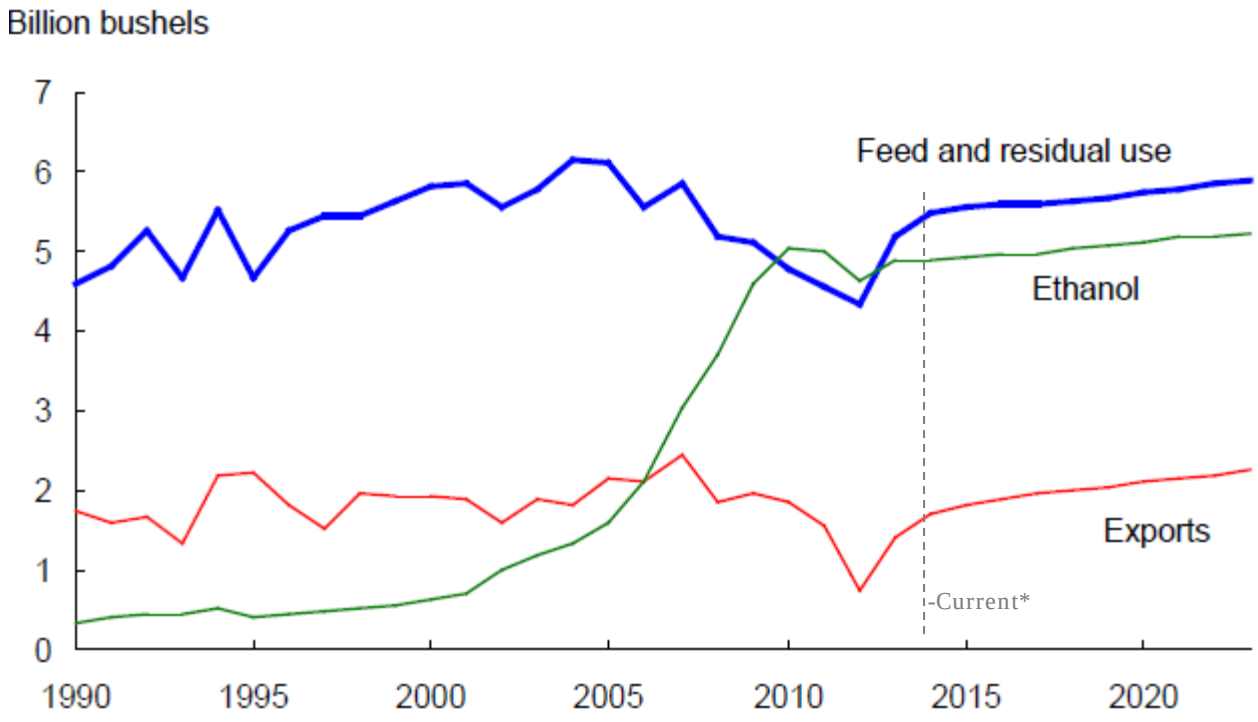
U.S. Drought

Jan 2012 - Present



Market Overview

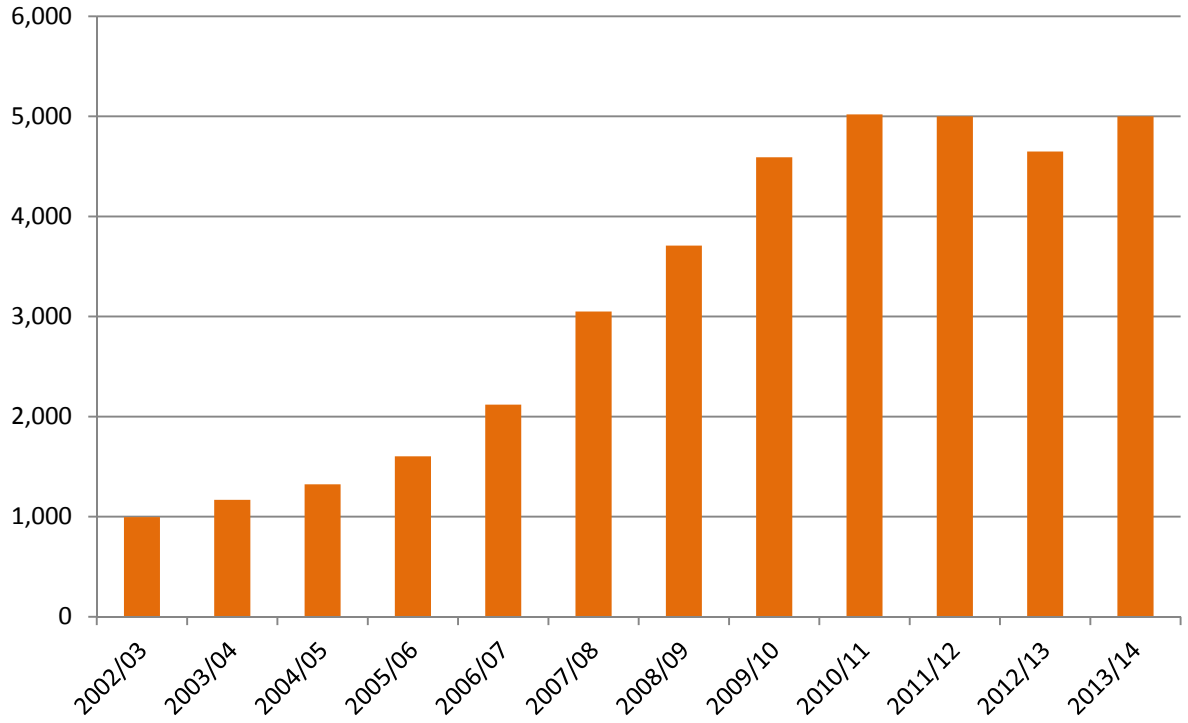
Corn: Feed and Residual use, Ethanol, and Exports



Source: USDA-ERS Feb. 2014

Market Overview

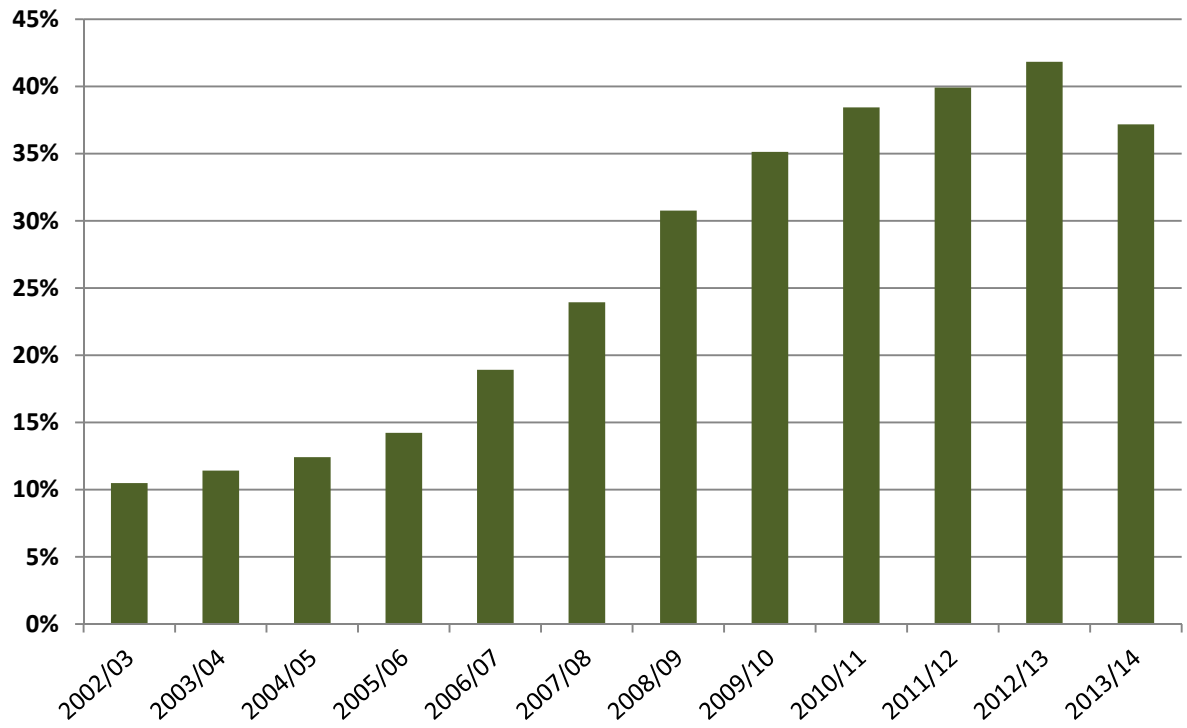
Consumption of Corn for Ethanol: Million bushels



Source: USDA-ERS 2014

Market Overview

Consumption of Corn for Ethanol: % of Production



Source: USDA-ERS 2014

Questions?

International Activities

GRAIN INSPECTION ADVISORY COMMITTEE

BYRON E. REILLY

ACTING DIRECTOR

DEPARTMENTAL INITIATIVES AND INTERNATIONAL AFFAIRS

JULY 15, 2014

Current Trade Issues

- Discontinue LL Rice Proficiency Program
- Mexico Detains Rail Shipments
- China Rejects U.S. Corn
- China – Soybean Vessel Comparison Study
- Quality Complaints

Discontinue LLRice Proficiency

- Early 2014, FGIS notified customers: no positives for LL Rice since 2008; discontinued in Proficiency study
- April 1, 2014: "There are no transgenic rice varieties for sale or in commercial production in the United States at this time."
- Japan's MAFF ended pre-testing on July 1
- Russian officials want to visit U.S. to verify disappearance of LL Rice
  - FGIS sent reply to Russia with industry data suggesting a site visit is not necessary

Mexico Detains Rail Shipments

- Mexican officials (SENASICA) detaining U.S. rail shipments due to presence of soil
- Exporters pay high demurrage costs
- March 2014, FGIS & APHIS traveled to Nuevo Laredo to meet with SENASICA
- SENASICA visited FGIS' National Grain Center
  - Met with industry and observed train loading in Kansas
- APHIS to continue discussions with SENASICA

China Rejects U.S. Corn Shipments

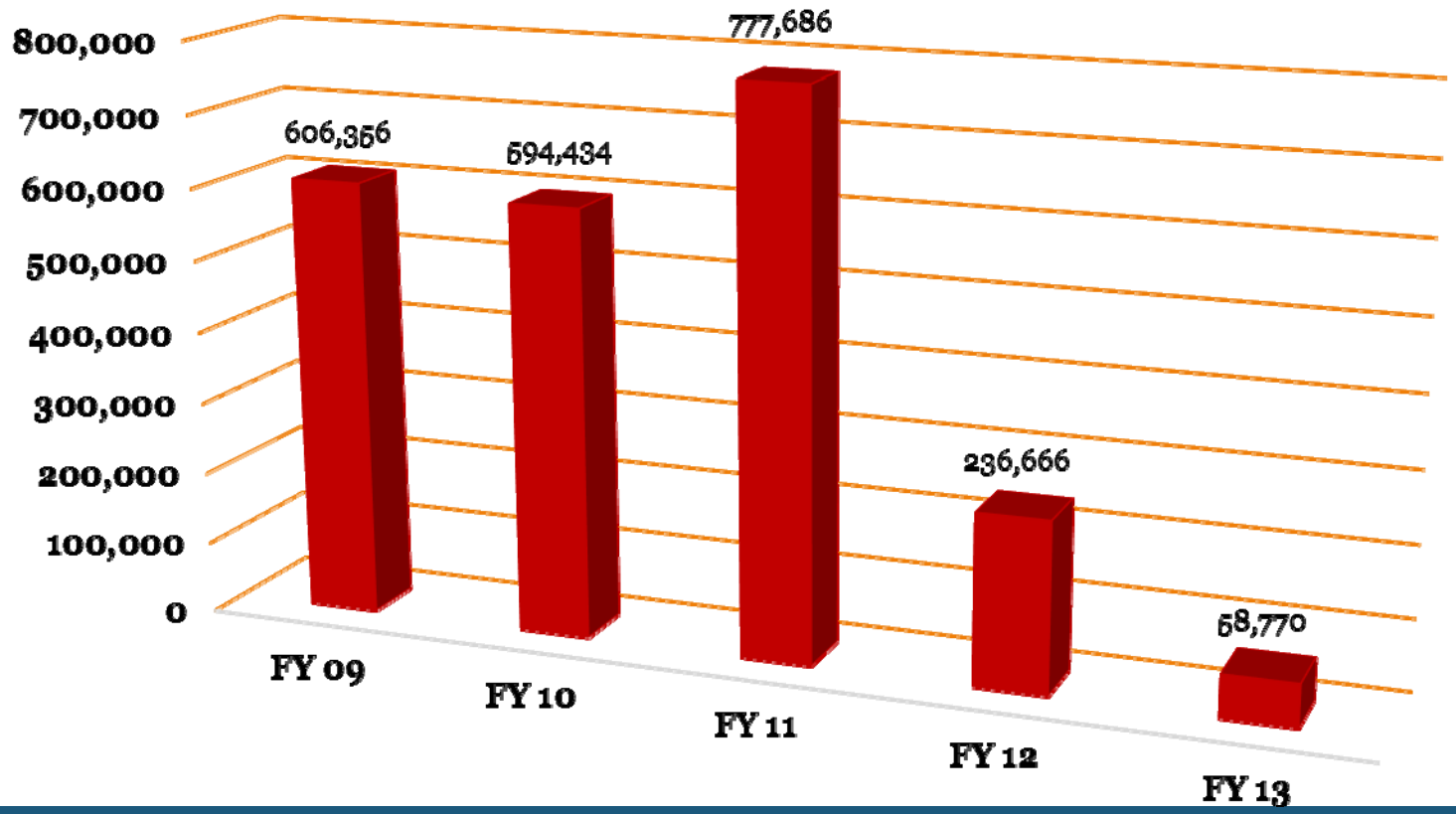
- Syngenta's MIR 162 corn event deregulated in the U.S. is not approved in China
- China rejects shipments testing positive causing huge trade disruptions
- Syngenta plans to commercialize Duracade, also not approved in China
- Chinese regulations don't permit tolerances for unapproved events

U.S./China Vessel Comparison Study

- May 2014, FGIS & FAS met with Chinese officials in Beijing
- Possibly study two vessels this shipping season
- Conduct a probe comparison and study on FM
- Visited ports and labs in Guangzhou, Guangdong, Shenzhen, Dalian

Importer Complaints

Metric Tons



Thank you!

Questions?

Service Delivery

GRAIN INSPECTION ADVISORY COMMITTEE

Kansas City, MO

Bob Lijewski

Director

Field Management Division

July 15, 2014

Agenda

- FMD Overview
- Pacific Northwest Labor Issues
- Fall Protection and Safety
- Laboratory Modernization Project

FMD Overview

- Field Management Division (FMD)
- "Service Delivery" arm of FGIS
- Perform original inspection & weighing service
  - 8 Field Offices
  - 400+ full-time and part-time samplers, technicians, inspectors, supervisors, and contractors
- Promulgate regulations and write instructions
- Network of Field Offices oversee delegated and designated States and Agencies

Pacific Northwest Labor Issues

- Longshore employees locked out at two export elevators on Columbia River
  - One serviced by FGIS
  - One serviced by WSDA
- Limited disruptions to Official service due to safety concerns
- Developed plans for safe entry and exit
- Update on current events

Rolling Stock Fall Protection

Rolling Stock Fall Protection

BACKGROUND

- The “Miles Memorandum” (October 18, 1996)
- FGIS cited for 4 OSHA violations in July, 2011
- FGIS appeals in Dec. 2011
- Dec. 2012 OSHA drops 1 citation; upholds 3 others

Rolling Stock Fall Protection

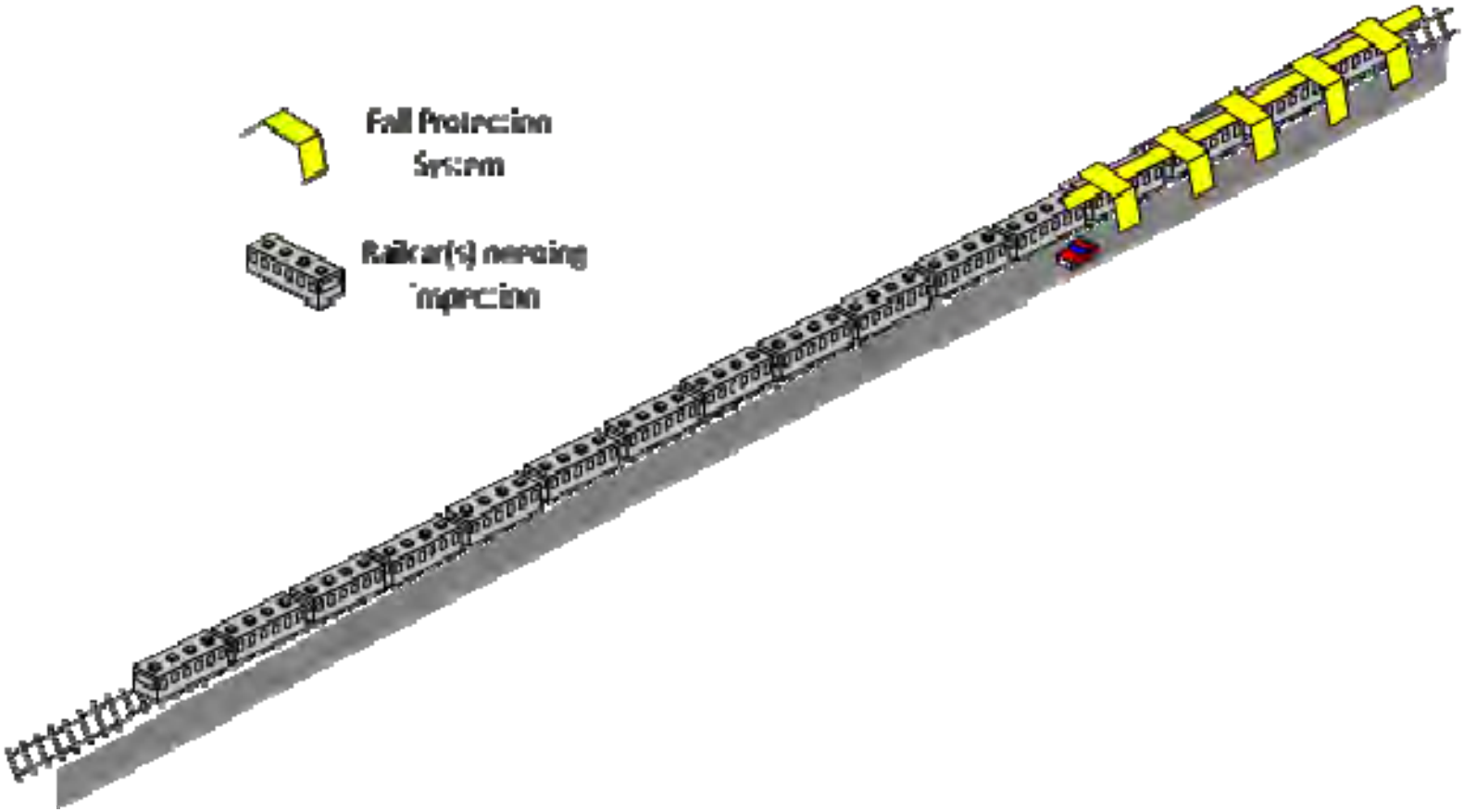
- GIPSA formulates plan to address remaining citations
  - GIPSA did not follow internal policy to:
    - Conduct fall protection assessments
    - Train employees on fall hazards
    - Train supervisors to identify hazards
- GIPSA meets with OSHA in October 2013 to discuss proposed fall protection assessment

Rolling Stock Fall Protection

- GIPSA drafts "FGIS Rolling Stock Fall Protection Directive"
- Directive outlines
  - Purpose
  - Definitions
  - Background
  - Policy
  - Responsibilities
    - FGIS
    - Applicant
  - Documentation
  - Examples

Rolling Stock Fall Protection

Rolling Stock Fall Protection



Rolling Stock Fall Protection

FGIS XXXX.XX
XX/XX/XXXX

EXAMPLE #3 - Rolling Stock Fall Protection Assessment:

1. Is a suitable fall arrest system installed in location where GIPSA employees are sampling or performing stowage exams?
   Yes, but only approx 5 car lengths long.
   a. Is the system free of hazards?
      Yes

2. Is the area where sampling/stowage exam is to take place contiguous to a building or permanent structure?
   No.
   a. If yes, why isn't fall protection provided?
      N/A

3. How far is the nearest building or permanent structure from the area GIPSA employees are to sample/perform stowage exam?
   N/A.

4. What type of surface is contiguous to the area where sampling/stowage exam is to take place?
   Gravel

5. Is this a multiple track yard?
   No.
   a. If yes, how many tracks are used for sampling?
      N/A

6. Can railcars be positioned next to a building, structure, or other area where fall arrest system may be used?
   No, the railcar cannot be moved. There is no locomotive available.

7. Can a freestanding mobile system be used?
   No.

FINAL ASSESSMENT – IS FALL PROTECTION FEASIBLE?

Yes for the first 5 cars, but no for the remaining 11 cars. Use FP for the cars positioned under fall protection, however FP is not feasible for the remaining 11 cars.

Rolling Stock Fall Protection

- FGIS developed required training in conjunction with Safety & Health Manager and GIPSA training office
  - Fall hazard awareness
  - How to conduct an assessment
  - How to use PPE
- FGIS purchasing harnesses for all offices
- Directive release pending; high priority for Agency

Laboratory Modernization Project

Laboratory Modernization Project

Laboratory Modernization Project

Grain Standards and Market Needs

GRAIN INSPECTION ADVISORY COMMITTEE

PATRICK MCCLUSKEY

CHIEF, POLICIES AND PROCEDURES BRANCH

FIELD MANAGEMENT DIVISION

JULY 15, 2014

Rulemaking

Notice of Proposed Rulemaking Fees for Commodity Inspection (Excluding Rice) Services and Processed Commodity Analytical Services, and Amendment of the AMA Regulations to Consider Private Agencies as Cooperators.

