



United States Department of Agriculture

2012 Annual Report

Grain Inspection, Packers & Stockyards Administration

Federal Grain Inspection Service



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Federal Grain Inspection Service: 2012 Annual Report

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The Federal Grain Inspection Service

The U.S. Department of Agriculture's (USDA) Grain Inspection, Packers and Stockyards Administration's Federal Grain Inspection Service (FGIS) establishes quality standards for grains, oilseeds, pulses, and legumes; provides impartial inspection and weighing services through a network of Federal, State, and private entities; and monitors marketing practices to enforce compliance with the U.S. Grain Standards Act, as amended, (hereinafter, USGSA) and Agricultural Marketing Act of 1946, as amended (hereinafter, AMA). Through these activities, FGIS facilitates the marketing of grain, oilseeds, and related products.

FGIS administers uniform, national grain inspection and weighing programs established by the Act. Services under the Act are performed on a fee basis for both export and domestic grain shipments. USGSA requires that export grain be inspected and weighed, prohibits deceptive practices with respect to the inspection and weighing of grain, and provides penalties for violations.

Agency Mission

FGIS' primary mission is twofold: promote the marketing of high-quality grain to domestic and international buyers and maintain objective standards for grain to certify its quality as accurately as practicable. These standards define uniform and descriptive terms to facilitate the grain trade, help determine grain storability, offer users the best possible information to determine end-product yield and quality, provide market incentive frameworks, reflect the economic value-based characteristics to end users, and accommodate scientific advances in testing.

Key Activities

In administering and enforcing the Act, FGIS:

- Establishes and maintains official U.S. grain standards for barley, canola, corn, flaxseed, oats, rye, sorghum, soybeans, sunflower seed, triticale, wheat, and mixed grain;
- Promotes the uniform application of official U.S. grain standards by official inspection personnel;
- Establishes methods and procedures and approves equipment for the official inspection and weighing of grain;
- Provides official inspection and weighing services at certain U.S. export port locations, and official inspection of U.S. grain at certain export port locations in eastern Canada along the St. Lawrence Seaway;
- Delegates qualified State agencies to inspect and weigh grain at certain U.S. export port locations;
- Designates qualified State and private agencies to inspect and weigh grain at interior locations;
- Licenses qualified State and private agency personnel to perform inspection and weighing services;
- Provides Federal oversight of the official inspection and weighing of grain by delegated States and designated agencies;

- Investigates, in cooperation with the USDA Office of Inspector General, alleged violations of the Act and initiates appropriate corrective action;
- Monitors the quality and weight of U.S. grain as received at destination ports, and investigates complaints or discrepancies reported by importers; and
- Helps U.S. trading partners develop and improve their grain inspection and weighing programs.

Services provided under USGSA and AMA

Under provisions of the Act, most grain exported from U.S. export port locations must be officially weighed. A similar requirement exists for inspection, except for grain which is not sold or described by grade. Intercompany barge grain received at export port locations also must be officially weighed. The Act also requires that all corn exported from the United States be tested for aflatoxin prior to shipment, unless the contract stipulates that testing is not required.

Mandatory inspection and weighing services are provided by FGIS on a fee basis at 50 export elevators (including 4 floating rigs). Five delegated States provide official services at an additional 16 export elevators under FGIS oversight.

Under the AMA, FGIS administers and enforces certain inspection and standardization activities related to rice, pulses, lentils, and processed grain products such as flour and corn meal, as well as other agricultural commodities. Services under the AMA are performed upon request on a fee basis for both domestic and export shipments by either FGIS employees or individual contractors, or through cooperative agreements with States.

About This Report

Pursuant to section 87(f-2) of the Act, FGIS respectfully submits this report each year to the United States Congress. Activities described in this report cover fiscal year 2012 (October 1, 2011, to September 30, 2012).

After the introduction, the report is divided into six sections. Sections 2 through 4 represent agency program goals, and the last two sections provide information regarding FGIS' management initiatives and financial position.

Any mention of firm names or trade products does not imply that they are endorsed or recommended directly or indirectly by the U.S. Department of Agriculture.

Employees & Locations

As of September 30, 2012, FGIS was comprised of 471 full-time permanent employees and 113 temporary employees located at headquarters unit in Washington, DC; the National Grain Center in Kansas City, Missouri; 7 field offices; 1 Federal/State office; and 3 sub-offices. Field offices are located in Stuttgart, Arkansas; Kansas City, Missouri; Grand Forks, North Dakota; League City, Texas; New Orleans, Louisiana; Portland, Oregon; and Toledo, Ohio. FGIS also has a Federal/State office in Olympia, Washington. FGIS offers official inspection and weighing services in all areas of the United States and services for U.S. grain exported from Canadian ports.

National Grain Center Grand Opening

Construction of the National Grain Center (NGC) in Kansas City, Missouri, was completed in August 2012. The NGC is a research and development facility for the scientist, engineers, economist and analysts who establish the technical standards, methods and requirements for the Federal Grain Inspection Service (FGIS). U.S. grain, rice, and other commodities flow from farm to elevator to destinations around the world. FGIS provides farmers, handlers, processors, exporters, and international buyers with sampling, inspection, weighing and stowage examination services that accurately and consistently describe the quality and quantity of the commodities being bought and sold.

The NGC is the technology arm of the FGIS that identifies, develops, evaluates and implements technology-based solutions to grain inspection needs. FGIS' Board of Appeals and Review establishes national standards for sensory grading and adjudicates appeals of grades issued at the point of original inspection. NGC staff also confirms the quality of processed commodities purchased by USDA for distribution by the United States Agency for International Development for U.S. food aid programs.