Notice of Proposed Rulemaking United States Standards for Barley

Final Rule United States Standards for Wheat: 05/01/2014

Advance Notice of Proposed Rulemaking: Asking for comment on current services, and focusing on DDG's

Commodity Inspection Fees

- Fees for inspection of graded commodities (not rice)
- Fees for processed commodity analytical services
- Revenue must cover obligations--2013 OIG audit
- The existing fee schedule does not generate sufficient revenue to cover program costs.
- Retained Earnings (RE): unencumbered funds to operate a program in the event of disruption of revenue stream
- Administrative Directive: 3-6 months of RE

Commodity Inspection Fees

Commodity Program Financial Analysis
(Million Dollars)*

	(Actual) Fiscal Year 08	(Actual) Fiscal Year 09	(Actual) Fiscal Year 10	(Actual) Fiscal Year 11	(Actual) Fiscal Year 12	(Actual) Fiscal Year 13	(**) Fiscal Year 14
Revenue	$2.3	$2.4	$3.9	$2.7	$2.4	$2.5	$2.5**
Obligations	$2.5	$2.8	$3.6	$2.8	$2.9	$2.9	$3.1**
Prior Year Adjustments	$0.1	$0.1	$0.1	$0.1	$0.5	$0.1	$0.1**
Retained Earnings	$1.7	$1.5	$2.0	$2.0	$2.0	$1.7	$1.2**

*Figures may not sum due to rounding. ** Projection

Commodity Inspection Fees

- Fees for graded commodities static since May 2001
- Fees for commodity testing lab static since Feb 2004
- GIPSA began work on this fee increase in March 2008 but placed on back burner in order to work on the export user fee docket.
- Calculated new fees using projections of:
  - employee salaries and benefits,
  - future costs to replace/maintain aging commodity testing equipment,
  - IT upgrades to improve certification efficiency and program management

Commodity Inspection Fees

- Harmonize fees for grain and commodities on same or similar testing services
- Fee schedule: delete tests no longer offered; include tests added since last fee review
- 5 % increase in first year
- 4 % increases in out years through 2020
- Reduce obligations by reducing headcount through attrition due to retirement and moving personnel to other revenue producing positions

Commodity Inspection Fees

Future Year Projections: Commodity Program
(Million Dollars)*

	FY15	FY16	FY17	FY18	FY19	FY20
Revenue	$2.67	$2.78	$2.88	$2.99	$3.10	$3.22
Obligations	$2.95	$2.84	$2.94	$3.04	$3.14	$3.25
Gain/ (Loss)	($0.28)	($0.06)	($0.06)	($0.05)	($0.04)	($0.03)
Retained Earnings	$0.93	$0.87	$0.81	$0.76	$0.72	$0.70

***Figures may not sum due to rounding.**

Commodity Inspection Fees

- Proposed Rule docket is under review for legal sufficiency by the USDA-Office of the General Counsel
- Review by other USDA offices prior to publication in *Federal Register*
- Anticipate publication in *Federal Register* by end of September
- 30-day comment period; review comments; draft a Notice of Final Rulemaking; 30 day effective date

US Standards for Barley

- Request by industry
- Review comments of stakeholders to ANPR
- Proposing amendments to barley standards
- Document has been reviewed and cleared by Office of the General Counsel for legal sufficiency
- Currently with the Office of the Secretary
- Waiting to hear when it will be published in *Federal Register*
- Final Rule to follow pending stakeholder comments
- Effective date one year after Final Rule publication

US Standards for Wheat

- Published a Notice of Final Rulemaking in May 2013
- Effective date May 1, 2014
- Amended definition of Contrasting Classes for Hard White wheat
  - Removed Hard Red Winter wheat and Hard Red Spring wheat from definition of Contrasting Classes in Hard White wheat
  - Hard red wheat will function as Wheat of Other Classes
- Allows 5% of hard red wheat to be blended into hard white wheat at US#2 grade; previously limit was 2%

Request for Public Comment

- Services currently offered or needed to facilitate the marketing of grain and related products
- 90-day comment period
- Grains, oilseeds, rice, pulses, related products
- Co-products of ethanol production (a.k.a. DDG's)
- 2007 ANPR focused specifically on DDG's;
  - Thanks but no thanks
  - Don't call us, we'll call you
  - Approve mycotoxin test kits

Request for Public Comment

- Expansion in DDG industry/exports
- Is any role for GIPSA in the standardization of products or testing procedures for DDG's?
- Are there market-identified quality attributes not currently described or measured that would facilitate the marketing of grains, oilseeds, and related products?
- Any other services GIPSA should offer to facilitate the marketing of grains, oilseeds, and related products?

Thank you!

Muchas Gracias!

ありがとう Arigato Goziamsu

Merci!

Go raibh maith agaibh!

Quality Initiatives and Compliance Issues

Quality Assurance and Compliance Division
GIAC Meeting
July 15-16, 2014

Quality Programs: Inspection Accuracy

- Completed pilot on 9/30/13
  - 99.0% certificate accuracy
- Revised Performance Standards
  - Amended FGIS Directive 9000.1
  - Implemented January 29, 2014
  - Rolled out March 17, 2014
- Collects critical interpretive inspector data for select factors at every GIPSA field office

Quality Programs: Inspection Accuracy

Field Office	Factors Reviewed	Samples Reviewed	Factor Accuracy
Grand Forks	112	56	93.9%
League City	643	398	91.3%
Moscow	32	18	95.3%
New Orleans	1,475	710	97.2%
Portland	285	98	89.4%
Stuttgart	247	131	93.0%
Toledo	158	67	96.9%
National Average	**2,952**	**1,478**	**94.6%**

- March 17 – July 1, 2014
- Factor accuracy measures original inspector to QAS result.

Quality Programs: Inspection Accuracy

- Continue to develop reports and analyze data
  - Provide another measure of quality assurance on certificate accuracy
  - Improve alignment between QAS and inspectors
  - Identify training needs
  - Improve inspector performance and accountability

Quality Programs:
Quality Management Program (QMP)

- Proposed changes
  - Clarity on quality elements
  - Internal audit procedures
  - Training requirements

- Ensure Official Agency personnel meet the regulations, are adequately trained, and remain abreast of new development

Quality Programs: FY 2014 Strategic Goals

- Review all FGIS Quality Assurance Programs and determine how best to organize these functions within FGIS
  - Quality is the responsibility of official agencies and FGIS
  - Define
  - Develop

Quality Programs:
FY 2014 Strategic Goals

- Create and implement Quality Assurance Dashboards to assist FGIS and official Agency managers and supervisors in the analysis of thee effectiveness and efficiency of the delivery of services
  - Accessibility
  - Visual display
  - Dynamic evaluation
  - Timely notification and correction of performance issues

Contact Information

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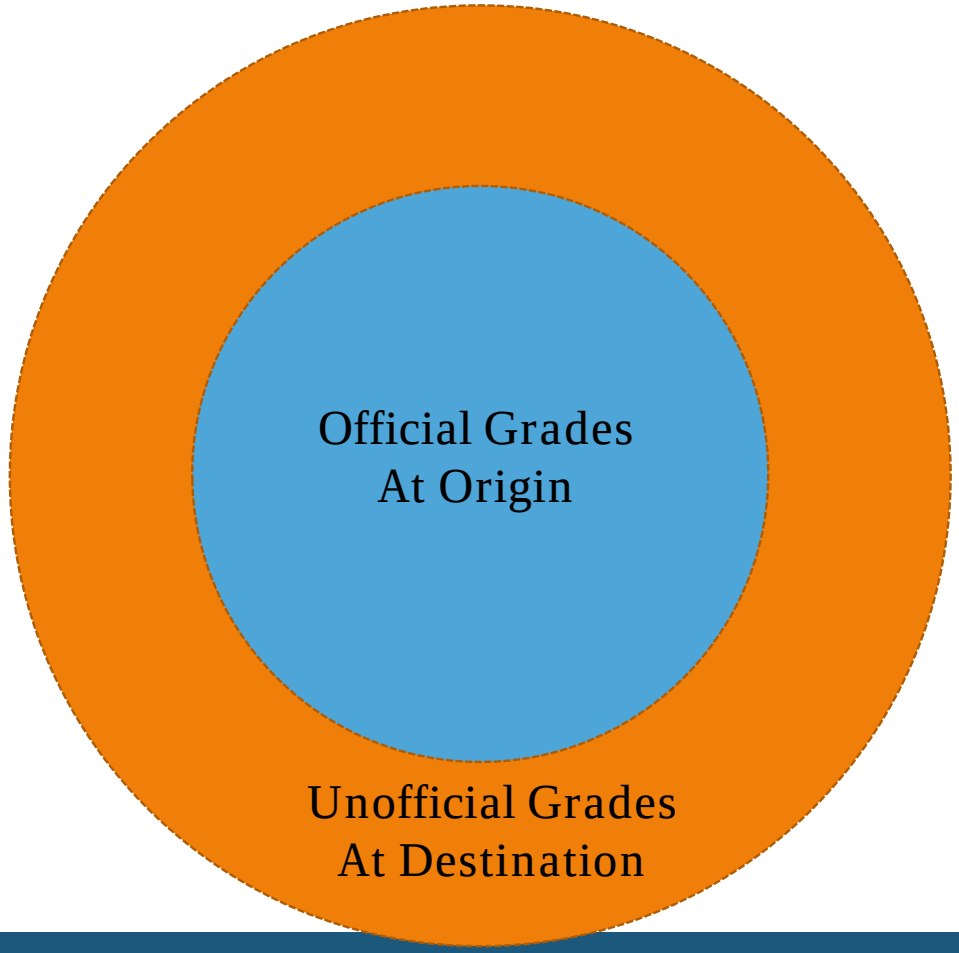
2014 Moisture Appeals

GRAIN INSPECTION ADVISORY COMMITTEE

MARY COFFEY ALONZO
DIRECTOR, TECHNOLOGY AND SCIENCE DIVISION
JULY 15,2014

UGMA-Compatible Moisture Meters

Official/Unofficial

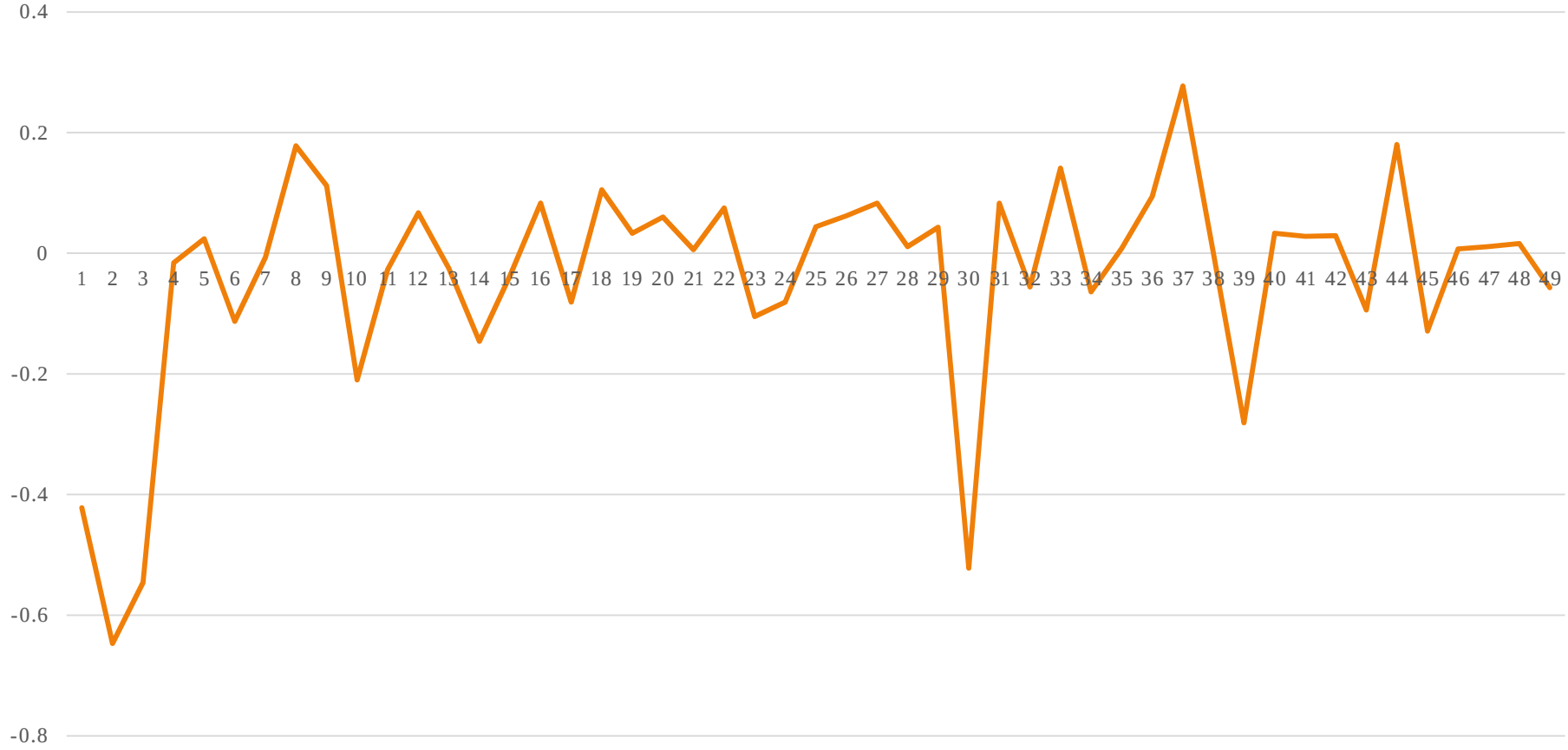


2014 Moisture Appeals

- Thirty nine appeals
  - Five Official Service Providers
  - All service points used DICKEY-john moisture meters
  - Upper Midwest shipping to Pacific Northwest
- Four Applicants for Service
  - Two primary applicants

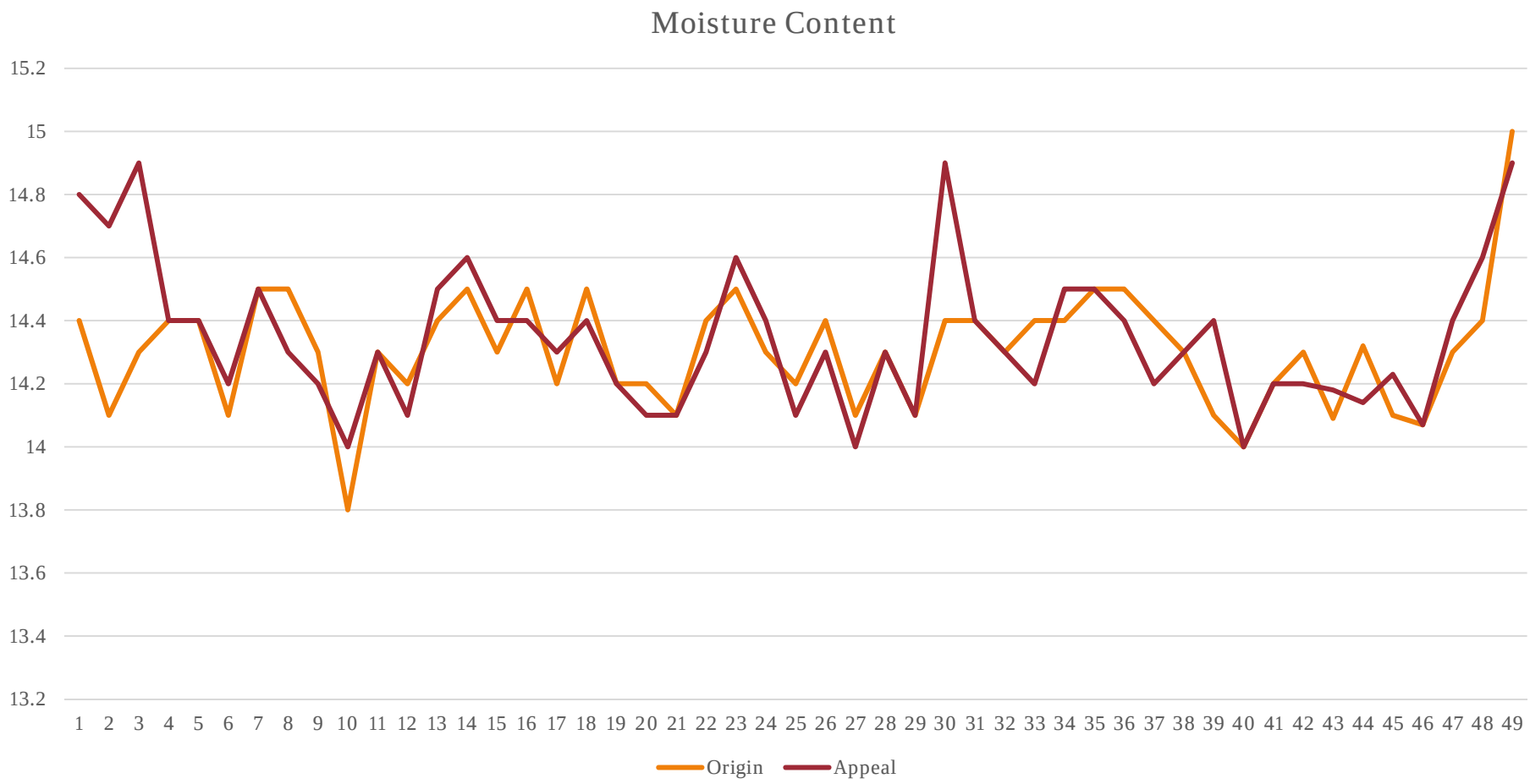
2014 Moisture Appeals

AVERAGE DIFFERENCE – Origin v. Appeals



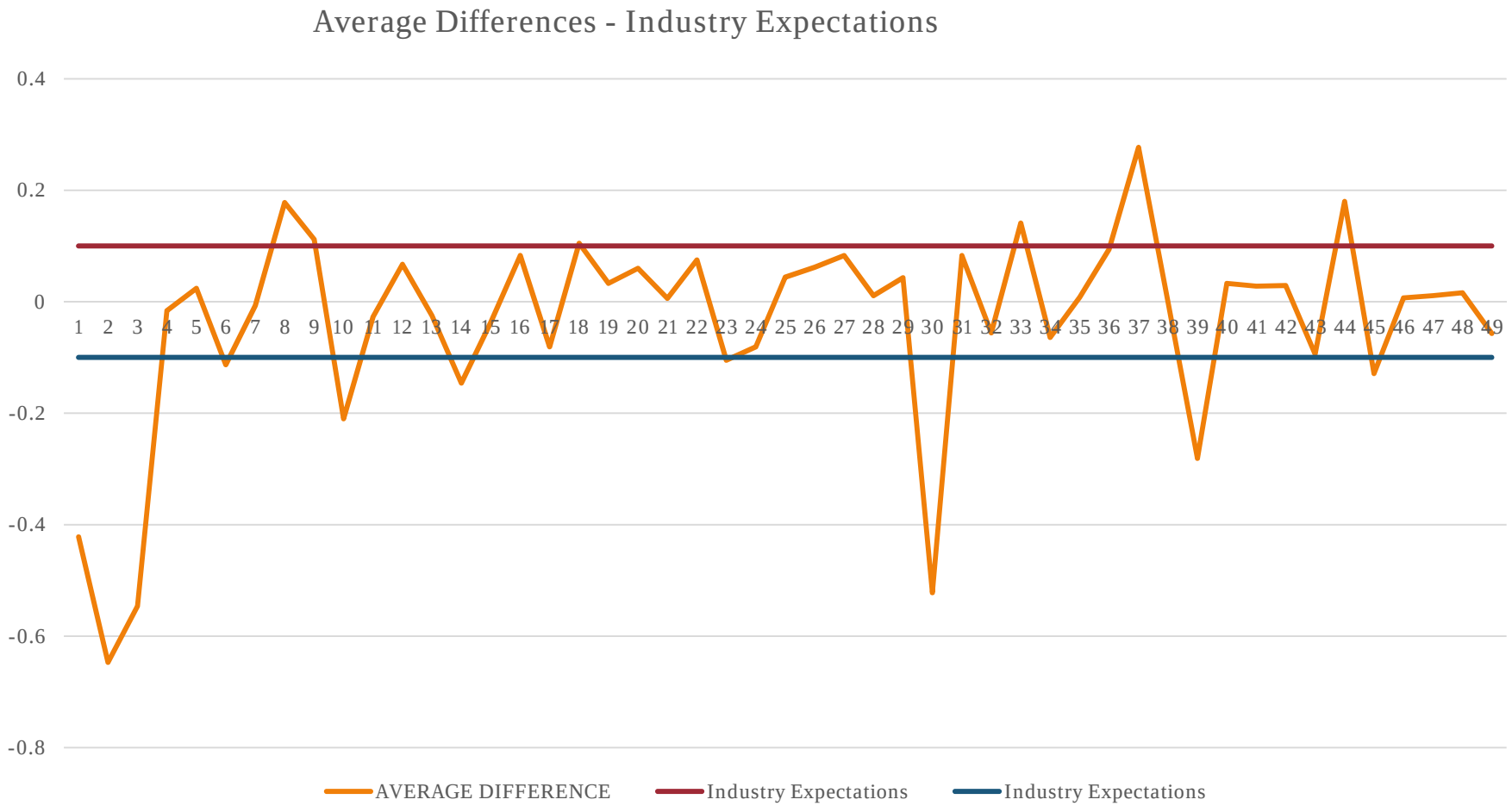
United States Department of Agriculture

2014 Moisture Appeals

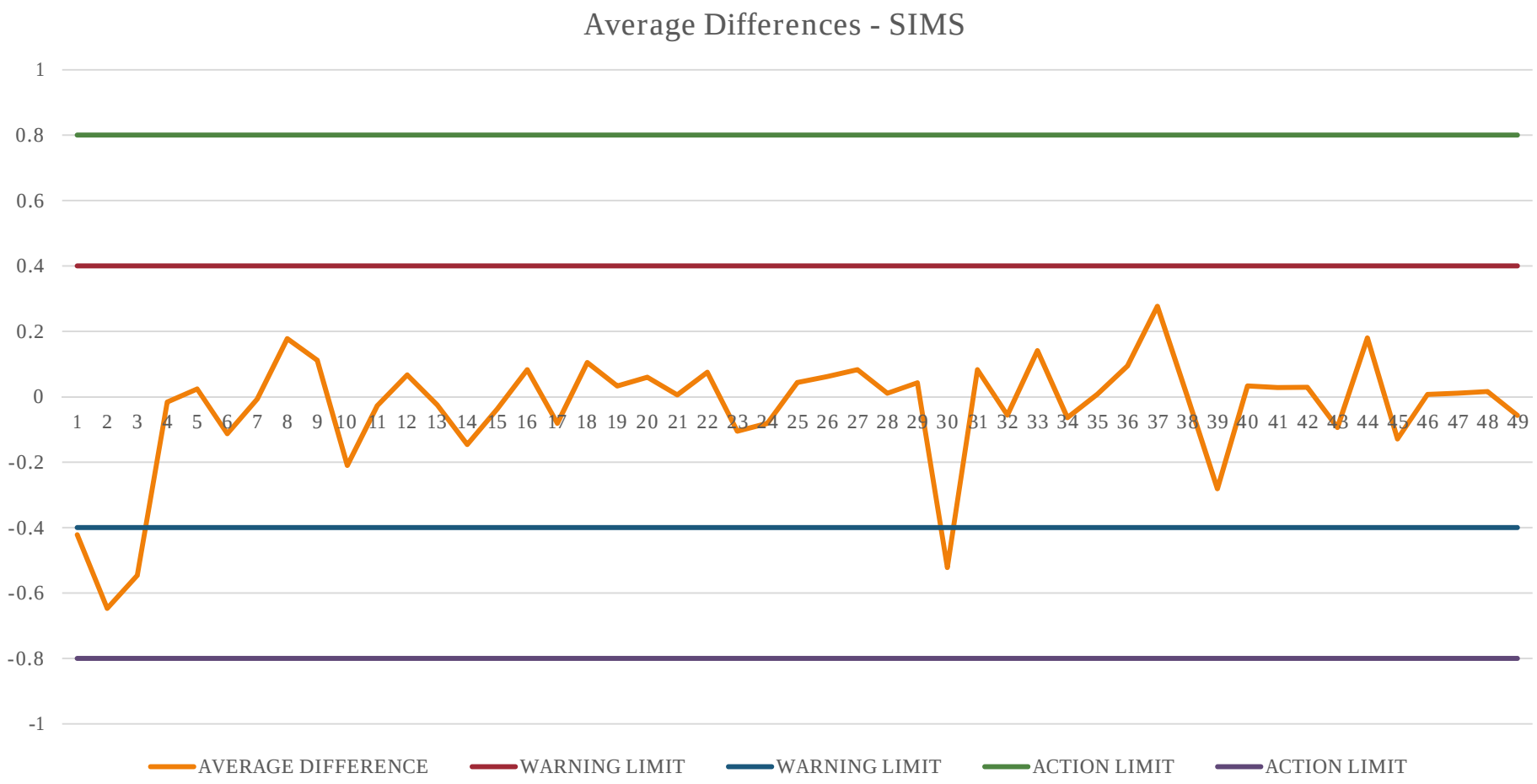


United States Department of Agriculture

2014 Moisture Appeals

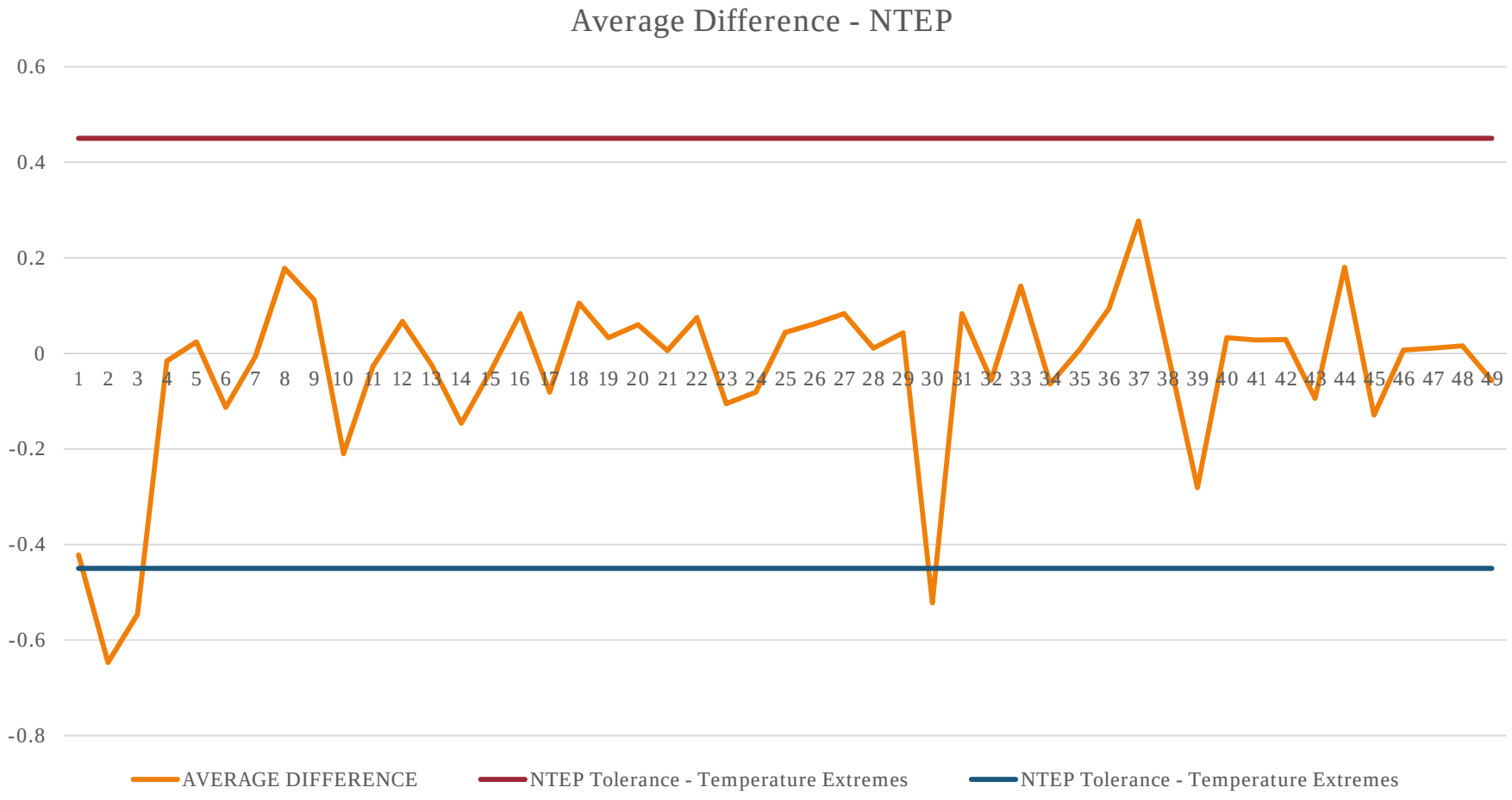


2014 Moisture Appeals

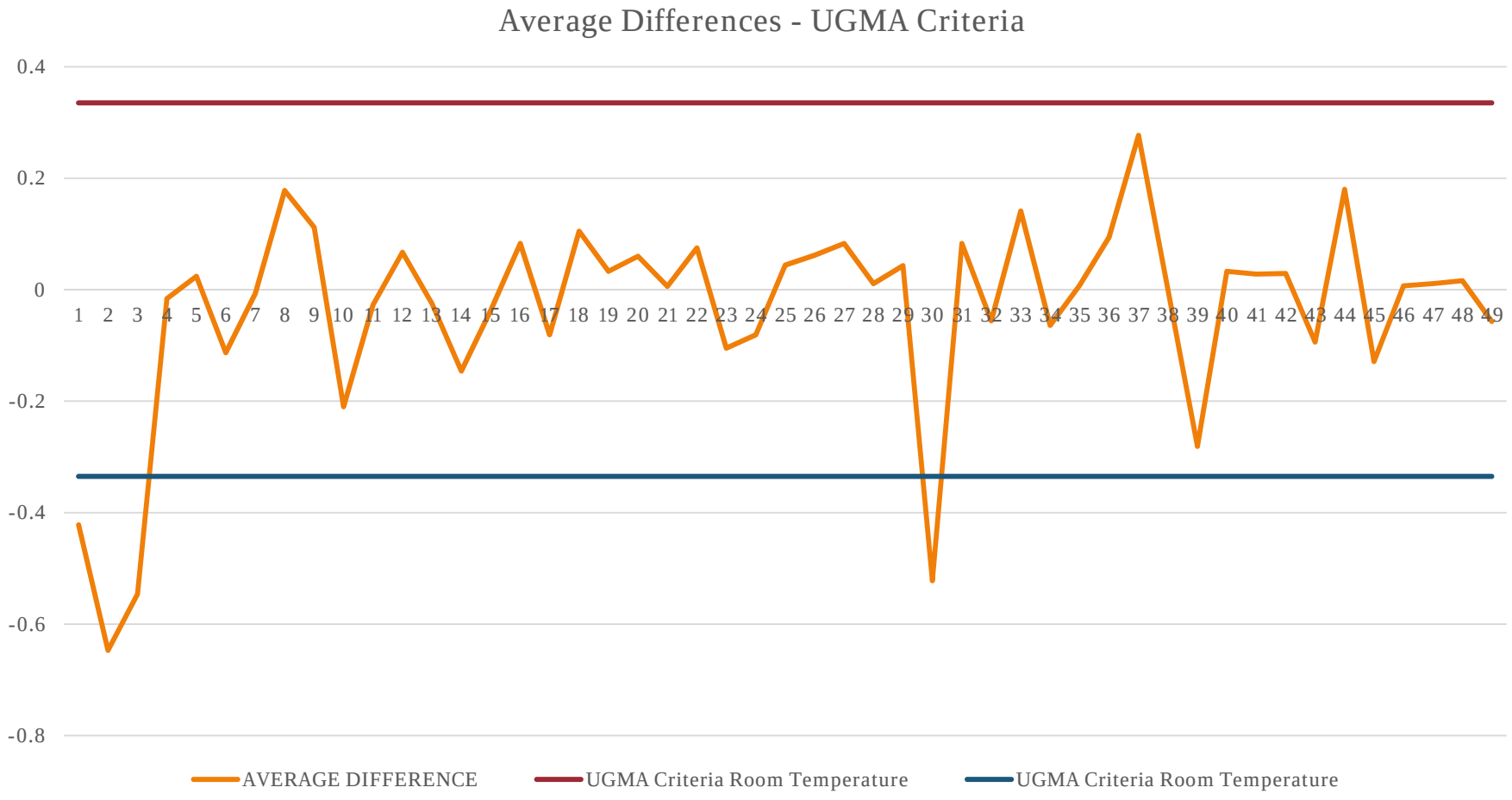


United States Department of Agriculture

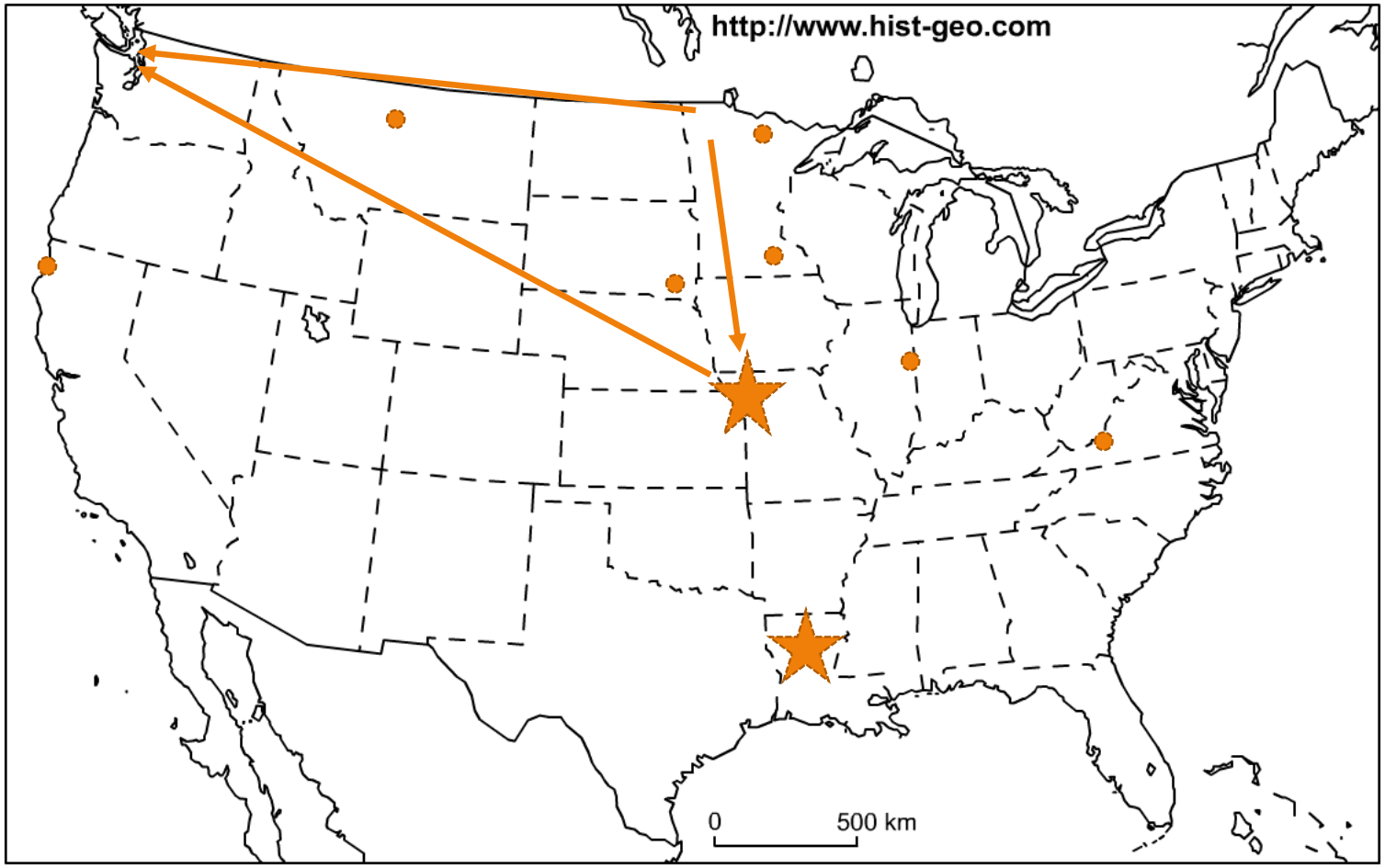
2014 Moisture Appeals



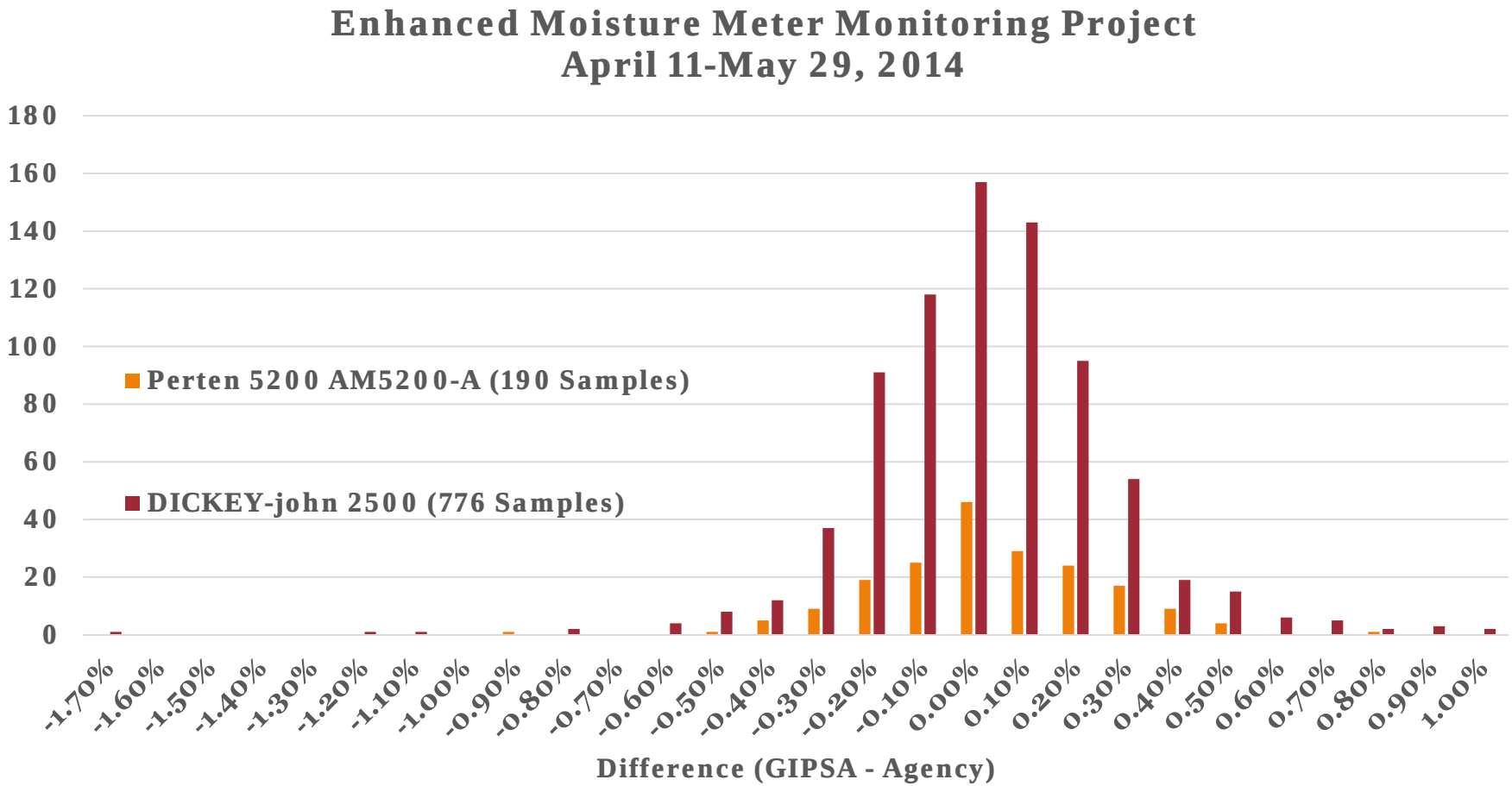
2014 Moisture Appeals



Moisture Meter Alignment



Enhanced Moisture Monitoring



Follow Up Actions

- Update SOP
  - Temperature tests
  - SIMS monitoring
  - Warning and action limits
  - Inorganic daily check sample
- Test weight??
- Repeat EMM

NAEGA/NGFA

- Independent third party testing?
- End user maintenance requirements?
- Discussion

Quantitative Rapid Test Kit Program for Genetically Engineered (GE) Traits

Dr. Tandace Bell
Biotechnology and Analytical Services Branch
TSD-NGC
Grain Advisory Committee
July, 2014

Composition and Functions of the Biotechnology and Analytical Services Branch (BASB)