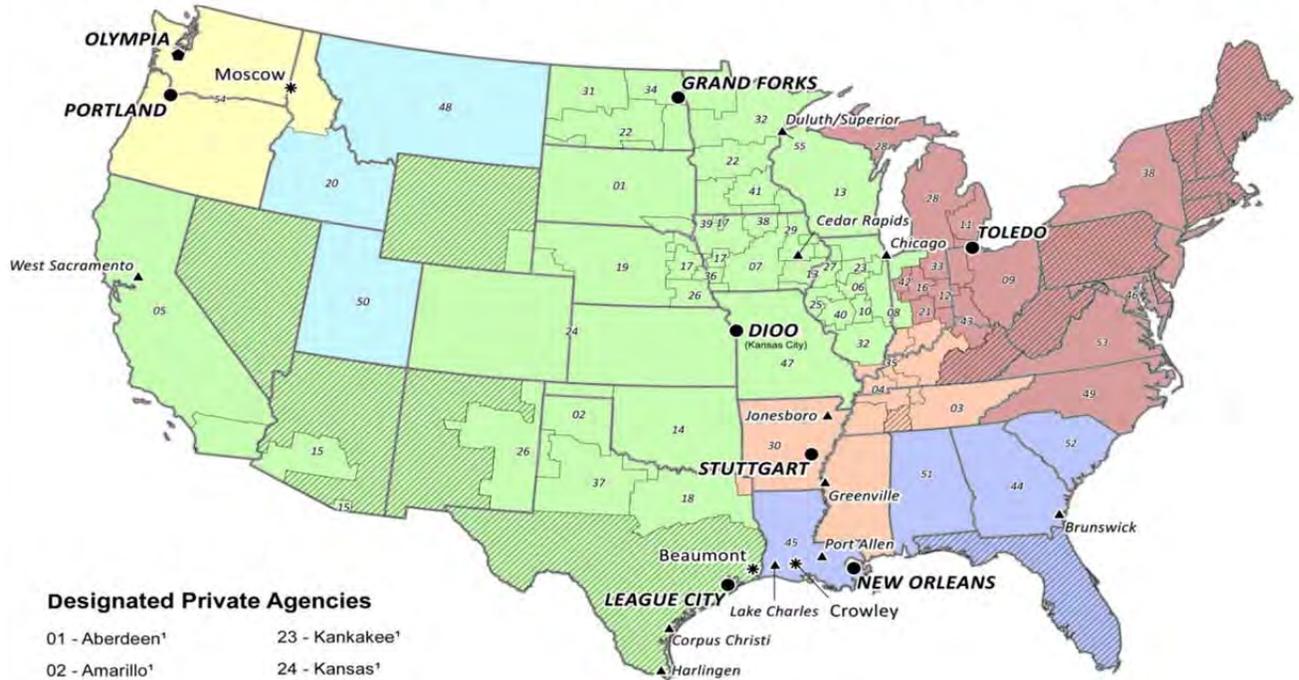
The NGC has produced ground-breaking research into the measurement of moisture in grain. GIPSA recently implemented two moisture meters based on the Unified Grain Moisture Algorithm (UGMA). The new technology, adapted into two commercially available instruments approved for use by GIPSA, improves grain moisture measurement by improving the accuracy of the measurement while reducing the cost of maintaining the calibrations used to measure moisture. The NGC has also made major improvements in the reference methods used for measuring mycotoxins in grain, and evaluates the accuracy of rapid test kits used throughout the U.S. to determine the level of mycotoxins in grain.

The renovation expanded the NGC from approximately 35,000 square feet to almost 56,000 square feet. The expansion allowed FGIS to consolidate personnel and functions from five field offices located throughout the Midwest into a single location supporting centralized inspection monitoring activities.



National Grain Center Opening
October 12, 2012
Kansas City, Missouri

OFFICIAL AGENCY GEOGRAPHIC AREAS AND FGIS FIELD OFFICES



Designated Private Agencies

- | | |
|-------------------------------------|-----------------------------------|
| 01 - Aberdeen ¹ | 23 - Kankakee ¹ |
| 02 - Amarillo ¹ | 24 - Kansas ¹ |
| 03 - Barton | 25 - Keokuk ¹ |
| 04 - Cairo | 26 - Lincoln ¹ |
| 05 - California Agri ¹ | 27 - McCre ¹ |
| 06 - Central Illinois ¹ | 28 - Michigan |
| 07 - Central Iowa ¹ | 29 - Mid-Iowa ¹ |
| 08 - Champaign ¹ | 30 - Midsouth |
| 09 - Columbus | 31 - Minot ¹ |
| 10 - Decatur ¹ | 32 - North Dakota ¹ |
| 11 - Detroit | 33 - Northeast Indiana |
| 12 - East Indiana | 34 - Northern Plains ¹ |
| 13 - Eastern Iowa ¹ | 35 - Ohio Valley |
| 14 - Enid ¹ | 36 - Omaha ¹ |
| 15 - Farwell Southwest ¹ | 37 - Plainview ¹ |
| 16 - Frankfort | 38 - Schaal ¹ |
| 17 - Fremont ¹ | 39 - Sioux City ¹ |
| 18 - Gulf Country ¹ | 40 - Springfield ¹ |
| 19 - Hastings ¹ | 41 - State Grain ¹ |
| 20 - Idaho | 42 - Titus |
| 21 - Indianapolis | 43 - Tri-State |
| 22 - Jamestown ¹ | |

Designated States

- 44 - Georgia
- 45 - Louisiana
- 46 - Maryland
- 47 - Missouri¹
- 48 - Montana
- 49 - North Carolina
- 50 - Utah

Designated and Delegated States

- 51 - Alabama
- 52 - South Carolina
- 53 - Virginia
- 54 - Washington

Delegated States

- 55 - Wisconsin

Field Office Circuits

- | | |
|---|---|
| Domestic Inspection Operations Office (DIOO) ¹ (Kansas City) | FGIS Field Offices |
| Grand Forks | Federal/State Office |
| New Orleans | FGIS Sub-Offices |
| Portland | FGIS Duty Points |
| Stuttgart | Official Agency Boundaries |
| Toledo | Unassigned Areas |
| | State Boundaries |

¹Oversight is divided between DIOO (Grain/Processed Commodities), Grand Forks (Pulses), and Stuttgart (Rice)

Section I: Outlook 2013

U.S. Standards for Grain

FGIS regularly reviews the official standards for grain to ensure that the standards remain relevant to the marketplace. In 2013, FGIS will continue its review of the U.S. Standards for Wheat, originally promulgated in 1916. FGIS anticipates publication of a Final Rule in the *Federal Register* addressing 12 comments received from a Notice of Proposed Rulemaking published in 2012.

In 2013, FGIS will continue with a review of the barley standards, which were originally promulgated in 1926. The last revision of the barley standards occurred in 1997. In 2011, FGIS sought comments from barley stakeholders which will be used as the basis for a proposed rule in 2013.



Modernization of Laboratories

FGIS works at on-site laboratories at each location where export cargo shipments are inspected. Per the Regulations, these official inspection laboratories are provided and maintained by the exporter. FGIS provides guidelines for the design, maintenance, and location of these laboratories to provide for accurate and efficient inspection service, without sacrificing the health or safety of our employees. The export grain facilities began providing FGIS with export inspection lab space in the mid/late 1970's when FGIS became authorized under the USGSA to perform mandatory export inspection services. Recently, several new export inspection labs were either constructed or proposed, which presented an opportunity for FGIS to design a modern lab.

Pesticide Testing and Method Development

FGIS provides pesticide residue testing services for applicants and for domestic and export surveys. In addition, FGIS develops analytical methods to support these activities, which play a critical role in demonstrating the quality of U.S. grain as it relates to health, safety, and adherence to U.S. and international regulatory limits. In FY 2012, FGIS made improvements to one of its methods for the analysis of pesticide residues in corn and soybeans by using gas chromatography/tandem mass spectrometry for more effective removal of chemical interferences and for higher throughput than previously obtained with older equipment. In FY 2012, FGIS participated in the Pesticide Data Program (PDP), a cooperative effort of the USDA, U.S. Environmental Protection Agency, and participating States to monitor pesticide residue levels in fruits, vegetables, grain, dairy products, and other foods. FGIS began the development of two analytical methods for measuring pesticide residues in wheat grain targeted for an upcoming PDP survey in FY 2013.