Biotechnology Lab

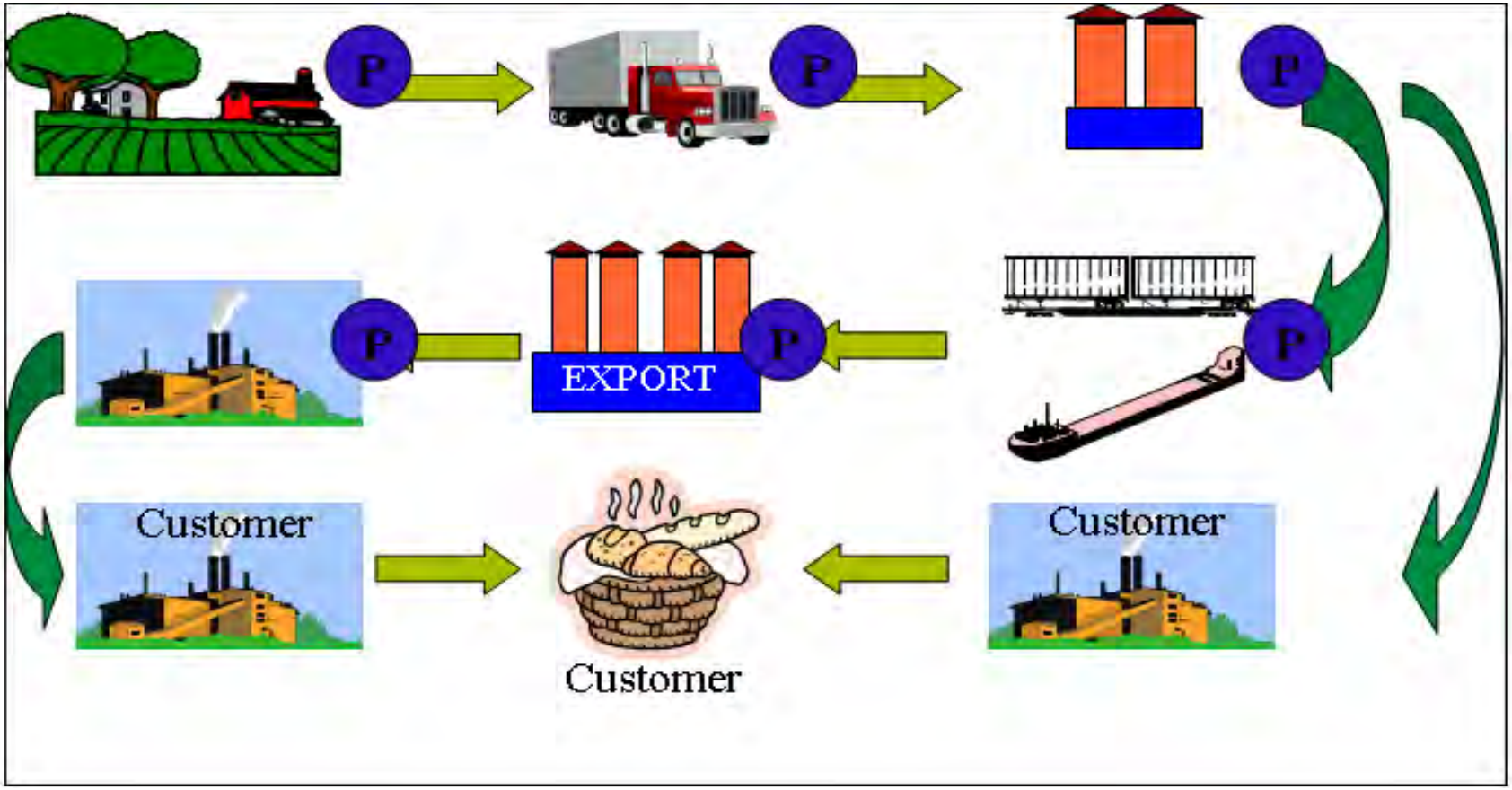
Commodities Testing Lab

Reference Labs

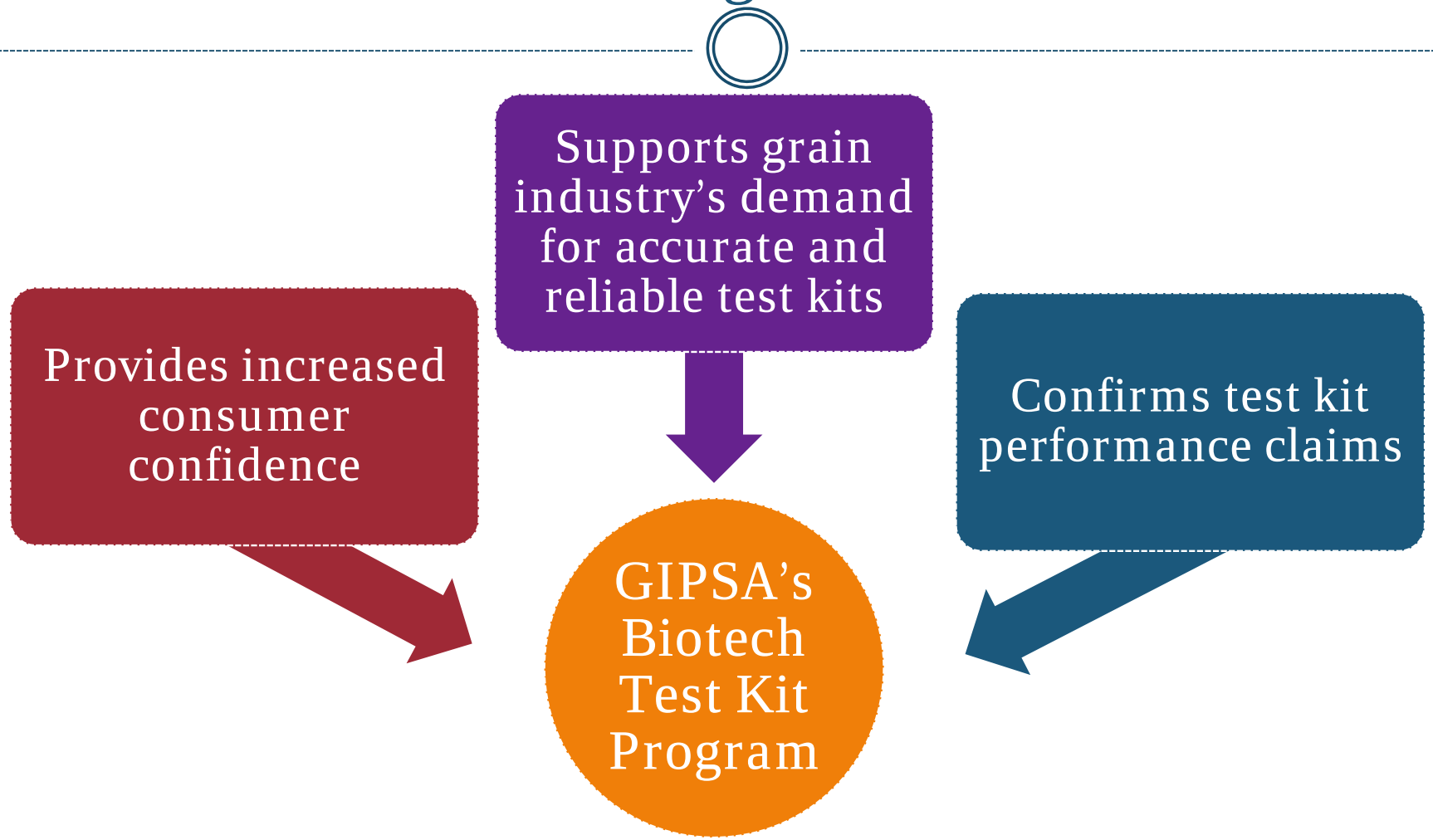
Development of GIPSA's Biotechnology Lab

- In 2001, the marketing structure of the U.S. industry had undergone significant changes
- USDA sought public comment on how the agency can best foster grain marketing in this evolving marketplace
- GIPSA developed additional voluntary testing and process verification programs
- USDA does not provide official testing for GE traits
- Biotechnology lab at GIPSA was developed

GE Testing Throughout the Grain Handling System



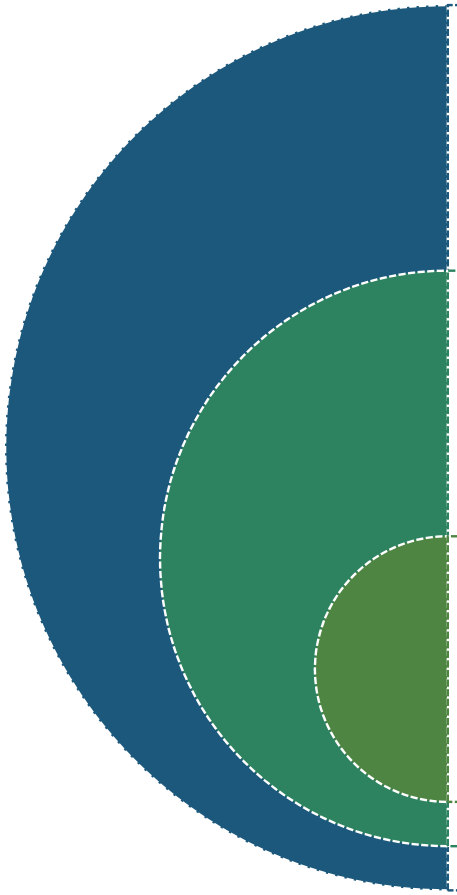
GIPSA's Biotech Rapid Test Kit Verification Program



Industry Expectations for GE Rapid Test Kits

- Distinguish biotech from conventional and organic crops
- Rapid
- Reliable
- Accurate
- Cost effective
- Traceability

A Quantitative GE Test Kit Program Could Address Evolving Market Issues



Changing Needs	• Transition from qualitative to quantitative rapid test kits
Emerging Technology	• More objective, meaningful, and traceable data
Sophisticated Markets	• Need to expedite the movement of grain and provide real time results

Biotechnology Qualitative Test Kit Evaluation Process

1. Data package is submitted by manufacturer supporting their claims

2. GIPSA staff reviews submitted data

3. If the data package is complete and claims of the kit are supported by the data, GIPSA conducts a performance verification of the rapid test kit

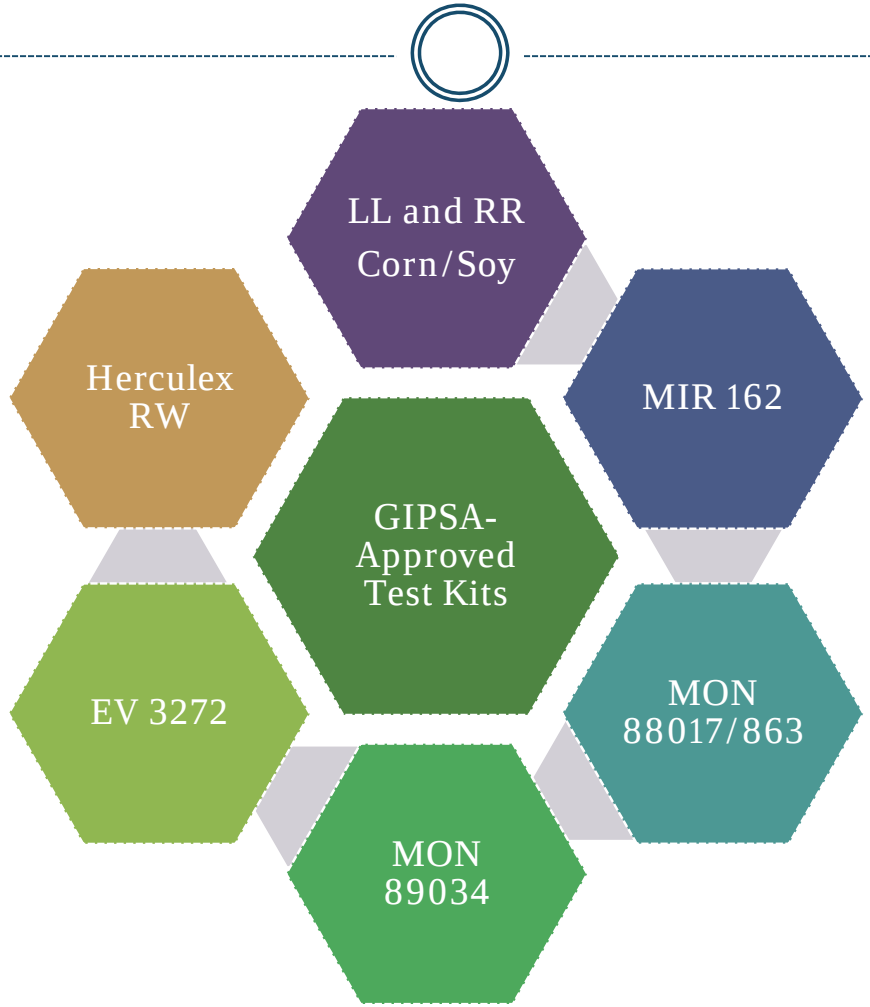
4. If the kit passes GIPSA performance testing, a Certificate of Performance (COP) is issued

Qualitative GE Rapid Test Kit Requirements

Control Samples

- 120 independent analyses, using three different test lots, 40 samples for each lot
- All test results must be negative for the GE protein of interest
- Fortified Samples
- 120 independent analyses, using three different test lots, 40 samples for each lot, at the claimed detection threshold
- All test results must be positive for the GE protein of interest

Current GIPSA-Approved Rapid Test Kits



Development of Quantitative GE Rapid Test Kit Requirements

- Determine appropriate number of independent analyses, test lots, and individual samples
- Develop accuracy requirements for test kits against reference standards
- Design criteria for maximum RSD values and standard deviations
- Implement appropriate positive and negative controls
- Finalize directive and initiate program

Thank you!

Technology and Science Division

Brian Adam, Chairman,
Board of Appeals and Review

FGIS' Sorghum Project 2014

- Collaboration between the BAR, FMD, Official Agencies, and Industry
- Response to industry concerns

Project Scope

- All unit trains originating in Kansas, Texas, and Oklahoma that are intended for export via the LCFO

Established Quality Control

- Unit Train Alignment
- Calibration Odor Set
- Referee Odor Set
- Training

Unit Train Alignment

- Unit Train Alignment is a three way calibration tool used to confirm consistency with the BAR
- Origin – Destination – BAR
- Unit Train Alignment sample rate: 10% (one in every ten railcars are used in the survey)

Calibration Odor Set

- 9 individual sample
- Various odor types: musty, sour, COFO, etc.
- Results are known to inspectors
- Used to align inspectors to the BAR

Referee Odor Set

- 9 individual sample
- Various odor types: musty, sour, COFO, etc.
- Results are not known to inspectors
- Participants: 70+

FGIS Training

- 2/25/14 three inspectors from Corpus Christi, TX, for sorghum odor training
- 3/4/14 four inspectors from Galveston, TX, for sorghum odor training
- 4/21/14 a BAR member made a circuit review of the LCFO and provided sorghum odor training for FGIS inspectors

FGIS' Sorghum Project 2014 results

- Unit Train Alignment results: 96%
- Referee results: 89%
- Consistent results between origin/destination
- Facilitated the export of U.S. sorghum
- Positive feedback from industry

Questions or Comments?

Gluten Strength Analyzer

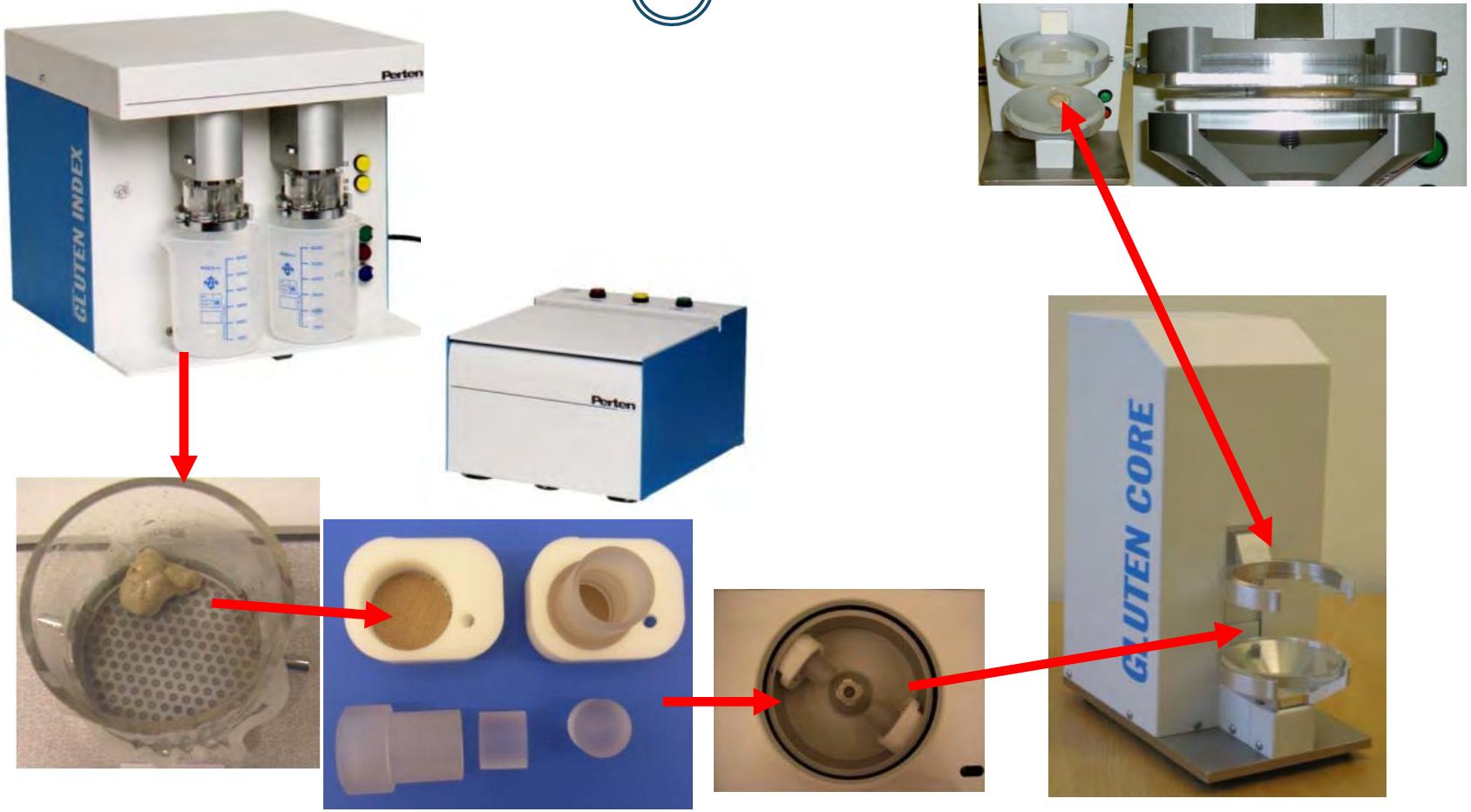
GRAIN INSPECTION ADVISORY COMMITTEE

Tim Norden, Chief
Analytical Chemistry Branch
Technology and Science Division
July 15-16, 2014

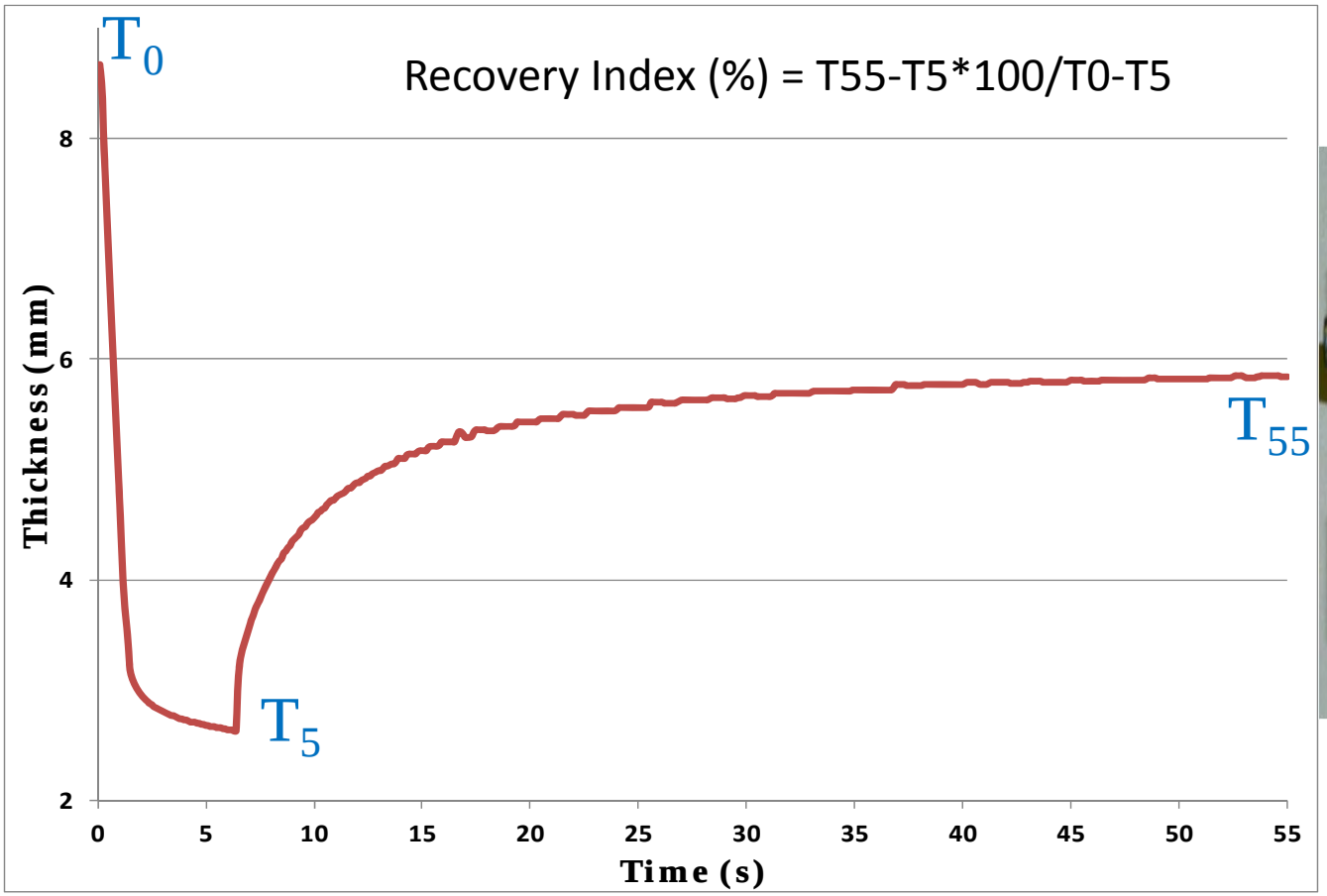
Gluten Analyzer Project

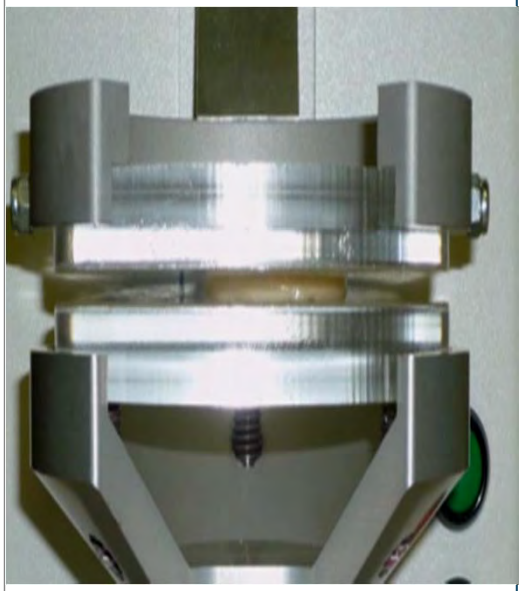
- GIPSA identified gluten strength as an important functional test for wheat and a key market need
- GIPSA Collaborative Project (started in 2007):
  - Agricultural Research Service, Perten Instruments, Cornell University, and Oklahoma State University
- Goal:
  - Develop a market-relevant test for gluten strength that can be accomplished in less than 30 minutes