Service Delivery of Modernization

FGIS continues to improve its inspection and weighing program with enhancements to *FGISonline*. In 2013 the *FGISonline* team will focus their efforts on improving the efficiency and effectiveness of service delivery by streamlining business practices through technology. The team is also focusing on identifying how *FGISonline* can support the objectives of the quality program and meet the needs of the future in light of opportunities with new technologies.

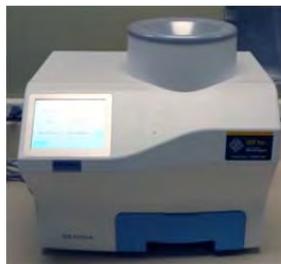
As part of this modernization work, in 2013 FGIS will decommission two legacy systems currently running on mainframe computers and integrate these program applications into *FGISonline*. Centralization of online business services will contribute to the ongoing activities to improve data structures and reporting capabilities within *FGISonline*.

FGIS will complete an automated barge certificate program in 2013. This will allow barge certificates to be issued from automated weighing systems in export elevators without manual data entry.

Section II: Providing the Market With Terms and Methods for Quality Assessment

Release of Cutting Edge Moisture Measurement Technology

Moisture measurement remains one of the most important official and commercial grain inspection activities because of moisture content's impact on end-use value (dry matter content) and storability. FGIS research has resulted in the Unified Grain Moisture Algorithm (UGMA)—an approach to grain moisture measurement that has shown its potential to improve grain moisture measurement by: 1) yielding improved accuracy, 2) permitting multiple manufacturers to design moisture meters that can use common calibrations and give equivalent results, and 3) reducing the cost of on-going calibration maintenance. The FGIS Grain Inspection Advisory Committee (GIAC) has consistently encouraged FGIS to proceed with implementation of the new UGMA moisture measurement technology to better serve the Agency's stakeholders. In FY 2012, FGIS performed an evaluation of the effects of moisture gradients within grain samples (such as can occur at harvest) for different moisture technologies. The UGMA technology showed significant improvement relative to the older official moisture meter.



*Perten Instruments'
AM-5200-A*



*DICKEY-john
Corporation's GAC
2500UGMA*

Also, the UGMA technology was found to yield much better accuracy for corn of varying test weights. Based on these results, the GIAC recommended that FGIS hasten the implementation of UGMA moisture meters, starting with corn and other major fall-harvested grains in September 2012. FGIS developed evaluation criteria for "UGMA-Compatible" moisture meters, evaluated and approved two commercially-available models, purchased moisture meters, performed initial performance verifications for all official UGMA meters, developed final calibrations, and implemented the UGMA moisture meters for corn, soybeans, sorghum, and sunflower seed on September 10, 2012. In FY 2013, FGIS will finalize calibrations for the remaining commodities under its jurisdiction and plans to implement the UGMA moisture meters for those commodities on May 1, 2013. The transition dates for different crops were selected to minimize the effects on the value of grain stocks.

Wheat

Wheat Functionality: The intrinsic qualities of wheat affect the quality of end products. To best determine the ability of wheat to meet specific end-use needs, accurate test methods are needed to differentiate functional qualities. These methods should also be practical, rapid, and reproducible among different laboratories to provide value transparency from the producer to the processor and provide information that better predicts appropriate end-uses, thereby enhancing the marketability of U.S. wheat.

Farinograph tests are widely used to determine certain quality factors. FGIS studies have shown significant differences in Farinograph test results among commercial laboratories, which can lead to confusion in wheat markets. In 2008, FGIS initiated a multiple laboratory collaboration that included the instrument manufacturer to identify ways to improve standardization of the Farinograph method among commercial laboratories. In 2009, collaborative studies identified the addition of water and data processing algorithms as additional sources of significant Farinograph method variation. Since 2010, FGIS has continued collaborative studies of the Farinograph method with the manufacturer, who introduced a new Farinograph model in 2012 that incorporated automated water addition and a more flexible software platform. In 2012, FGIS evaluated the new automated model, developed FGIS procedures for using the instrument, and successfully installed those procedures on another automated model instrument. In 2013, FGIS plans to further test FGIS method reproducibility among several wheat functional property testing labs in the U.S. using the new automated model instrument to improve the Farinograph method in the marketplace.



Gluten compression recovery testing

Gluten strength is one of the most important aspects of wheat functionality because it affects bread dough's ability to rise; however, the market lacks a consistent definition of this characteristic. Since 2008, FGIS has worked with USDA's Agricultural Research Service, academia, and industry to develop new standardized methods for precisely and reproducibly describing the

viscous and elastic properties of gluten. In FY 2009, the collaborative work led to private industry's development of a prototype. This gluten test successfully differentiated gluten strength among and within wheat classes. In FY 2010, FGIS evaluated the relationships between popular empirical dough rheological tests and the new prototype instrument. Some clear

Wheat (continued)

relationships were identified that may pave the way for a single international test for wheat functionality based on gluten strength. In FY 2011, FGIS continued its collaboration to refine gluten strength tests and assess their suitability, relevance, and value for use in the wheat marketing system with various commercial and academic entities. The private industry collaborator in the project developed new near-commercial visco-elastic test prototypes with advanced technologies and delivered them to the FGIS laboratory for further evaluation. In FY 2012, FGIS began evaluating the near-commercial prototypes and developing FGIS test procedures to assess gluten strength. In FY 2013, FGIS will continue to systematically evaluate the new instruments and participate in collaborative studies to further evaluate the method's effectiveness and value in describing the functional properties of wheat.

Falling Number test is an important measure of sprout damage in wheat and an indicator of performance of wheat during the processing of wheat flour for making various wheat products. In FY 2013, the existing FGIS Falling Number testing program will be strengthened through a new monitoring program to ensure the consistency of results among official inspection and testing labs.

Wheat classing continues to be one of the most difficult challenges within the official inspection system. There is a need for an objective method to perform varietal identification of wheat cultivars (and thereby, classing) to augment visual analyses. FGIS has established a reference High Performance Liquid Chromatography (HPLC) method that is based upon work performed at the USDA's Agricultural Research Service laboratory in Manhattan, Kansas, and has demonstrated the utility of the method. In FY 2009, FGIS developed a database of all relevant U.S. wheat varieties and a mathematical algorithm for identifying unknown varieties. For single-variety samples, the varietal identification success rate was near 100 percent. In FY 2010, FGIS developed a more efficient matching algorithm and investigated the transferability of the method to another HPLC instrument. In FY 2011, FGIS tested and improved the accuracy and generality of this method for objectively identifying wheat varieties using results obtained from another laboratory. This test is now routinely used to assist official inspectors at FGIS' Board of Appeals and Review in classifying challenging wheat samples. In FY 2012, this method was further refined to test single kernels of wheat. In FY 2013, this method will be further tested in collaboration with other U.S. laboratories.

Mycotoxin and Biotechnology Rapid Test Evaluations

The grain industry needs fast, reliable tests to detect and quantify the incidence of fungal-produced mycotoxins in grain and to detect the presence of genetically-engineered (GE) traits in grains. To ensure that commercially available tests provide reliable results, FGIS offers a performance evaluation and certification program.