Gluten Analyzer Method



Gluten Analyzer Output



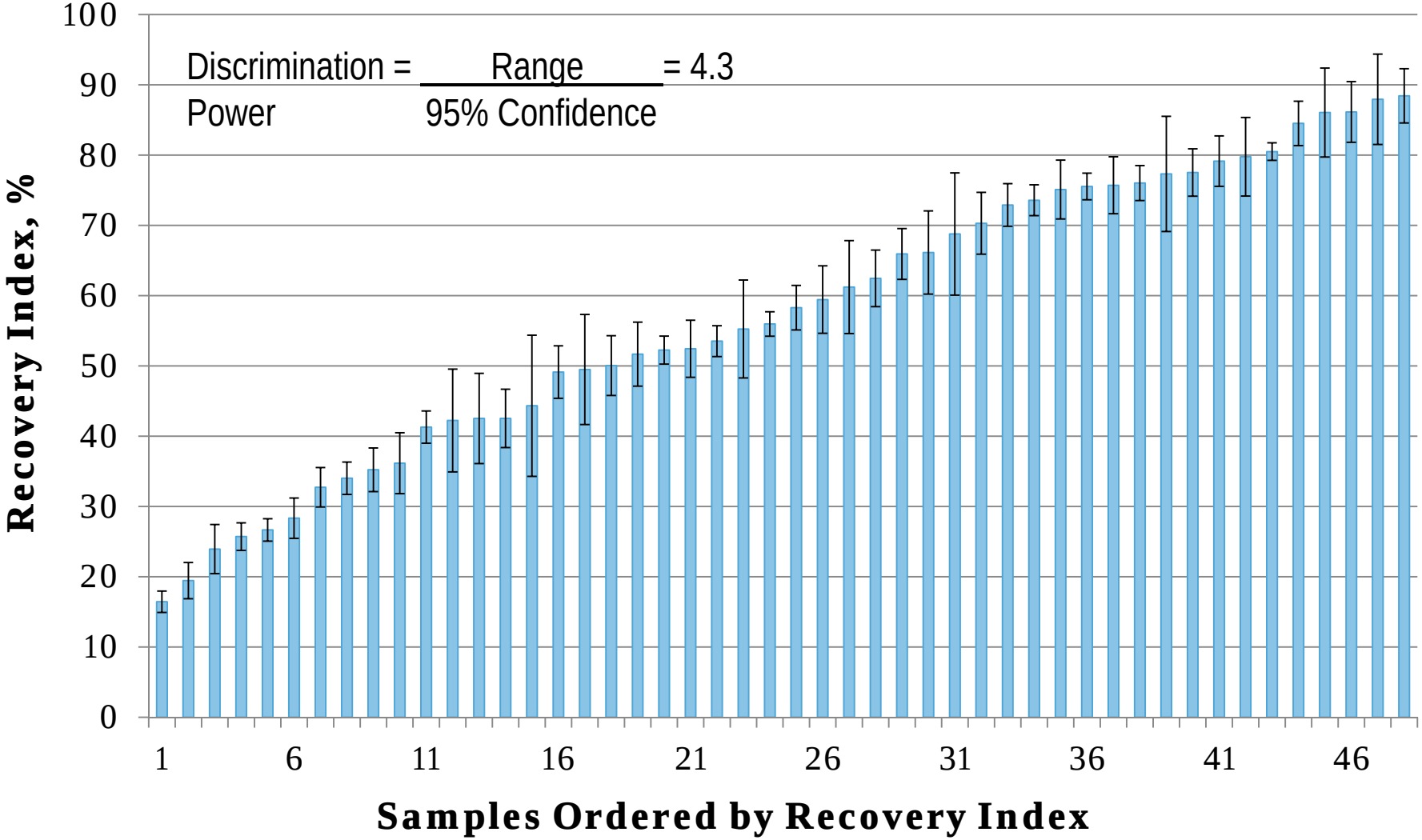


Hard Wheat Sample Set

- 48 Hard red winter & Hard red spring pure cultivars
  - Wide protein range
  - Wide Farinograph stability time
  - Samples from Wheat Quality Councils and popular U.S. cultivars

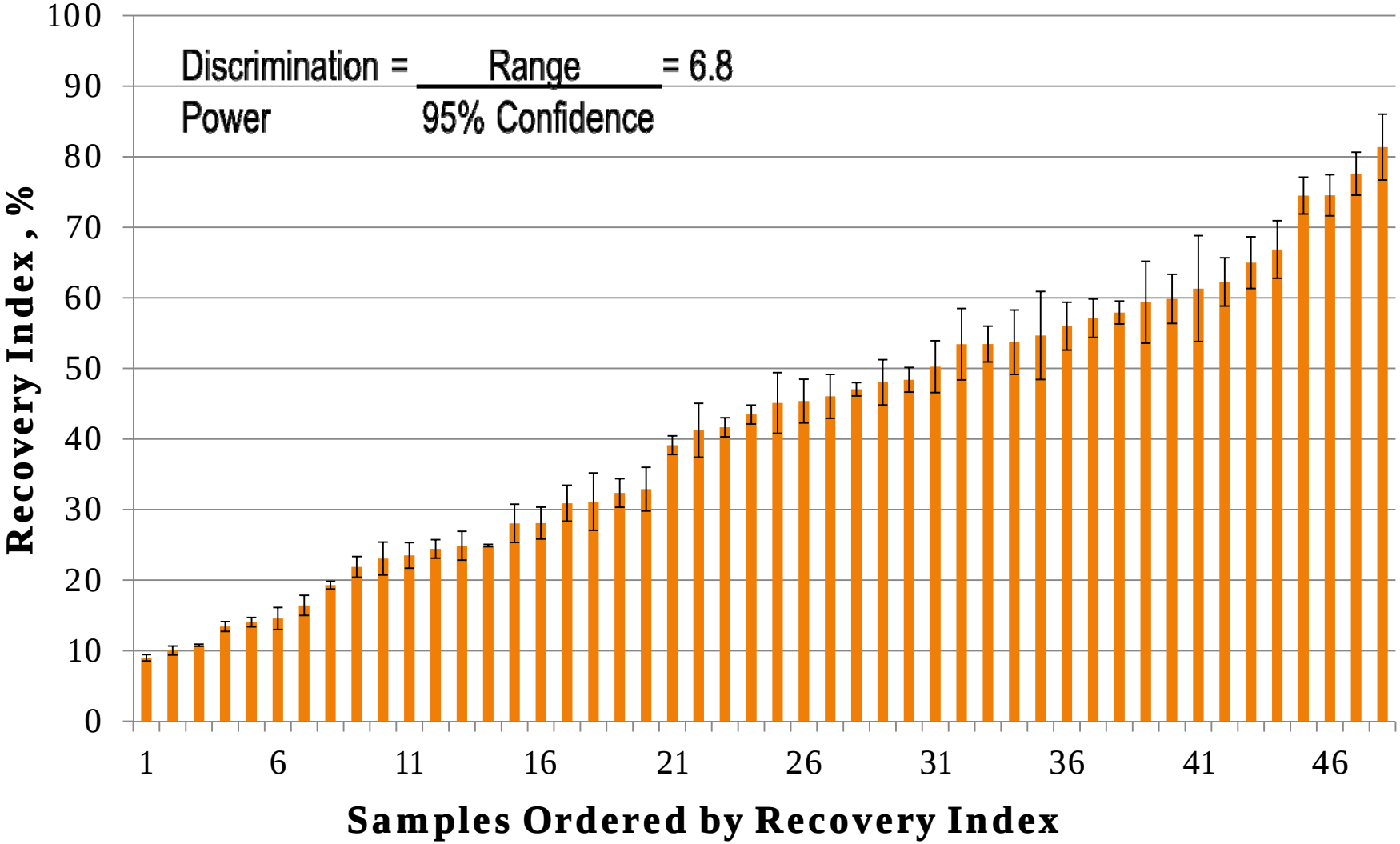
Gluten Analyzer Recovery Index

Hard Wheat Sample Set – Flour



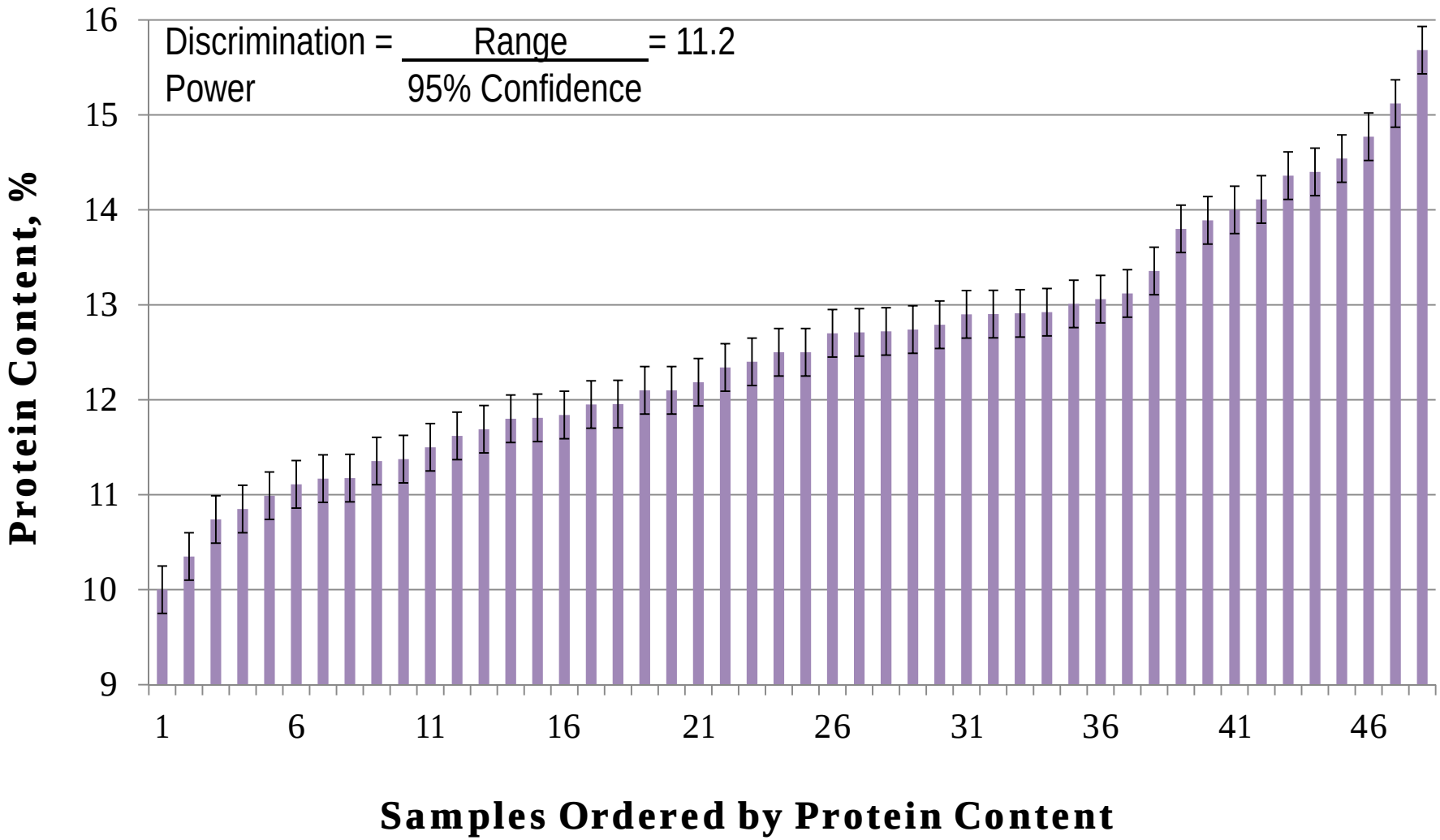
Gluten Analyzer Recovery Index

Hard Wheat Sample Set – Ground Wheat



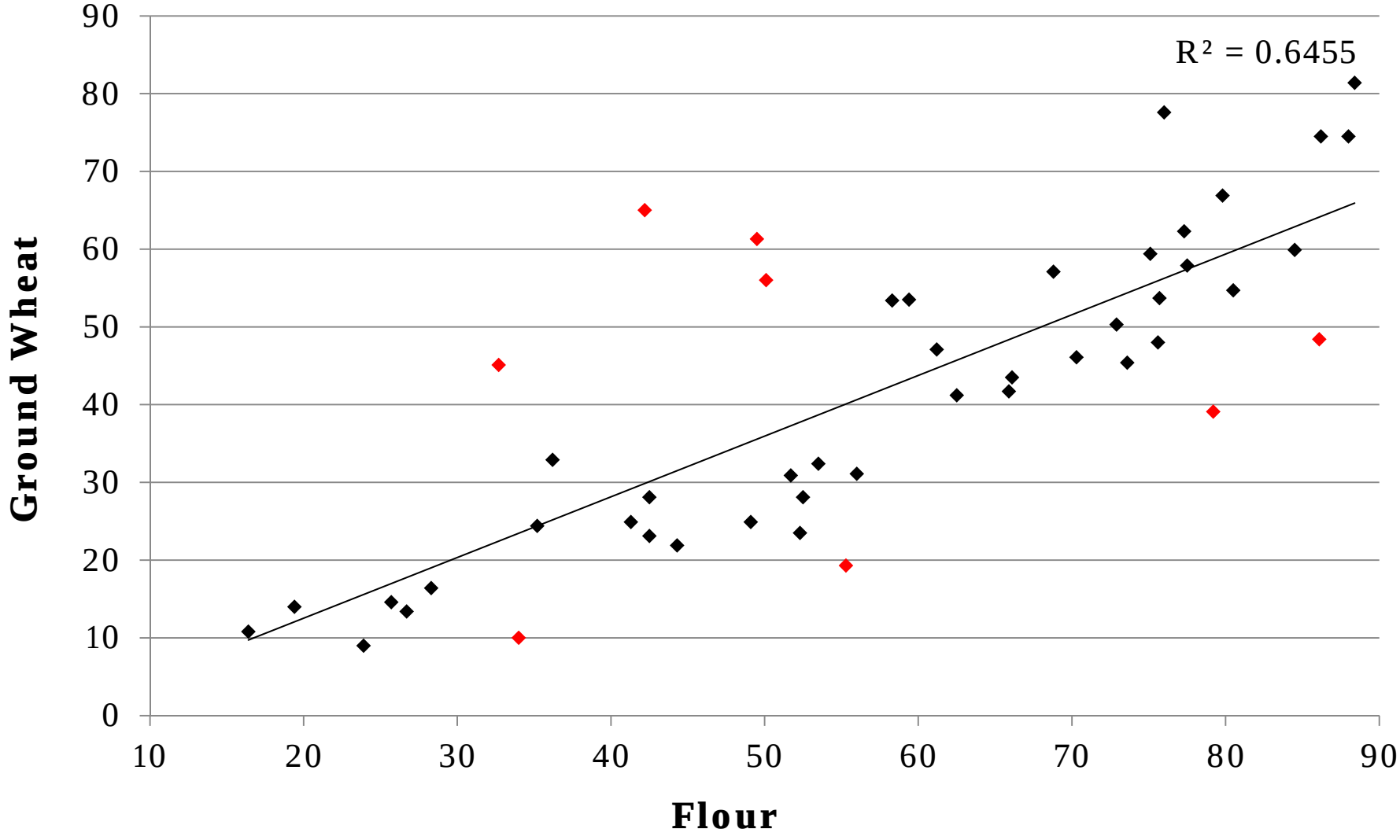
NIRT Protein

Hard Wheat Sample Set – Pure Cultivars



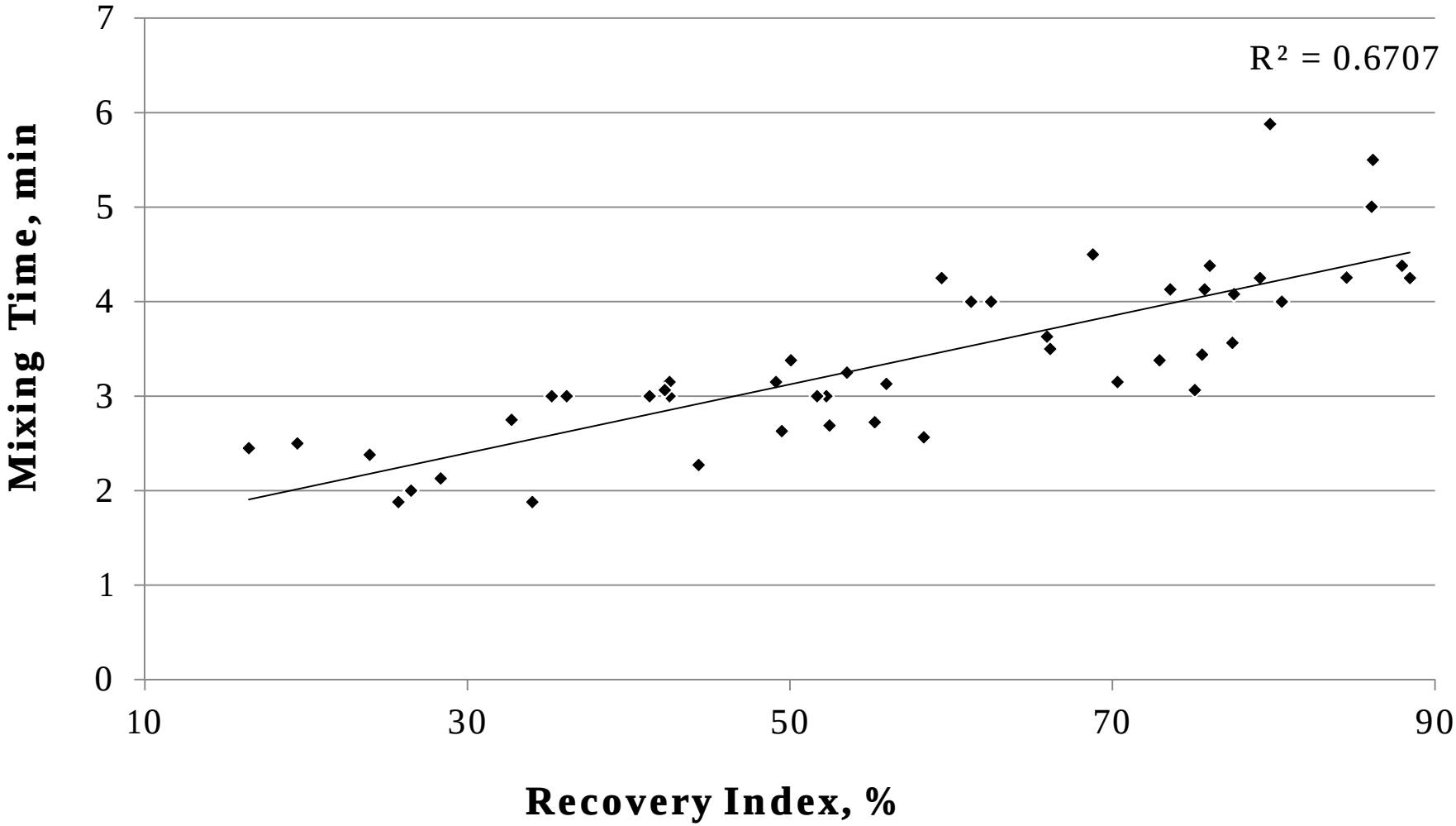
Recovery Index

Flour vs. Ground Wheat



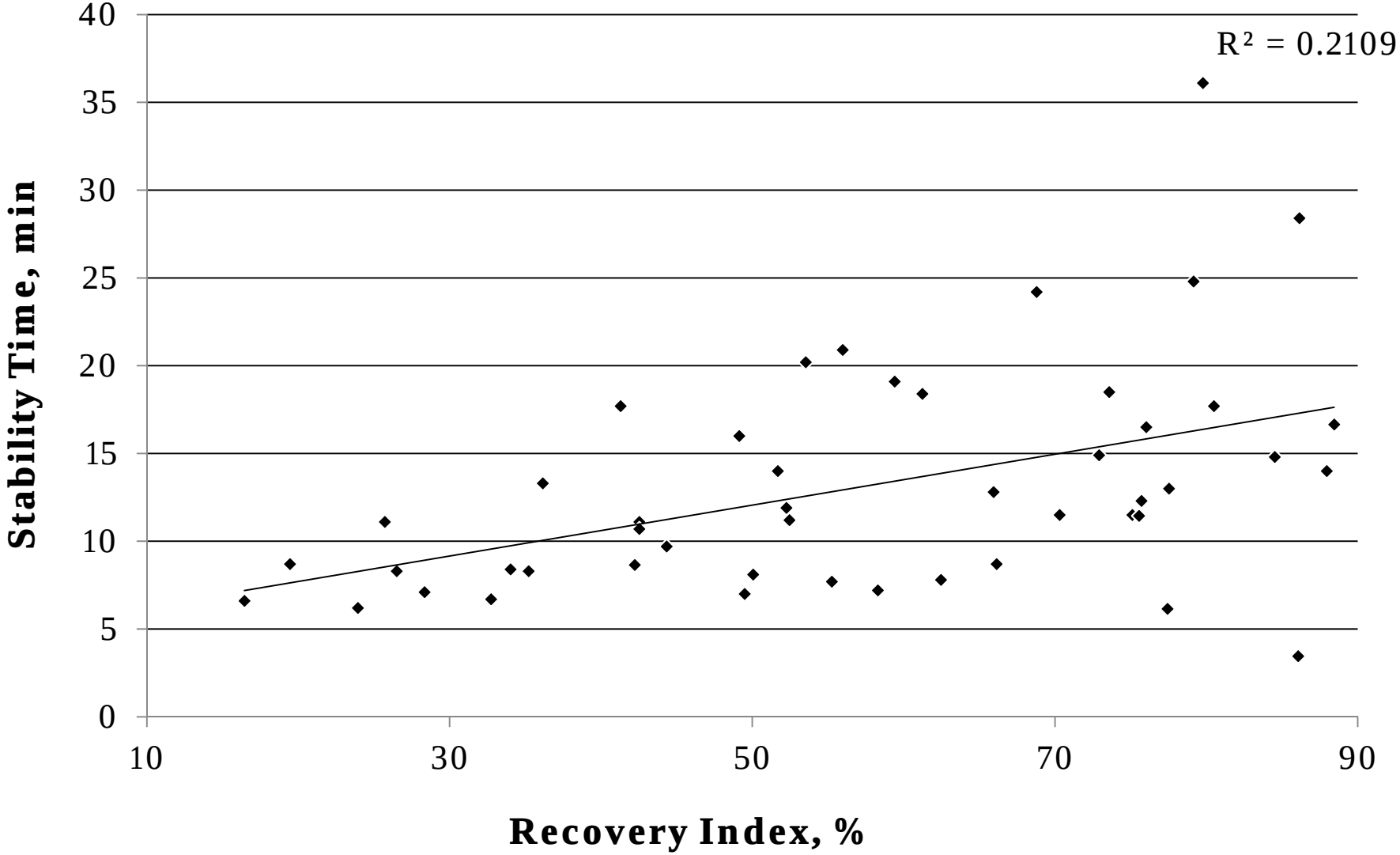
Recovery Index vs. Mixograph Mixing Time

Hard Wheat Sample Set – Pure Cultivars



Recovery Index vs. Farinograph Stability Time

Hard Wheat Sample Set – Pure Cultivars



Project Status and Future Work

- Concerns
  - Lack of correlation of some flour and ground wheat samples
  - Low correlation with Farinograph
- Perten Instruments leading field testing and commercialization efforts
- GIPSA – possible additional work
  - Retesting of 8 problematic samples
  - Validation of Farinograph results

Perten Field Testing Status – June 2014

- Four different US labs
  - California Wheat Commission, Wheat Marketing, Kansas State University, & Northern Crops Institute
- Testing of 50 -100 samples in each lab
- Results compared to other "gluten strength" data
- Time frame is 3-6 months
- Based on the outcome Perten will make a decision on commercialization

Questions?