In FY 2012, a total of 40 rapid test kits were evaluated for the analysis of mycotoxins (aflatoxins, deoxynivalenol, fumonisins, ochratoxin A, and zearalenone). Of the 40 test kits, 32 met the FGIS performance criteria and were certified. Three test kits were evaluated and certified for detection of GE events (Alpha amylase, Vip3a, and Cry 34Ab1 proteins).



Reference Method Analyses

FGIS establishes and performs reference methods for protein, moisture, oil, fatty acid composition, and mycotoxins. These methods are used to maintain the accuracy of current testing in the official inspection system and to support development of new rapid field tests. The protein, moisture, oil, and fatty acid reference analyses support the near-infrared spectroscopic, dielectric, and nuclear magnetic resonance instruments used for rapid inspection at field locations that perform official testing. The mycotoxin reference analyses support the evaluation and standardization of rapid tests for official and commercial grain inspection, support quality assurance programs to ensure consistent and reliable testing results, and are available for Board Appeals upon request. In FY 2012, FGIS validated improved reference methods for the determination of fumonisins in corn and ochratoxin in wheat.

Biotechnology

Biotechnology Proficiency Program: The FGIS Biotechnology Proficiency Program now involves 160 organizations on five continents (Africa, Asia, Europe, and North and South America), with more than 80 percent of the participants from organizations outside the United States. This program, which FGIS initiated in 2002, enables organizations to assess and improve their accuracy and precision in identifying GE events in grains and oilseeds. FGIS disseminates blind test samples to participants bi-annually and compiles and disseminates the results of tests.

Biotechnology (continued)

Respond to Inadvertent Release of Unapproved Traits into the Marketplace: In recent years, few instances of inadvertent releases of unapproved GE events into the U.S. grain handling system have occurred. When such an inadvertent release occurs, a rapid response is necessary to identify and validate methods to detect the trait and thereby protect the integrity of U.S. grain markets. The testing methods must be highly specific and sensitive to effectively maintain confidence in U.S. grain marketing systems. Current detection methods within FGIS' Biotechnology Laboratory focus on high-throughput DNA extraction methodologies which will enable FGIS to more effectively respond to inadvertently released products. FGIS is in the initial stages of development of high throughput DNA extraction methods for corn, soybeans, and rice. FGIS assists government and private laboratories that use protein and DNA-based technologies by performing impartial third-party verification of their methods for both qualitative and quantitative detection of transgenic events in GE crops. FGIS involvement in responding to such incidents facilitates harmonization of sampling plans and international testing for GE grains and oilseeds. FGIS provides expertise to USDA's Animal and Plant Health Inspection Service when responding to inadvertent releases of unapproved GE events.



FGIS Employees

Harmonizing Biotech Reference Methods: There is a need for highly specific and accurate tests for the various GE crops grown in the United States. FGIS has developed intra-laboratory-validated real-time polymerase chain reaction methods and has evaluated the accuracy, reliability, and proficiency of publicly available methods used to detect and identify GE grains and oilseeds. FGIS participated on a scientific panel of experts engaging U.S. stakeholders and influencing outcomes on issues related to testing of GE traits in grains with the goal of developing global scientific consensus regarding the analysis of transgenic events. FGIS continues to collaborate with international organizations such as Codex Alimentarius, International Organization for Standardization, American Association of

**Sensory
Reference
Materials**

Cereal Chemists, American Oil Chemists' Society, Institute for Reference Materials and Measurements, and the Canadian Grain Commission to harmonize testing technologies for GE grains and oilseeds. Many of these collaborations result in publications in peer-reviewed scientific journals.

FGIS' Visual Reference Image (VRI) system serves as the primary tool to ensure standardization of FGIS' sensory (visual) grain inspection services. In 2012, FGIS completed a multi-year project of image upgrades, edits, and replacement of the entire current official VRI library. FGIS also created a new visual reference image to be added to *Bean VRI 12.0, Water Blistered*, for white/off-white beans exhibiting an orange water blister.



Sorghum Odor

Sorghum odor determination is inherently difficult because of the range of odors present. Sorghum end-users may find different types and levels of odor acceptable based on their preferences and the grain's intended end-uses. This variance poses many challenges for the sorghum industry. In the spring of 2009, FGIS established a Sorghum Odor Taskforce with representatives from a cross-section of the sorghum industry. FGIS' goals were to understand the needs of end-users; understand the challenges for producers and handlers; gain data and background information; and achieve a common understanding as to the acceptability of various odors and levels of intensity in grain sorghum. Sorghum "storage musty" odor was identified as a particular problem.



FGIS Employee

FGIS engaged a sensory expert from Kansas State University (KSU)—who works closely with USDA's Agricultural Research Service—to develop reference materials for use by both inspectors in the official system and by industry to assist in determining the acceptability of grain sorghum odors.

In FY 2010, FGIS assisted KSU researchers in the planned project. KSU successfully identified chemical compounds that could be used to "spike" clean sorghum to create "storage musty" reference samples. KSU conducted shelf-life tests to determine which of the chemical were suitable for use over extended periods. FGIS provided KSU additional samples to represent "clean/okay" and "storage musty" sorghum and participated in an initial experiment to assess the adequacy of KSU's suggestions for "spiked" reference samples.

In the spring of 2011, FGIS successfully conducted two multi-state sorghum surveys to verify that KSU had successfully identified the chemical compounds (Geosmine and 1, 2, 4-Trimethoxybenzene) that mimic "storage musty" sorghum odor.

In the summer of 2011, FGIS reconvened the Sorghum Odor Taskforce to assess the chemical reference sample created by KSU. The results were presented to the Grain Inspection Advisory Committee, who resolved that FGIS continue working on sorghum odor. In continuing this effort, reach out for industry and end-user feedback to set a 'storage musty' sorghum odor reference that refers to end-user."

Sorghum Odor (continued)

After reviewing the survey results, taskforce results and sorghum end-users by sector, FGIS selected a chemical “recipe” that will be used henceforth as the reference for “storage musty” sorghum odor. The reference sample consists of defined concentrations of Geosmine and 1, 2, 4-Trimethoxybenzene added to a base sample of stored sorghum that has an “okay” odor.

During FY 2012, with the assistance of KSU, FGIS created reference sample materials and trained all official inspection personnel to be calibrated to the reference sample when assessing whether stored sorghum has a musty odor. FGIS distributed the reference samples to all official inspection laboratories that inspect sorghum and began routine use of the reference samples for maintaining close alignment among official inspectors. Responses from grain inspectors and the sorghum industry have been very positive. In FY 2013, FGIS will continue to supply sorghum odor reference samples to official inspectors and will investigate whether similar chemical reference samples are needed to improve consistency in assessing other types of grain odors.

Standardizing Commercial Grain Inspection Equipment

In 2012, FGIS continued the cooperative effort among FGIS, the National Conference on Weights and Measures (NCWM), and the National Institute for Standards and Technology to standardize commercial inspection equipment including moisture meters, near-infrared analyzers (for protein, oil, and starch), and test weight modules contained within moisture meters and near-infrared analyzers. FGIS served as the sole evaluation laboratory for grain inspection equipment under the NCWM’s National Type Evaluation Program (NTEP). FGIS collected grain moisture meter calibration data for seven instrument models as part of the NTEP on-going calibration program. Calibrations developed in this program provide traceability back to the official FGIS moisture program and air oven reference method and are used in the majority of moisture meters used in commercial grain transactions throughout the United States.

The NTEP laboratory coordinated issuance of Certificates of Conformance and effective dates for moisture calibrations with the FGIS implementation of two new official moisture meter models for use with fall harvested grains. This close coordination ensured that state-regulated commercial moisture meter users were not precluded from using the same meters and calibrations as those used in official inspection. FGIS will continue to effectively use NTEP calibration data in the transition to the new official moisture measurement technology.

In 2013, FGIS will collect grain moisture meter calibration data for six NTEP models and will conduct NTEP testing for new grain inspection equipment models upon request. With the completed renovation of NTEP laboratory testing facilities, evaluation of additional grain analyzer models is also anticipated for the upcoming year.

Rice

Rice Enrichment: Rice is routinely fortified with various minerals such as iron and vitamin supplements to enhance nutritional value. Periodically, field offices and official agencies receive requests from rice marketers to test for the presence or absence of enrichment in milled rice. In FY 2011, FGIS developed a rapid Prussian blue test for testing rice enrichment. Beginning in March 2012, FGIS offered the Prussian blue rapid test for enriched rice.



Prussian blue test: After addition of chemicals to rice, distinct blue color develops if enrichment is present

New Rice Sheller: In 2011, FGIS completed a project begun at the request of the California rice industry to evaluate a different rice sheller for possible official use in grading California-grown short and medium grain rice. Industry experience with the new sheller suggested that its use could potentially improve measurement consistency and reduce analysis time and machine maintenance costs relative to the rice sheller currently approved for official inspection. Customer response to the new sheller was positive in its first full year of use in the official system.

Rice Surface Lipids: In 2012, FGIS developed a preliminary near-infrared (NIR) calibration to rapidly predict rice surface lipid content. New laboratory equipment was acquired and test procedures were refined to provide the reference values needed for calibration development. Surface lipid measurements have the potential to supplement and perhaps replace official degree of milling determinations. In 2013, FGIS plans to work with the rice industry to validate the rice surface lipid calibration and assess its usefulness in describing the extent of bran removal for commercially milled rice.

**Rice
(continued)**

Rice Broken Scanner: In 2013, FGIS plans to investigate the use of scanner technology to determine percent broken kernels in rice samples. The imaging instrument currently used to determine rice broken kernels is no longer manufactured and is not fully supported. The original instrument was expensive and proved to have limited application in grain inspection. Lower cost, widely available, scanner technology could provide a viable alternative to grain inspectors' visual assessments of percent of broken kernels in milled rice.

Sampling Grain

Sampling is critical to the accuracy and integrity of FGIS results. In FY 2012, FGIS developed and implemented the drop sample testing procedure as an alternative to current but antiquated methods of check testing mechanical diverter sampling systems. The new method was communicated to stakeholders via publication of FGIS PN-12-02: Check Testing of Diverter-Type (D/T) Samplers: Drop Sample Test Option. The drop sample testing method is successfully being used in the domestic and export facilities. FGIS continues to address safety concerns associated with the current testing methods while working to provide more precise measurements of the performance of the diverter-type sampling systems.



Inspection of DT Sampler

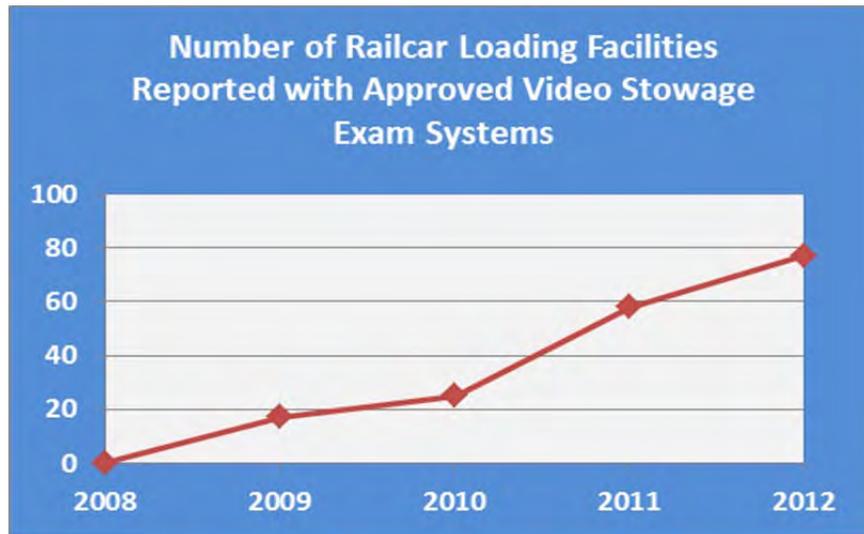
**Improving
Employee Safety
for Railcar
Stowage Exams**

Managing and reducing the hazard of falling from railcars is a priority of both FGIS and loading facilities. FGIS, in conjunction with cooperating loading facilities, determined in many locations that it is feasible for an inspector to perform pre-loading stowage examinations from inside the inspection lab using video cameras mounted above the cars. This eliminates the need to climb on top of the railcars to perform the inspection. With this arrangement, the rail cars are examined a few minutes before they are loaded and the need to climb on top of railcars is eliminated.

Utilizing Video Technology

As of October 2012, 77 facilities have been reported to FGIS as having video stowage exam systems which are approved and operational. This represents an increase of 19 facilities since the 2011 report.

The following chart shows the increase in rail car stowage exam systems since the start of the program in 2008:



Promoting U.S. Grain to International Customers

FGIS personnel frequently meet with delegations visiting from other countries to brief them on the U.S. grain marketing system, our national inspection and weighing system, U.S. grain standards, and FGIS' mission. Many of these delegations are sponsored by USDA Cooperator organizations including U.S. Wheat Associates and U.S. Grains Council, which arrange visits to grain production areas, FGIS field offices, onsite laboratories at export grain elevators, and the National Grain Center in Kansas City, Missouri.

Briefings at the National Grain Center are tailored to address each group's interests and concerns. Presentations include explanations of the various services available from FGIS, the Agency's use of the latest technology to provide grain traders with accurate and reliable inspection and weighing information and, for importers or potential importers new to the U.S. grain market, information on contracting for the quality they desire. Often the group receives training on analytical testing procedures and grain inspection methods and procedures.

These briefings foster a better understanding of the entire U.S. grain marketing system and serve to enhance purchasers' confidence in U.S. grain. Ultimately, these efforts help move our Nation's harvest to end-users around the globe.



An FGIS employee conducting a seminar for Vietnamese officials in Hai Phong, Vietnam

Visiting Trade and Governmental Teams

During 2012, FGIS personnel met with 36 teams from 24 countries.