National Mycotoxin Quality Assurance Program

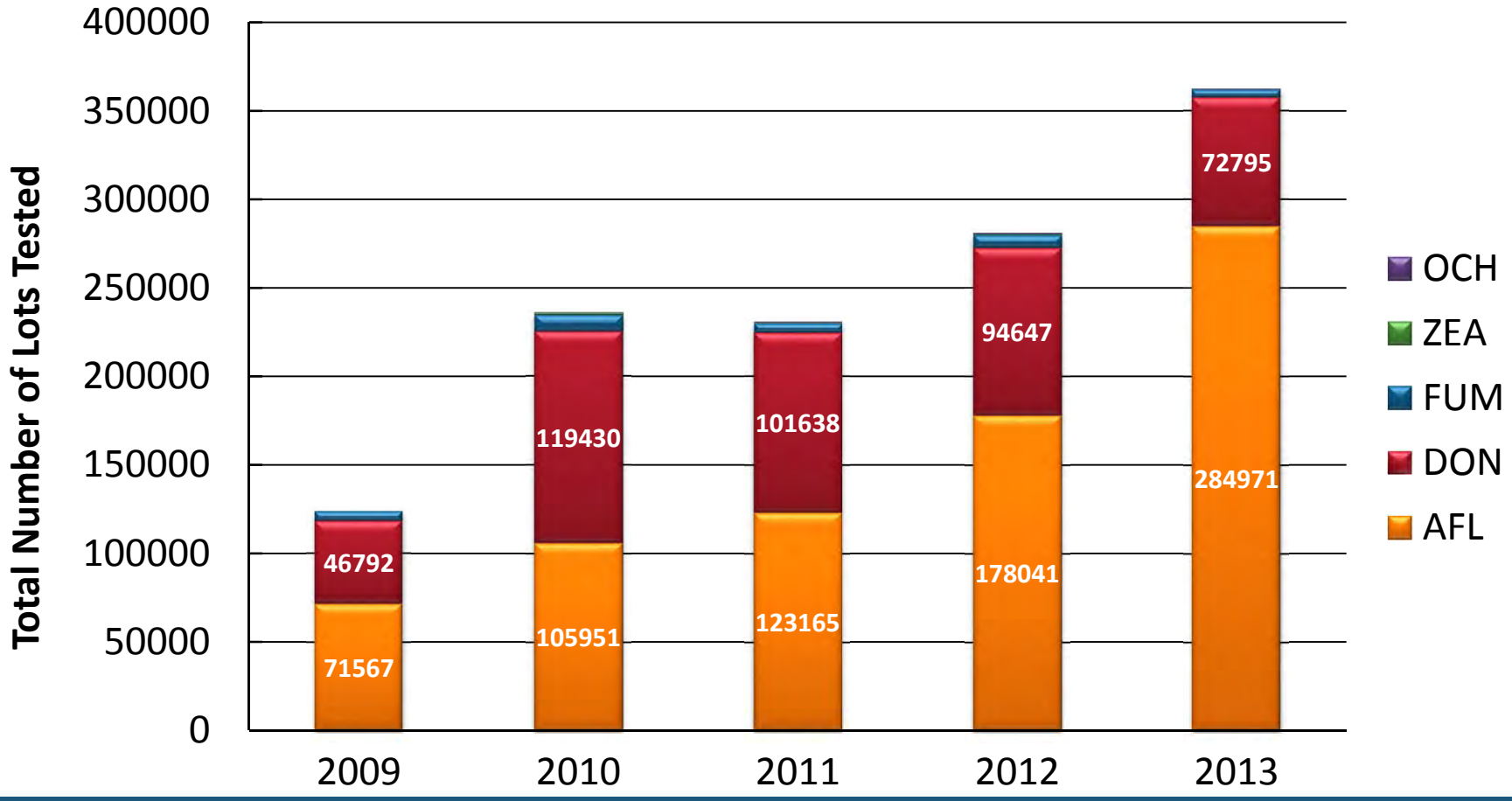
GRAIN INSPECTION ADVISORY COMMITTEE

Tim Norden, Chief
Analytical Chemistry Branch
Technology and Science Division
July 15-16, 2014

Overall Mycotoxin Testing by Year

Mean number of lots tested: 246,941

October 1 – September 30

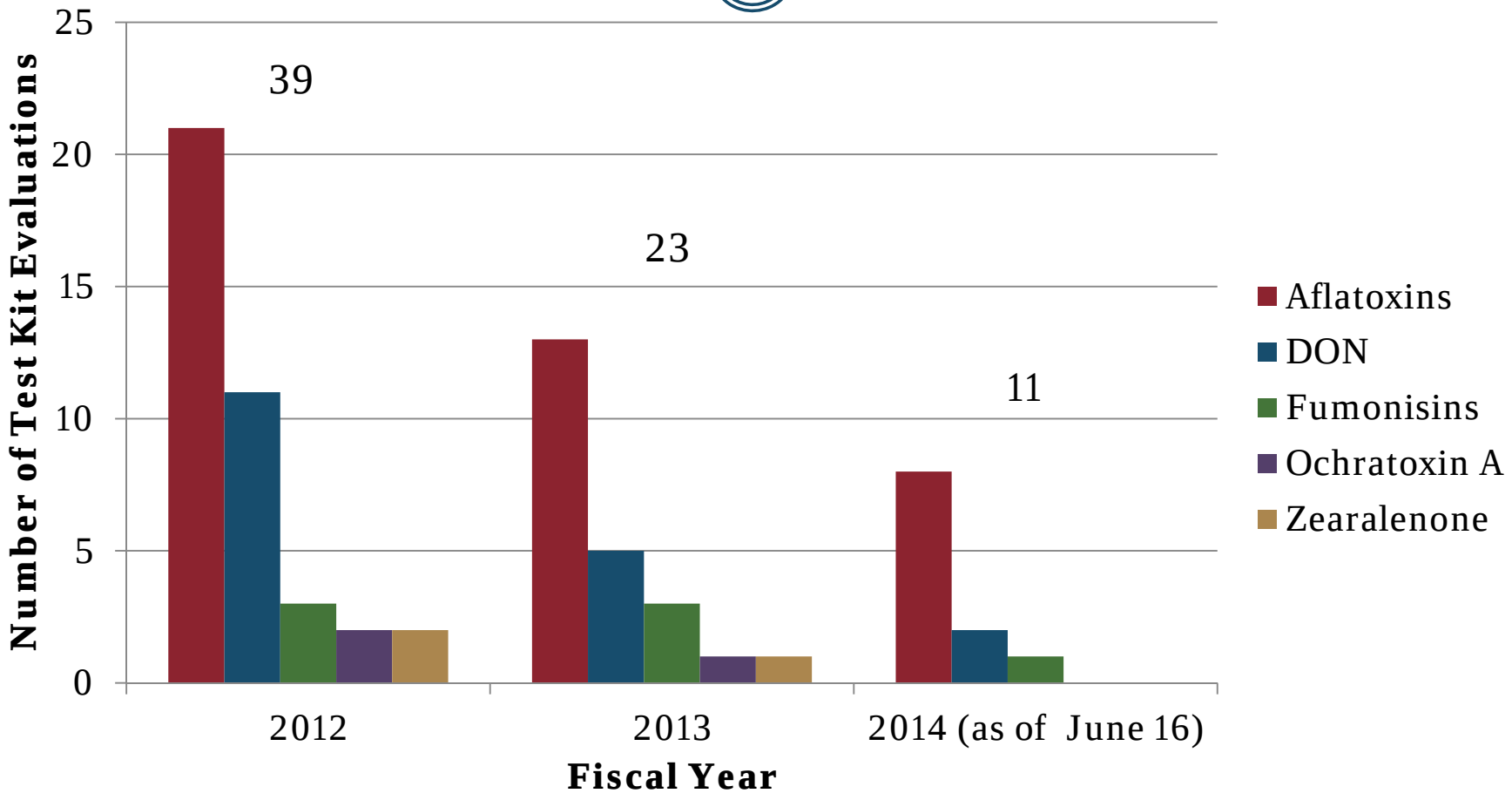


National Mycotoxin Quality Assurance Program

- Rapid test kit evaluation — *Current*
- Inspection monitoring
  - Direct information on testing accuracy
  - Focus on rapid feedback to service points
- Check sample program
  - System-wide performance
  - Focus on test kit / operator troubleshooting
- Operator training
- Technical assistance

Future

Mycotoxin Test Kit Evaluations



Aflatoxin Check Sample Distribution Summary

Distribution	Percentage of Satisfactory Results				Number of Service Points
	Contamination Level			Overall	
	Low	Mid	High		
August 2012	89	82	84	68	111
June 2013	87	84	74	58	106
Trained	*89*	*100*	*89*	*78*	*9*

Supplemental Analysis

- Definition –

  Supplemental analysis is a procedure followed when a result is observed above the upper limit of the concentration range in GIPSA's test kit performance criteria and it is performed at the request of the applicant.

- Problems
  - Accuracy not assessed in GIPSA performance evaluation
  - Each test kit has a different procedure
  - Added steps, time, and possibilities for error
  - Errors highlighted in recent aflatoxin check sample distribution

Elimination of Supplemental Analysis

- Proposed Solution
  - Expand concentration ranges in performance criteria
    - Based on FDA Action and Advisory Levels
    - Aflatoxins 5 – 500 ppb
    - Deoxynivalenol 0.5 – 10 ppm
    - Fumonisins 0.5 – 100 ppm
    - Ochratoxin A and zearalenone would remain unchanged
  - Do not report quantitative results greater than new upper limit
    - For example – aflatoxin > 500 ppb
  - Reduces the possibilities for error

GIPSA Approved Water-based Mycotoxin Test Kits

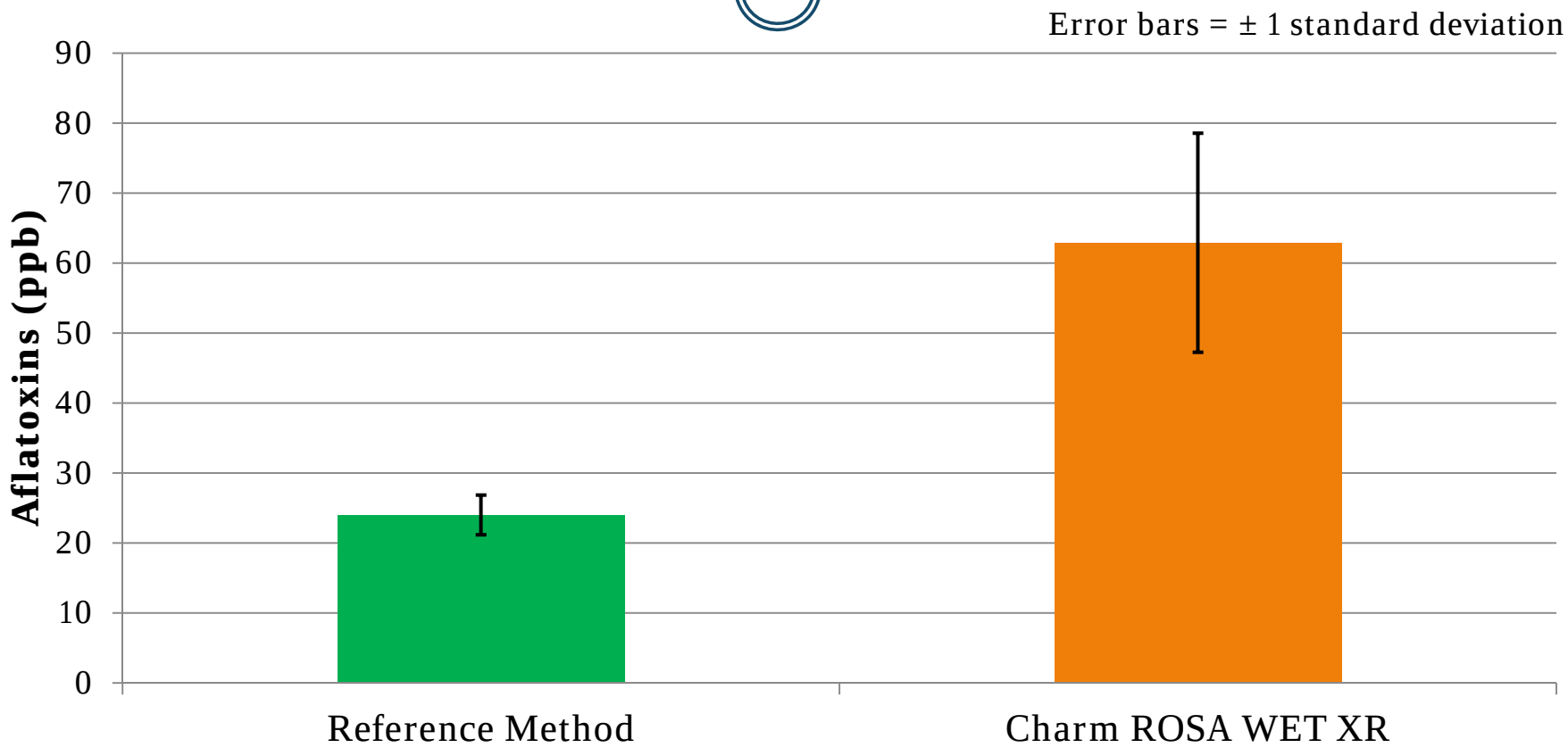
- Aflatoxin – 2 test kits
  - Envirologix – corn & wheat
  - Neogen – corn & 6 corn products
- DON – all test kits
- Fumonisin – 1 test kit
  - Charm Sciences – corn, barley, oats, rice, sorghum, wheat
- Ochratoxin A – 0 test kits
- Zearalenone – 0 test kits

Water-Based Aflatoxin Test Kits
Recent Performance Evaluations

- Naturally-contaminated corn
  - Coarse grind
    - 53 - 54% passed U.S. Standard No. 20 sieve
    - Conforms to official inspection requirements
  - Fine grind
    - 97% passed U.S. Standard No. 20 sieve
    - Conforms to test kit evaluation program
- Comparison to GIPSA Reference Method
  - Charm Sciences
  - Neogen Corporation
  - EnviroLogix

Aflatoxins in Coarsely-Ground Corn

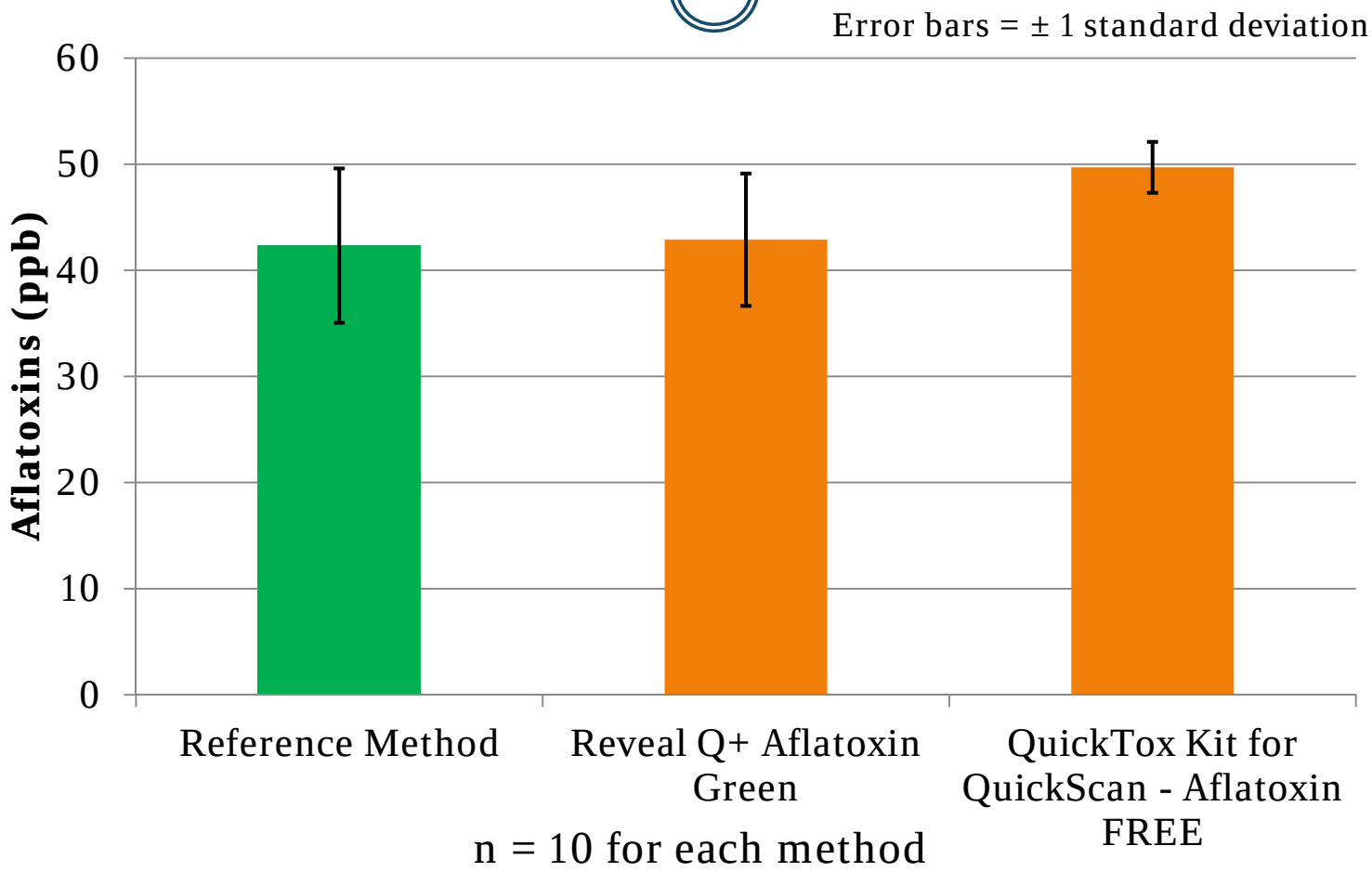
Charm Sciences Test Kits



n = 10 for each method

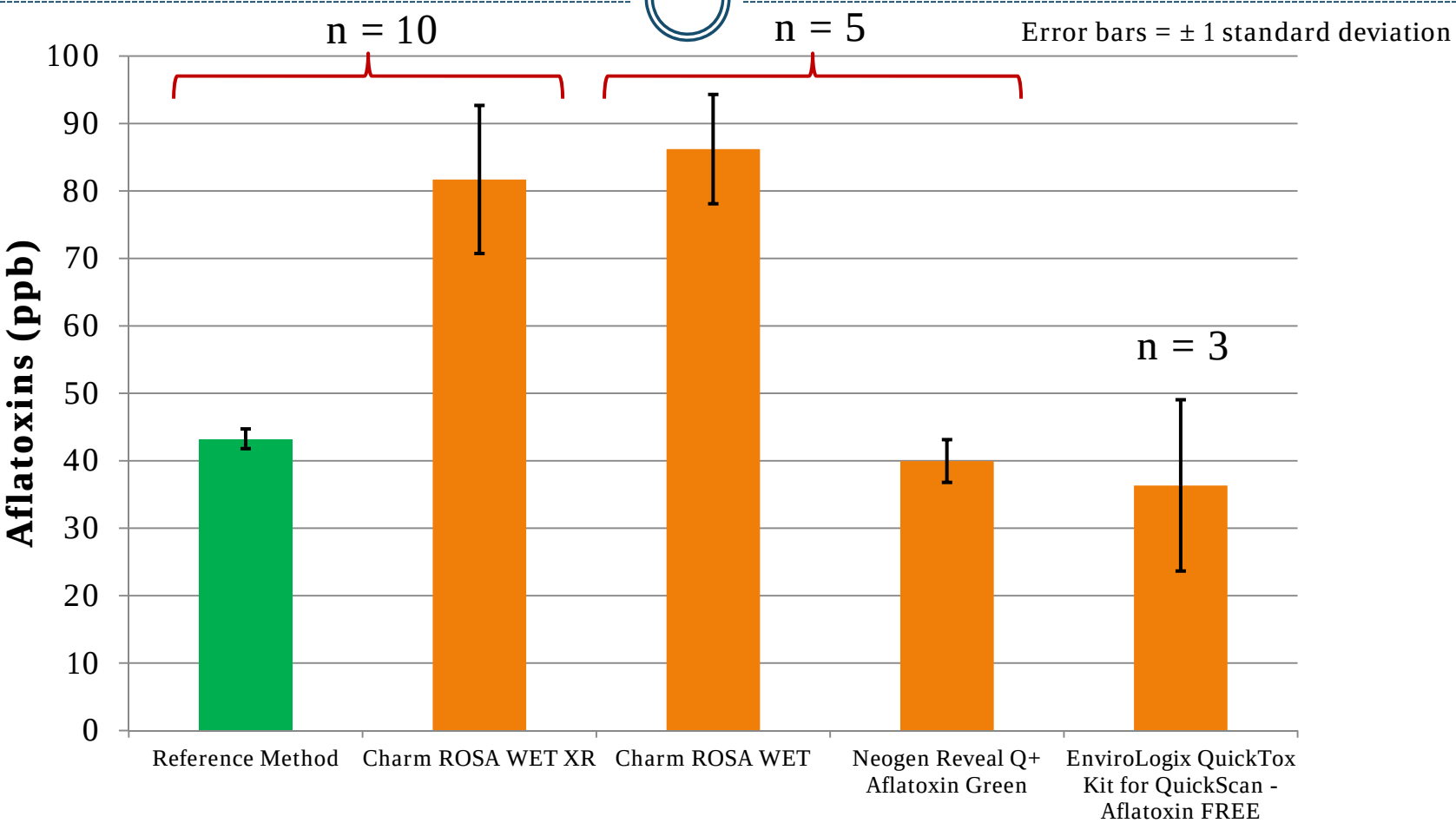
Aflatoxins in Coarsely-Ground Corn

Neogen and EnviroLogix Test Kits



Aflatoxins in Finely-Ground Corn

Charm Sciences, Neogen, and EnviroLogix Test Kits



Summary of Water-Based Test Kit Evaluation

- Unacceptable high bias observed for Charm ROSA WET and WET XR test kits
  - Certificates of conformance cancelled – May 30, 2014
  - Charm Sciences performed a root cause analysis, resolved the issue, and resubmitted one test kit
- Neogen and EnviroLogix water-based test kits did not exhibit a high bias for the same samples

Questions?

National Falling Number Quality Assurance Program

GRAIN INSPECTION ADVISORY COMMITTEE

Tim Norden, Chief
Analytical Chemistry Branch
Technology and Science Division
July 15-16, 2014

Falling Number Test

- Measures effects of sprout damage
- Viscosity of wheat flour / water mix
- 25,000 official tests in 2012
- 24 official service points
  - 32 Instruments

National Falling Number Quality Assurance Program

- Issue
  - Customer / stakeholder accuracy concerns
- Goals
  - Provide information that assesses the level of accuracy among official service points
  - Validate and/or improve the accuracy of the official testing program

National Falling Number Quality Assurance Program

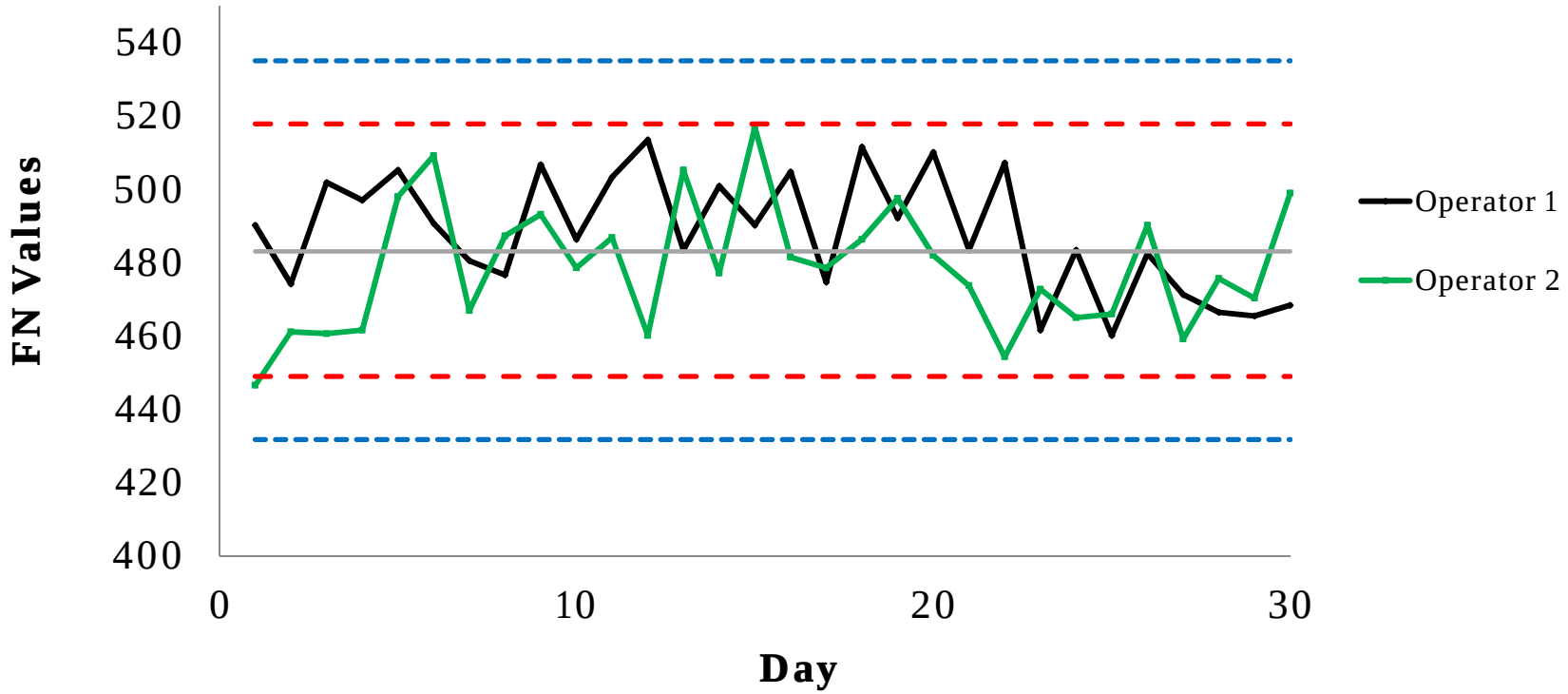
- Directive 9180.84 – Posted on April 23, 2014
- Inspection monitoring program
  - Reanalysis of samples at TSD
  - Rapid feedback on testing accuracy to service points
  - 1 sample per week – 24 locations / 32 instruments
- Check sample program
  - Certified reference samples sent from TSD
  - System-wide performance
  - 4 samples; 2 whole grain; 2 ground

National Falling Number Quality Assurance Program

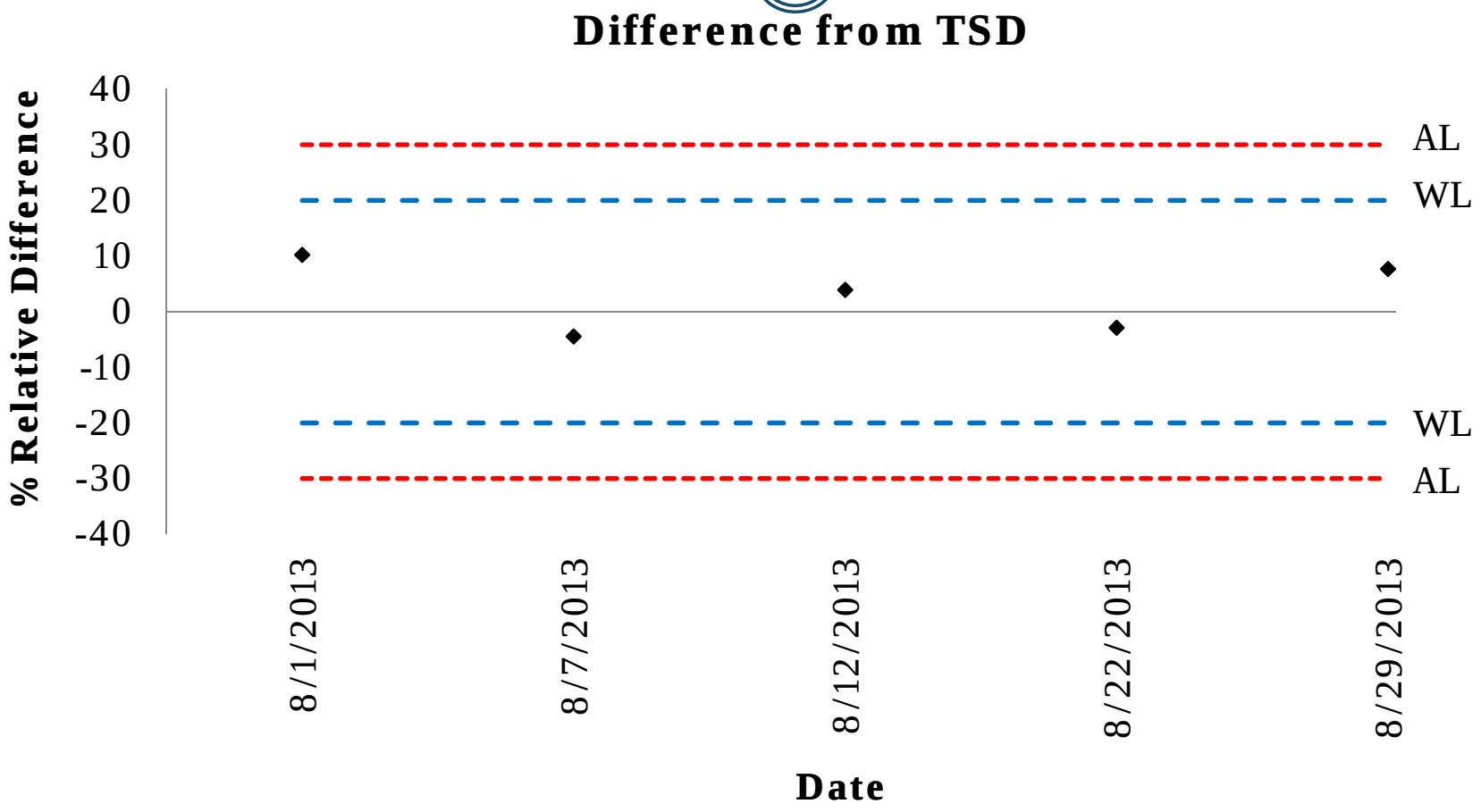
Operator Comparison Study

Operator 1: mean=488; stdev=16; rsd=3.3%

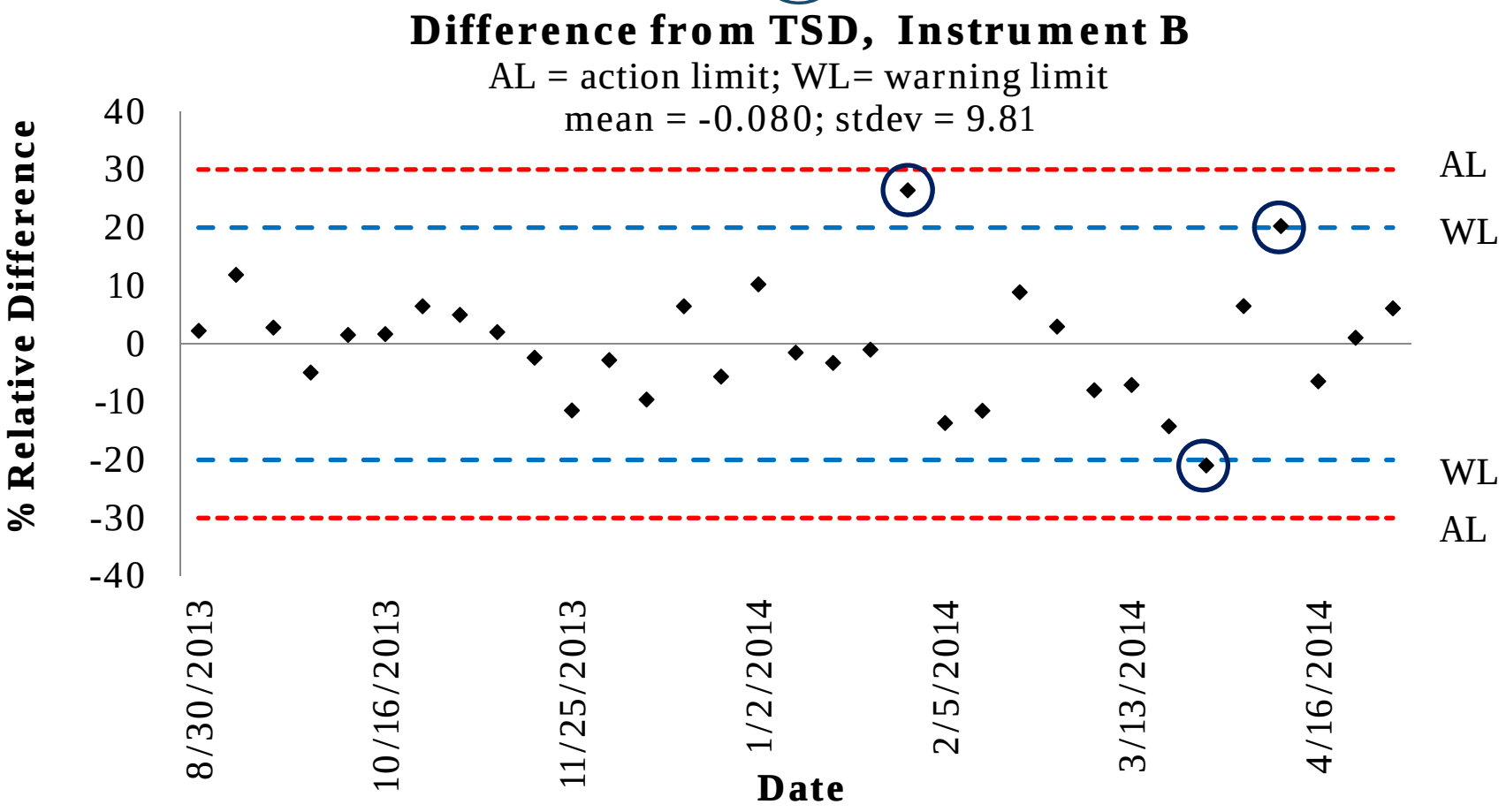
Operator 2: mean=479; stdev=17; rsd=3.6%



Inspection Monitoring Program Feedback



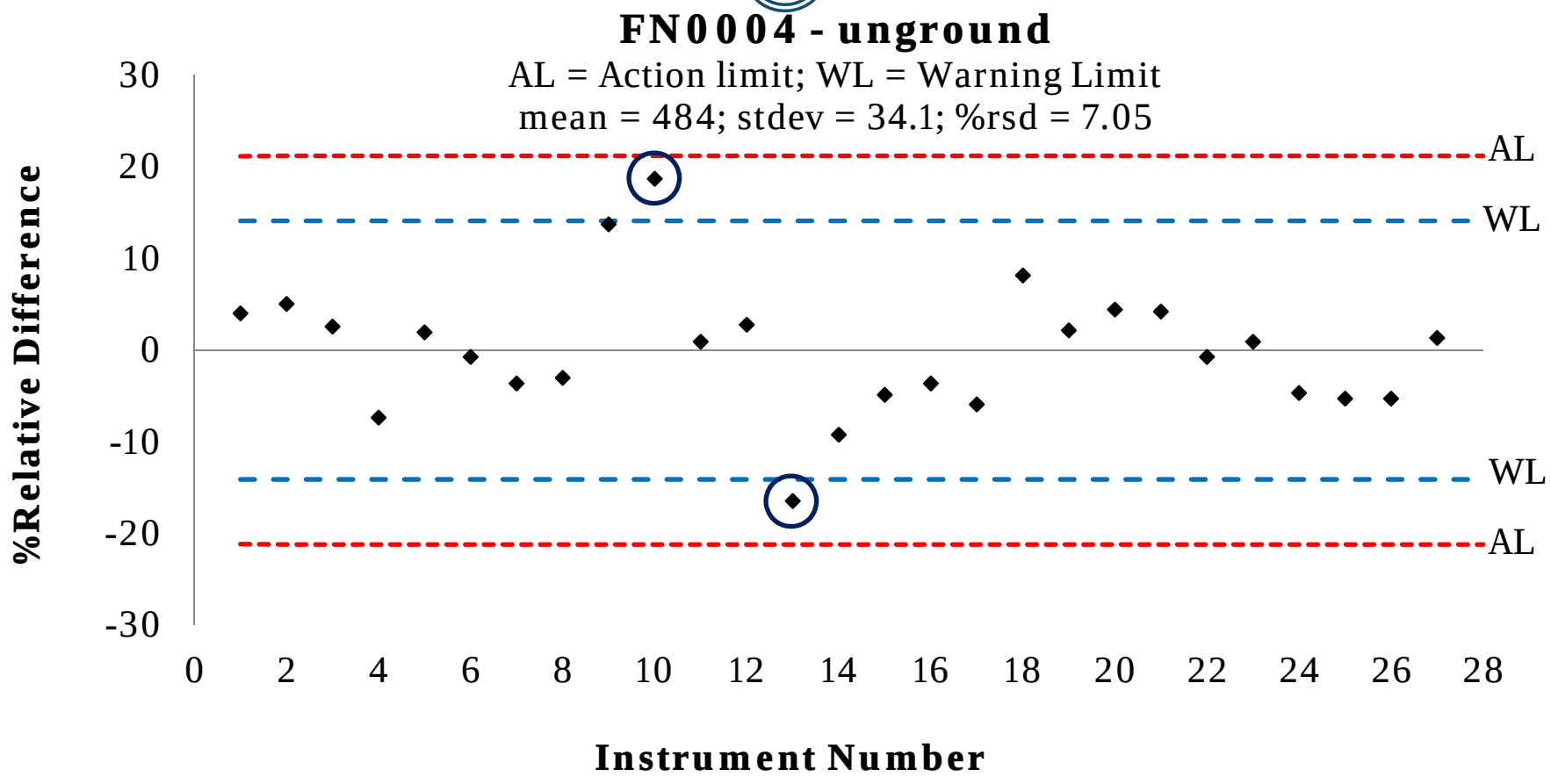
Falling Number
Pilot Program Results



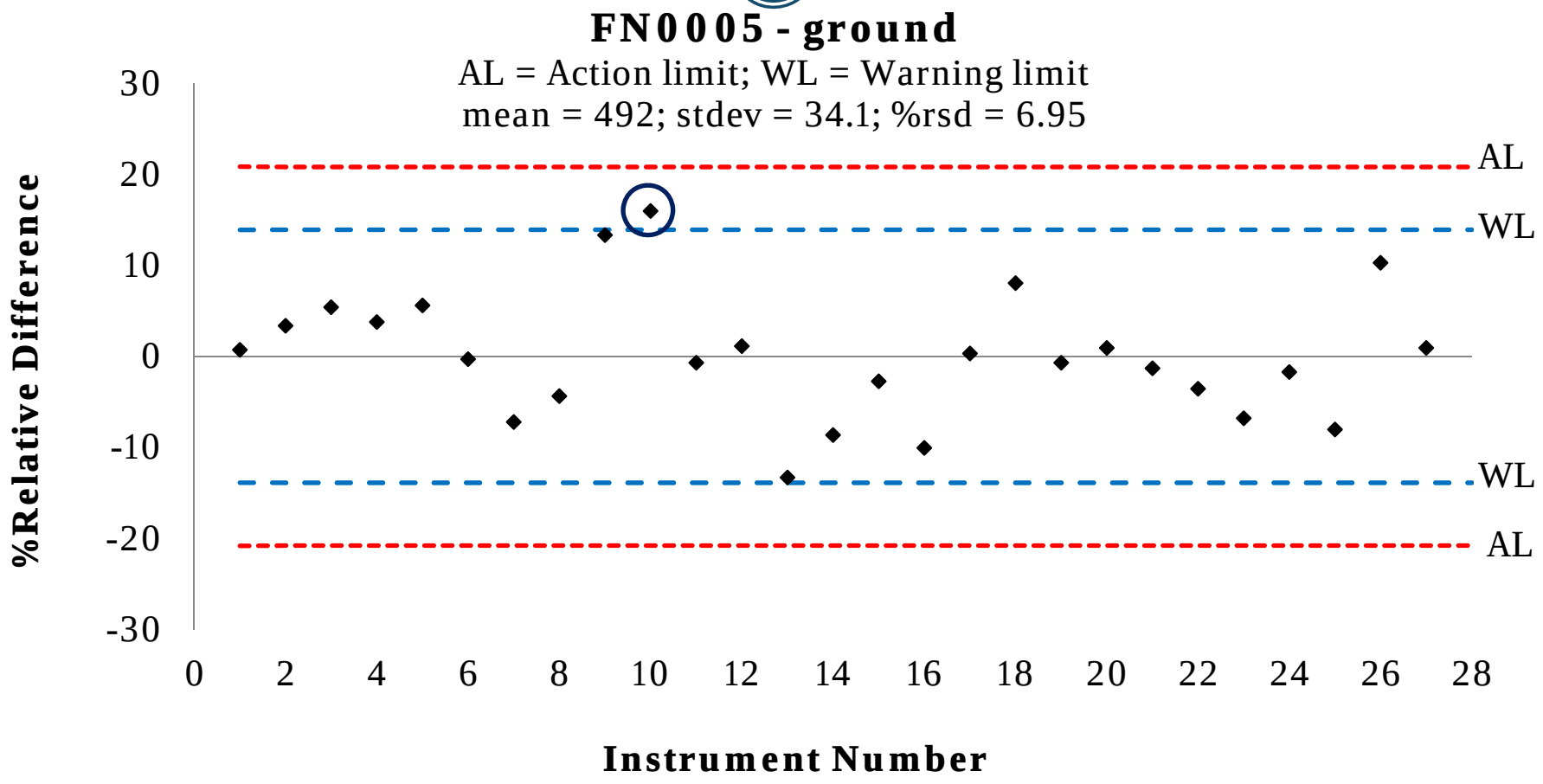
National Falling Number Quality Assurance Program