- | | |
|---------------------------|---------------------|
| Brazil | Japan |
| Canada | Korea |
| China | Libya |
| Colombia | Mexico |
| Dominican Republic | Philippines |
| Egypt | Russia |
| El Salvador | Serbia |
| France | South Africa |
| Guatemala | Switzerland |
| Indonesia | Taiwan |
| Ireland | Ukraine |
| Israel | Venezuela |



An FGIS employee at a corn starch plant in Jakarta, Indonesia providing instruction to local quality control personnel about the U.S. standards for corn

International Activities

Technical Assistance: In FY 2012, FGIS responded to customers' needs for technical assistance in foreign markets. Exporters, importers, and end-users of U.S. grains and oilseeds, as well as other USDA agencies, USDA Cooperator organizations, and other governments, occasionally ask for FGIS personnel to provide expertise. These activities include representing the Agency at grain marketing and grain grading seminars, meeting with foreign governments and grain industry representatives to resolve grain quality and weight discrepancies, helping other countries develop domestic grain and commodity standards and marketing infrastructures, assisting importers with quality specifications, and training local inspectors in U.S. inspection methods and procedures. Such activities are typically funded through various programs administered by USDA's Foreign Agricultural Service (FAS), USDA's Farm Service Agency, or directly by FGIS.

Corn Quality Survey: FGIS coordinated with representatives of U.S. Grains Council to conduct an export corn survey. The corn quality survey was conducted on corn exported through the Gulf and Pacific Northwest via ship in February and March of 2012. GIPSA assisted with the survey by collecting samples, grading and testing the corn, and providing export inspection data. The survey will be conducted annually.



*An FGIS employee taking samples
for a Korean-US corn sample comparison in
Gunsan, South Korea*



An FGIS employee participated in an export sampling project at the Taeyoung Grain terminal, Port of Pyeongtaek in South Korea

Corn to Korea

Korea Corn Quality Assessment Project: Feed buyers in Korea have raised concerns about inferior corn quality over the past few years. In July 2012, U.S. Grains Council and the Korean Feed Association in conjunction with FGIS monitored the levels of broken corn and foreign material, test weight, and moisture in three shipments of U.S. Yellow corn to Korean ports. An FGIS representative performed additional sampling of shipholds at loading and traveled to Korea to sample them when they arrived.

Soybeans to China

China Soybean Vessel Surveying Project: The U.S./China Memorandum of Understanding (MOU), which addressed China's concerns over soybean quality, plant health, and food safety of soybeans, was signed in December 2010. Stemming from the MOU, officials from China's Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and USDA agreed to conduct a joint survey of four U.S. soybean vessels to address their concerns regarding treated soybean seeds and other quality factors. Representatives from FGIS, Animal and Plant Health Inspection Service (APHIS), FAS, American Seed Trade Association, North American Export Grain Association (NAEGA), and U.S. Soybean Export Council drafted and submitted a project protocol to AQSIQ for the soybean vessel surveying project. The U.S. is waiting for comments or concurrence from AQSIQ, after which we will begin the joint survey.

Promoting Standardization

China Sampling Workshop: In August 2012, a FGIS representative traveled to Beijing, China, to give a presentation on statistical considerations when sampling bulk commodities at the Second International Forum on Sampling for Commodity Grains.

**International
Travel for 2012**

Summary of International Travel for 2012		
Country Visited	Purpose	No. of Travelers
Canada	Stowage and Grain Inspections	1-4 per trip
Costa Rica	U.S. Rice Inspection Training	1
Mexico	APPAMEX/NAEGA Grain Trade Issues Meeting	1
Japan	U.S./Japan Cooperative Program	1
Hungary	Codex Committee on Methods of Analysis and Sampling	2
Vietnam, Indonesia and Malaysia	U.S. Grains Council Corn Outlook Seminars in Asia	1
Korea	Sampling and Monitoring U.S. Corn Shipments Unloading	1
China	Continuation of MOU Implementation	1
China	International Association for Cereal Science and Technology Cereal and Bread Forum	1

Section III: Protecting the Integrity of U.S. Grain and Related Markets

Alleged Violations

At the beginning of fiscal year 2012, eight cases involving alleged violations of the USGSA and the AMA were pending. During the year, FGIS opened nine new cases stemming from allegations of altering official documents and equipment, using unapproved equipment and improper sampling procedures, engaging in prohibited or deceptive grain handling practices, exporting grain without mandatory weighing services, assaulting/intimidating official personnel, and providing official services outside of an official agency's assigned geographical area. FGIS referred one case to the Office of Inspector General (OIG) for criminal investigation; suspended proposed action on two cases after the Official Agency provided written confirmation that they were terminating their designation as an Official Service Provider; issued one warning and three caution letters where violations occurred; and issued three information letters where the violations were deemed minor or unintentional. In all, FGIS closed six cases including five from prior years and one from 2012.

Registrants to Export Grain

The USGSA requires that all persons who buy, handle, weigh, or transport 15,000 metric tons or more of U.S. grain for sale in foreign commerce during the current or previous calendar year must register with FGIS. During 2012, FGIS issued 126 Certificates of Registration to individuals and firms to export grain.

Domestic Grain Inspection

FGIS oversees 55 official State and private agencies that provide official services under the USGSA. FGIS supervises 43 official private agencies and seven official State agencies that are designated to provide official inspection and/or weighing services in domestic markets; 4 official State agencies that are delegated to provide mandatory official export inspection and weighing services and designated to provide official domestic inspection and weighing services within the State; and one official State agency that is delegated to provide mandatory official export inspection and weighing services within the State.

The USGSA requires that designations be renewed every three years. In fiscal year 2012, FGIS renewed 20 official agencies for full three-year designations including 16 private and 4 State agencies.

Contract Review Program

In 2009, FGIS initiated a program to assess export shippers' compliance with contractual sales terms. The goal of the program is to ensure integrity and transparency throughout the official inspection system by making certain that shippers do not present false or misleading application for official inspection services. FGIS compares randomly sampled load order instructions (provided by export shippers to official personnel) to the quality specifications in the commercial sales contract. FGIS requests load order instructions from official agencies and FGIS field offices that provide official inspection services on selected export grain shipments, and contacts the appropriate exporter for copies of the sales contract associated with the selected shipments. These associated documents are compared to determine whether the load order instructions match contract specifications. In the event discrepancies are found, FGIS takes appropriate action to correct the situation, including sending official correspondence to the company officials notifying them of the review findings.

In 2011, FGIS concluded the first phase of the program and found a high level of compliance within the export community with contractual sales terms and official export requirements. Nonetheless, a few problem areas were detected, primarily stemming from some exporters' misunderstanding of official inspection and weighing requirements when shipping grain in containers. Therefore, FGIS continued the program by targeting shippers of container shipments, which were previously identified as having the most non-compliance items. Shippers were informed of the review findings and of their legal and regulatory requirements if discrepancies were found.