- Check sample program implementation – April 2014
  - Biannual distribution
  - System-wide performance
    - Certified reference samples sent from TSD – April 29
    - 18 official service points; 26 Instruments
    - 4 samples; 2 whole grain; 2 ground
    - Certified reference samples
    - Report sent to all service points – May 30
  - Good overall performance on this distribution

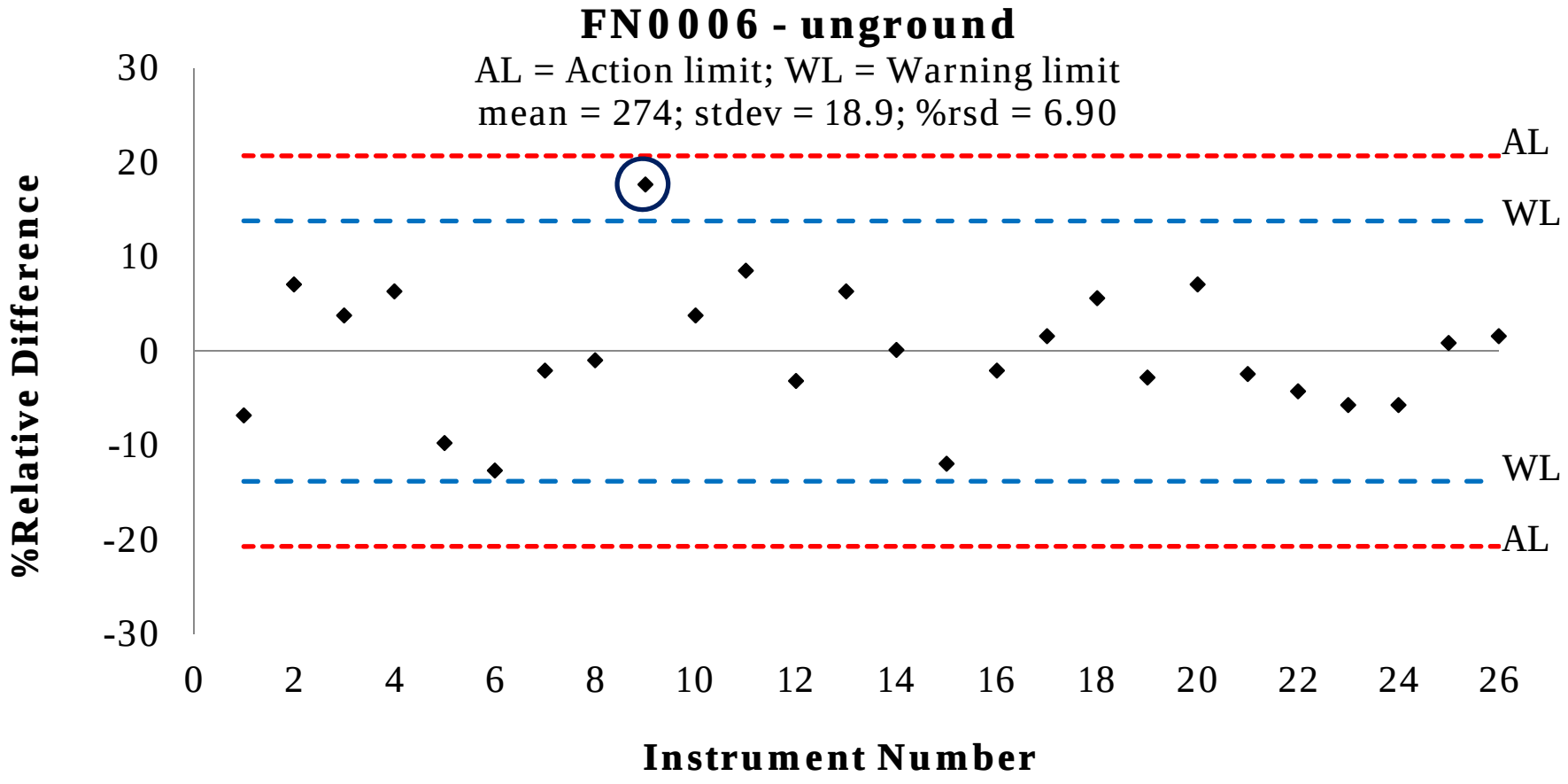
Falling Number Check Sample Results



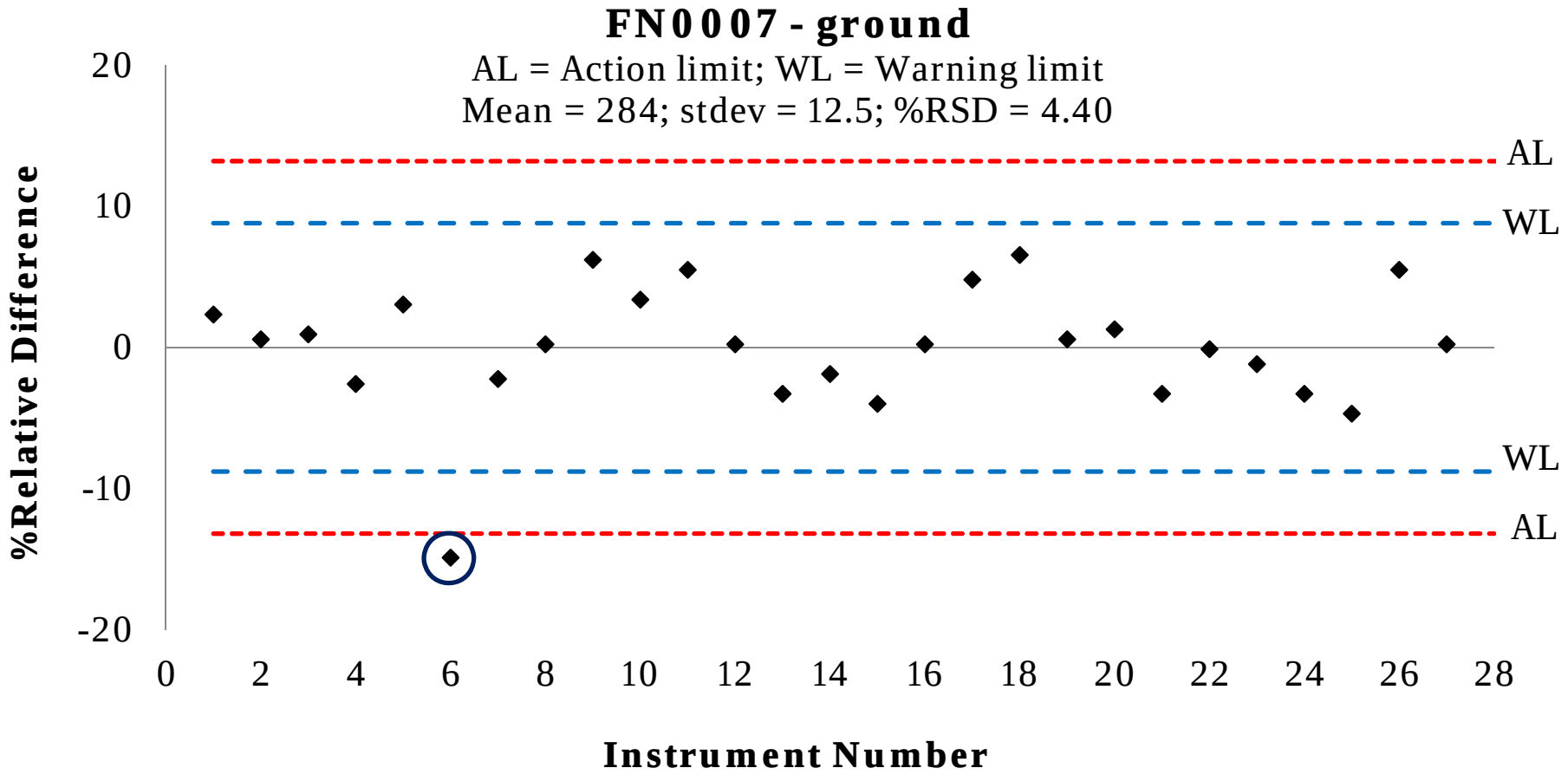
Falling Number Check Sample Results



Falling Number Check Sample Results



Falling Number Check Sample Results



Future Work

- Provide Weekly Feedback to Service Points
- Check Sample Distribution – November 2014
- Reassess program accuracy annually
  - Adjust warning and action limits, if appropriate

Questions?

Enhancing Grain Inspection Lighting

GRAIN INSPECTION ADVISORY COMMITTEE

DAVID. B. FUNK, PH.D

CHIEF SCIENTIST

TECHNOLOGY & SCIENCE DIVISION

JULY 15, 2014

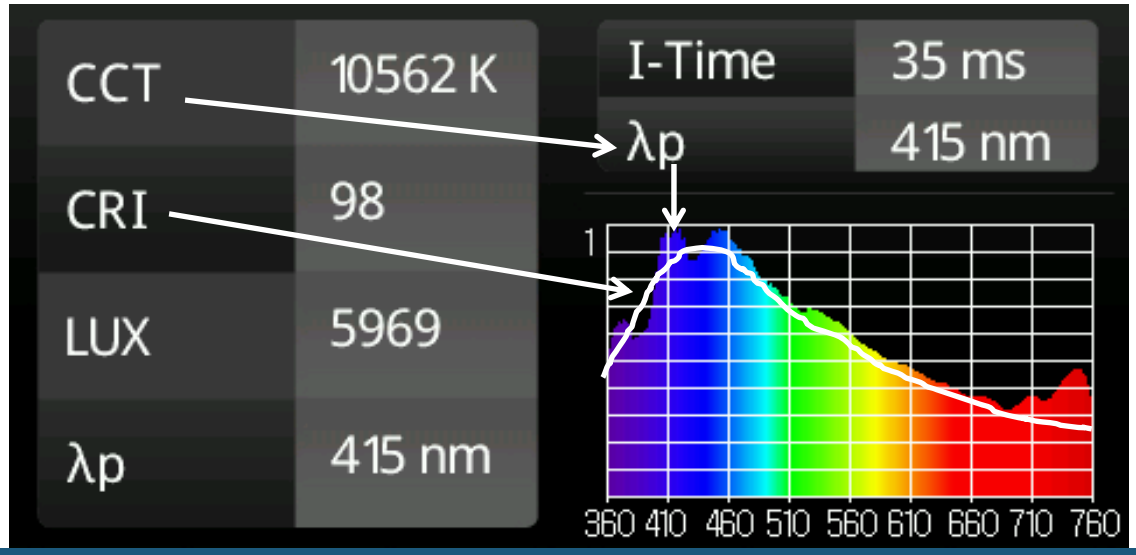
United States Department of Agriculture

Original “Standard” Lighting

FGIS Lighting Specifications

- Color Rendering Index (CRI) >= 92
- Color Temperature 7500 °K
- Rated Average Life 15,000 Hours

North Facing Sky Light



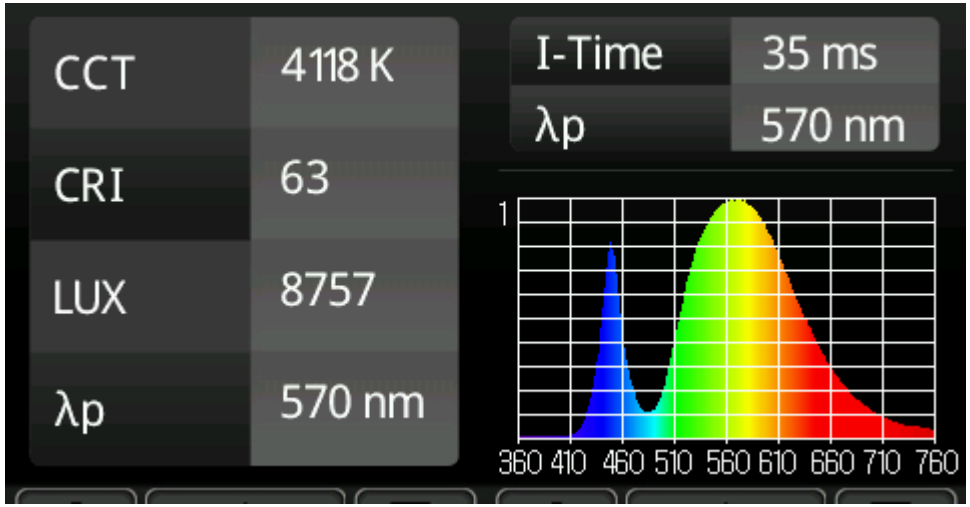
Approved T-8 Fluorescent Lamp

Offic
lamp

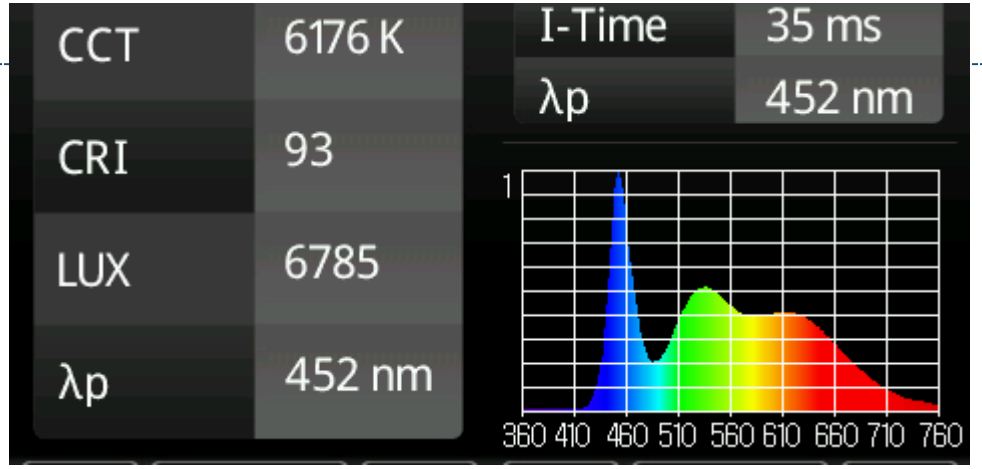
Advantages of LED Lighting

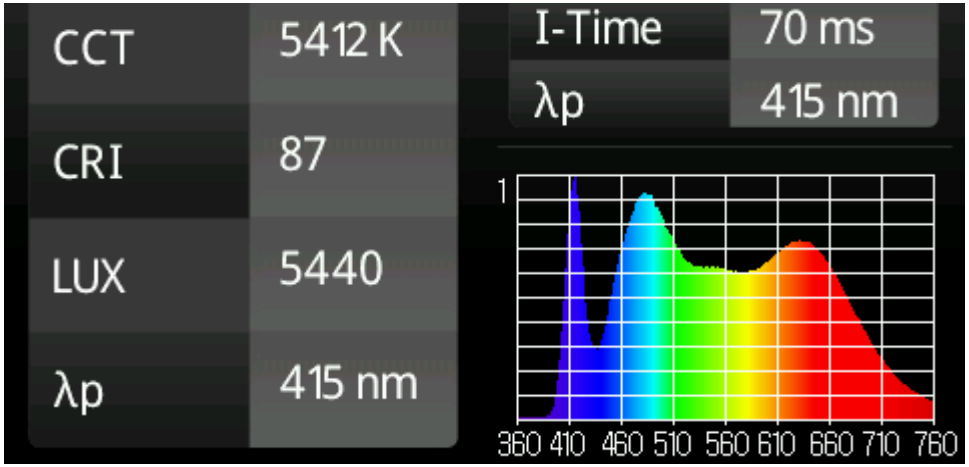
- Higher efficiency
- Longer life
- Low voltage wiring
- Suitable for custom task lighting
- Easily dimmable

LED Lighting Limitation-Low CRI



New Generation Lighting—High CRI LEDs





Challenges to Approving LED Lighting for Grading

- CRI and Color temperature specs developed for fluorescent lamps may not be appropriate for LEDs.
- Need to develop and test methods for assessing light quality and the effects of light quality on grain grading.

Methods Development Retrospective

GRAIN INSPECTION ADVISORY COMMITTEE

DAVID. B. FUNK, PH.D., D.SC. (*HC*)

CHIEF SCIENTIST

TECHNOLOGY & SCIENCE DIVISION

JULY 15, 2014

From Whence, Innovation?

- Market need
- Vision/imagination
- Confluence of technologies
- R & D knowledge and skills
- Determination

Innovation 1988-2014

- Near Infrared
  - NIRR—Technicon/DICKEY-john/Perten
    - NIRT—Tecator →Foss
      - Improved instrument standardization
      - 1225 →1226→1229→1241
      - PLS calibrations→Artificial Neural Network calibrations
  - Official NIR services
    - Wheat protein
      - Soybean protein and oil
        - Corn protein, oil, and starch
          - Barley protein
            - Wheat wet gluten

Innovation 1988 - 2014

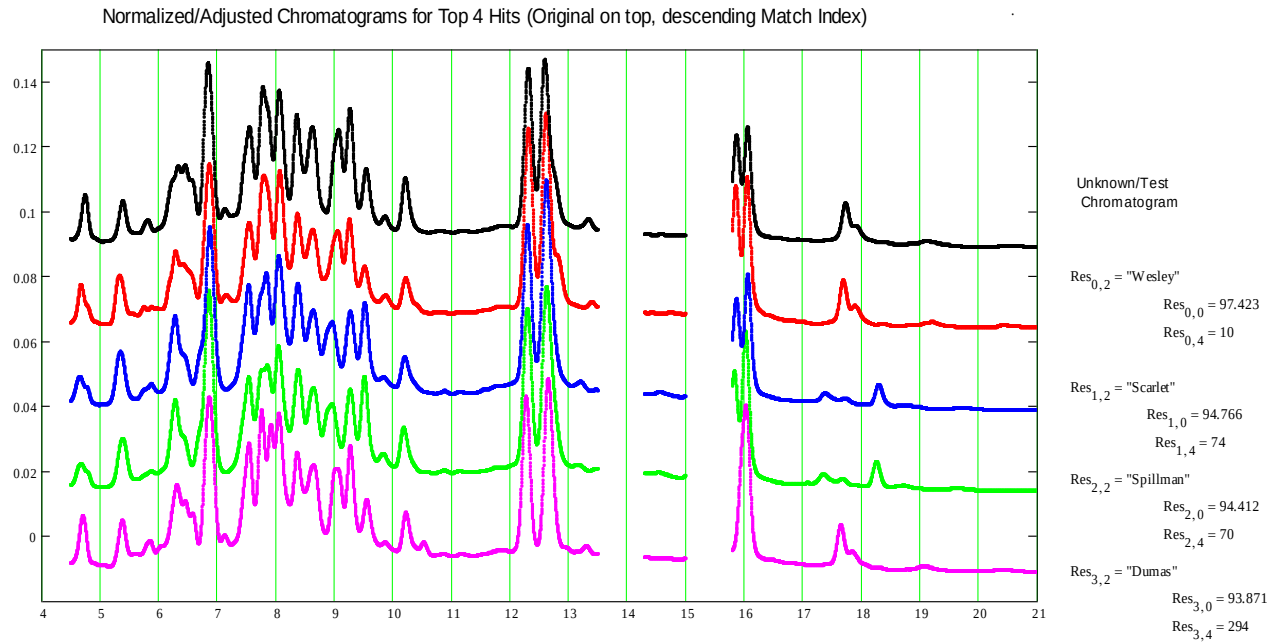
- Dielectric moisture measurement
  - Motomco Model 919
    - DICKEY-john GAC 2100
      - Unified Grain Moisture Algorithm
        - DICKEY-john GAC 2500UGMA
        - Perten AM-5200A

Innovation 1988 – 2014

- Nuclear Magnetic Resonance for Sunflower Seed Oil
  - Continuous Wave NMR
    - Pulsed NMR
      - Multiple approved models
      - Two additional models recently approved

Innovation 1988 - 2014

- Wheat Varietal ID
  - ARS developed HPLC Varietal ID method
  - TSD mathematical algorithm for matching unknown HPLC chromatograms



Innovation 2014

- Enhanced Grain Inspection Lighting
- USDA Rice Studio

To the Future!
Technology Drivers

- Military/weapons
- Space
- Globalization
- Instant communication
- Mass consumerism
- Internet of Things
- Computer gaming
- Data explosion
- Cybercrime
- Medicine
- Increased standard of living in developing countries
- Health/nutrition
- Food safety concerns
- Aging populations
- Water shortages
- Depletion of traditional energy sources

To the Future!

Emerging/Evolving Technologies

- Parallel processing
- Distributed processing
- Embedded processors
- Cloud computing and storage
- Optics—sensors and displays
- Drones/RPVs
- Robotics
- Biotechnology/genomics
- Chemistry/biochemistry
- Wearable electronics
- Voice recognition and control
- Nanotechnology
- Excellent cheap sensors
- Many others!

The Future of Innovation for the Official Grain Inspection

- Truly "new" market needs for viable official services have been and probably will continue to be rare.
- We need to deeply understand current systems and market needs.
- Continually study the confluence of new and evolving applicable technologies to improve existing services as well as address new market needs.

Enjoy the Ride!

I have!

Reauthorization

GRAIN INSPECTION ADVISORY COMMITTEE

KENDRA KLINE

ASSISTANT TO THE DEPUTY ADMINISTRATOR

JULY 15, 2014

Background

- 1976 Amendments
- Certain Provisions expire on September 30, 2015
- Process

2005 Reauthorization

- From 5 years to 10 years
- Push for delegating private inspections firms at export locations.
- Pilot Project
- Trip to Brazil/Argentina

Questions?