Exporting Grain in Containers

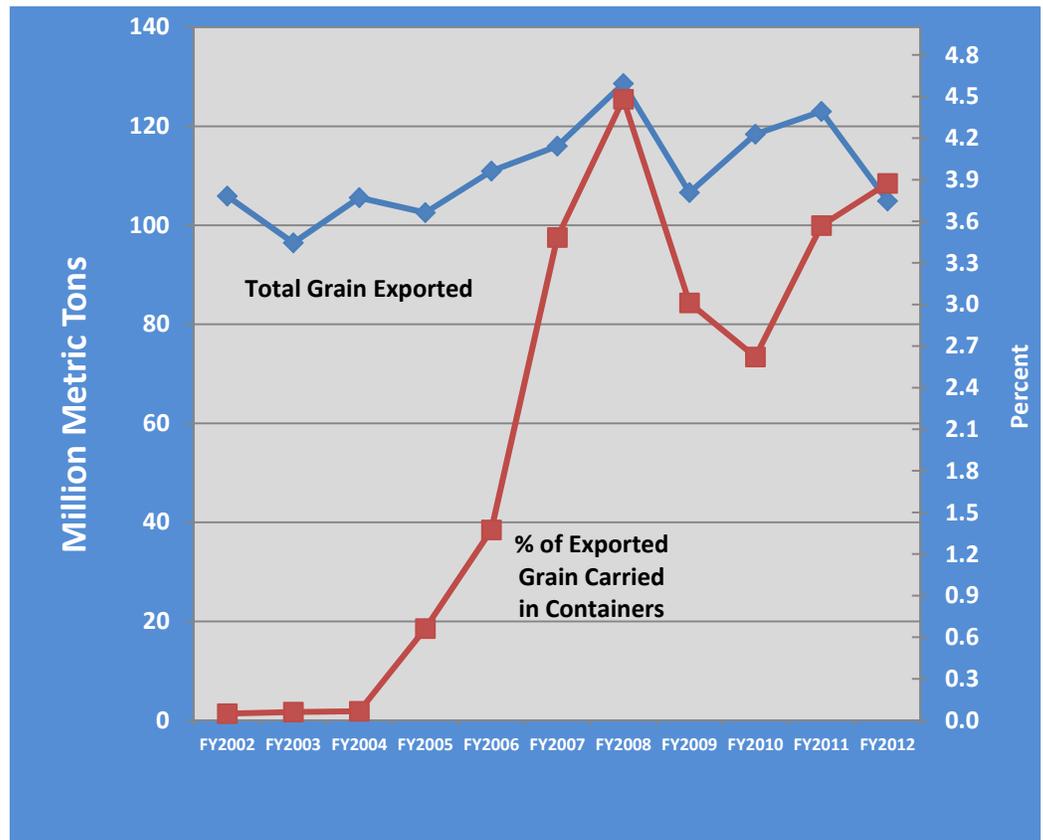
The U.S. grain industry has experienced a significant increase in the demand for grain exported in containers. A surplus of empty containers allows grain exporters to capitalize on opportunities to ship grain at a lower freight rate and deliver grain to small business entities.

Expansion of the containerized grain export market has exceeded most forecasts. Inspection of containerized cargo has increased from 0.1 percent of total grain exported (metric tons) in 2002 to 3.9 percent of total grain exported (metric tons) in 2012 and represented 1.5 percent of total domestic and export grain officially inspected (metric tons) by FGIS and official service providers in 2012.

**Exporting Grain
in Containers
(continued)**

FGIS is challenged to keep up with a growing number of container loading facilities. In 2002, six standardized grain inspection/weighing service points exported grain by container. Currently, there are 149 standardized grain inspections/weighing service points, with the majority in proximity to the railroad hub in Chicago. Initially, most of the container loading operations were based in the Pacific Northwest where empty containers were abundant at export container terminals. However in the past 7 years, much of the activity shifted to the Midwest, due to the close proximity to the grain supply and the rail yards that handle containerized cargo.

Exported Grain in Containers



Resolution of Issues Raised by International Customers

FGIS administers a formal process for investigating grain quality and weight discrepancies. When an importer of U.S. grain submits a claim regarding quality or weight, FGIS analyzes samples retained on file from the original inspection and samples submitted from the complainant (if the buyer chooses to submit them) and evaluate the accuracy of the initial inspection. This process allows FGIS to verify whether the original inspection and weighing service provided at the time of loading was correct, based on all available information. FGIS then issues a report of findings.

Occasionally, a particular buyer or importing country reports repeated discrepancies which cannot be resolved by a shipment-by-shipment review under this process. In such cases, FGIS may conduct collaborative sample studies or joint monitoring activities to address the discrepancy in a more comprehensive manner.

In FY 2012, FGIS received 5 quality complaints and zero weight complaints from importers of grain inspected under the USGSA. These complaints involved 236,666 metric tons, or about 0.2 percent by weight, of the total amount of grain exported during the year.

Summary of Complaints Reported by Importers on Inspection and Weighing Fiscal Year 2012				
Complainant	Country	Grain/ Commodity	Number of Complaints	Nature of Complaint
Asia	China	Soybeans	3	Treated soybeans
	China	Corn	1	Broken corn and foreign material
Central America	Venezuela	Wheat	1	Foreign material

Section IV: Providing Official Grain Inspection and Weighing Services

Partnerships with States and Private Entities

FGIS manages the national inspection and weighing system through a unique network of approximately 2,000 staff members at Federal, State, and private laboratories that serve grain producers, handlers, processors, and exporters across the country. FGIS' State and private partners are authorized to provide official services on FGIS' behalf under the authority of the USGSA and the AMA. FGIS delegates States to provide official inspection and weighing of U.S. grain at export port locations and designates States and private agencies to provide official inspection and weighing services in the domestic market. FGIS has 41 agreements with States and private agencies to provide sampling or inspection services for miscellaneous processed commodities, graded commodities, or rice under the AMA.

Modernization of Service Delivery

FGISonline is a portfolio of online business applications that modernizes the delivery of FGIS official inspection and weighing services. The online applications provide customers with fast, accurate services and access to a wealth of official inspection and weighing data. More information about the *FGISonline* applications can be found on the FGIS website at www.gipsa.usda.gov.

Some accomplishments for 2012 were:

The **Quality Assurance and Control application (QAC)** allows users to enter supervision data, access results, and track performance and ability of inspectors under the authority of FGIS. All official service providers have transitioned to QAC which allowed FGIS to decommission an old legacy system. QAC was enhanced to provide several user interactive reports, and many more reports will be added in 2013.

The **Inspection, Testing, and Weighing application (ITW)** captures testing and weighing results for grain and computes uniformity criteria (cu-sum) for export ship lots. All delegated States have transitioned to ITW which allowed FGIS to decommission an old legacy system. ITW was modified to address policy changes and user needs.

The **FGIS Official Service Provider Licensing application (FOL)** provides electronic examinations for official service providers to use for administering licensing exams for personnel who perform official functions under the USGSA and the AMA. FGIS released a

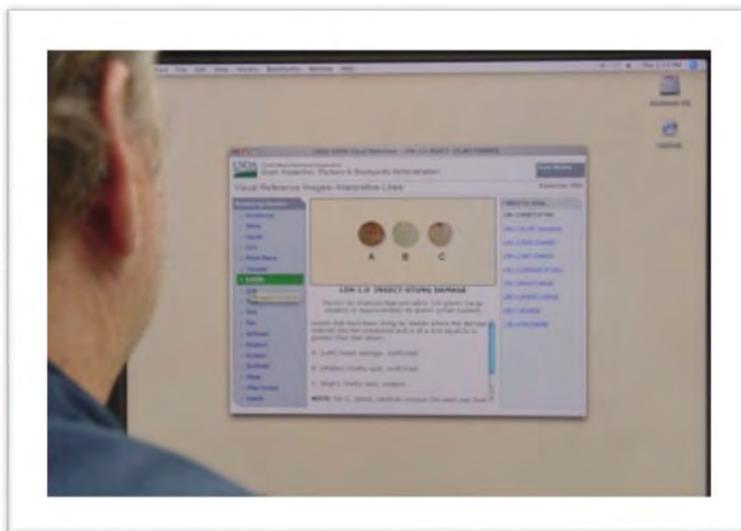


new version of FOL that made significant improvements on the performance of the application.

The **GIPSA Billing Application (GBA)** allows FGIS personnel to enter detailed billing information for invoicing through the Department's Financial Management Modernization Initiative (FMMI), and to manage inquiries of bills to their customers. It allows management to track revenues and improve evaluation of fees. It also improves the accuracy of invoices and reduces the time required to input the data for the bills. GBA now interfaces with the Department's FMMI application.

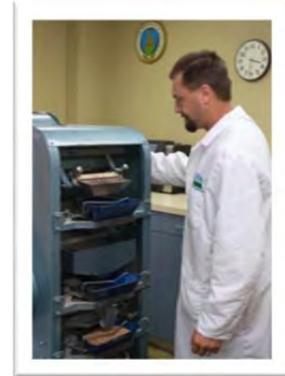
Educating Stakeholders

FGIS provides educational materials and grading aids to its customers through various outlets, at industry meetings and trade shows, and to the public through the FGIS website. In 2012, FGIS updated the corn, soybean, sorghum, wheat, and canola study questions. FGIS also updated the online Commodity Image Library and Visual Reference Library and created a rice enrichment test training course. All FGIS educational materials can be accessed from the GIPSA website at www.gipsa.usda.gov.



Distiller's Dried Grains

Distillers dried grains (DDGs), is a co-product of ethanol production and the remaining fraction (protein, fat, and fiber) of grain (corn, sorghum, wheat, etc.) after the starch is converted to sugar and then ethanol during the fermentation process. Roughly 17 pounds of DDGs can be produced from one bushel of corn (1 bu corn = 56 lbs), since corn is approximately two-thirds starch. Because of the composition of DDGs (30 percent protein, 11 percent fat, and 7-9 percent fiber), it is a very nutritious source of energy for livestock and is used to replace traditional feed grains and meals in limited quantities.



The production of DDGs has soared in recent years as ethanol production has grown. The United States produced 34.6 million tons of DDGs in the 2010/11 crop year, nearly six times the level in of 2003/04, according to the USDA Economic Research Service (ERS). Increasing supply, coupled with high prices for competing feeds (soybean meal and corn) and foreign market development efforts by USDA Cooperators, led to a surge in U.S. DDG exports beginning in 2008. Exports now constitute about 22 percent of domestic DDG production and reached a record \$1.9 billion in calendar year 2011, more than \$200 million above the previous record set in 2010.

FGIS facilitates the marketing of DDGs by providing phytosanitary inspections on behalf of APHIS. During FY 2011, FGIS sampled nearly 47 percent of all exported DDGs. Given the expected continued growth in foreign demand, FGIS expects to sample a larger percentage of DDGs exports in FY2012



Distiller's dried grains

Providing Scale Testing for the Railroad Industry

FGIS owns and operates five specially designed and built railroad track scale test cars for testing master scales, grain industry railroad track scales, and other commercial railroad track scales. The test cars are maintained and operated out of the FGIS Master Scale Depot in Chicago, Illinois.



New test car FGWX 600000 completed July 2010



An FGIS employee preparing to test a scale-unloading 100,000 lbs. of weights onto the cart

Providing Scale Testing for the Railroad Industry (continued)

The Master Scale Depot in Chicago is a National Institute of Standards and Technology (NIST)-certified Echelon III Metrology Laboratory where FGIS annually calibrates three 100,000-pound test car units that are used to calibrate the FGIS Master Scale and 10 railroad and state owned master scales. In turn, the master scale is used to calibrate railroad test weight cars which are used to calibrate railroad track scales throughout the country. FGIS also has two other specialized test weight cars that are used primarily to test and calibrate commercial railroad track scales. The Master Scale Depot performs weight calibrations on test weights and test weight cars ranging from 25 to 112,000 pounds. Commercial test weights ranging from 25 to 1,000 pounds are calibrated on a cost recovery basis. Test weight cars are calibrated at the Master Scale Depot and costs are recovered through a funding arrangement with the Association of American Railroads (AAR).

Under an agreement with the AAR, FGIS annually tests all master scales and performs a number of field calibrations associated with the program.

In accordance with AAR interchange rules, FGIS must replace rail cars before they reach 50 years of age.

Two of the test cars operated by FGIS reached the 50-year mark and were replaced in June 2010 and March 2012, respectively. FGIS purchased both test cars, and the AAR donated one used box car. The AAR also increased FGIS annual funding in a 10-year agreement to continue the Master Scale Calibration Program.



Loaded cart with 100,000 lbs. of calibrated test weight standards

Inspection Program Data

Fiscal Years 2010-2012

Item	Fiscal Years		
	2010	2011	2012
Quantity of Grain Produced ¹ (Mmt) ²	480.7	464.1	462.1
Quantity of Standardized Grain Officially Inspected (Mmt) ³			
Domestic	191.5	187.3	175.1
Export by FGIS	77.7	81.2	63.9
by Delegated States	29.2	29.5	27.6
by Designated Agencies	<u>11.5</u>	<u>12.3</u>	<u>13.4</u>
Total	309.9	310.3	280.0
Quantity of Non-Standardized Grain Officially Inspected (metric tons) ⁴			
Domestic	0	0	0
Export by FGIS	37,936	62,932	20,248
by Delegated States	145	253	0
by Designated Agencies	<u>120</u>	<u>0</u>	<u>0</u>
Total	38,201	63,185	20,248
Delegated States/Official Agencies			
Delegated and Designated States	4	4	4
Delegated States	1	1	1
Designated States	7	7	7
Designated Private Agencies	<u>44</u>	<u>43</u>	<u>43</u>
Total	56	55	55

(continued)

¹Source: USDA-National Agricultural Statistics Service, Quick Stats. This figure includes production of wheat, corn, sorghum, barley, oats, and soybeans.

² Million metric tons.

³ Includes grains for which FGIS maintains official standards: barley, canola, corn, flaxseed, oats, rye, sorghum, soybeans, sunflower seed, triticale, wheat, and mixed grain.

⁴ Includes items inspected under the authority of the U.S. Grain Standards Act that do not meet the requirements for grain as set forth in the official U.S. standards for grain, including cracked corn.

	Fiscal Years		
	2010	2011	2012
Number of Official Original Inspections ⁵			
FGIS	121,325	134,393	104,758
Delegated States/Official Agencies	<u>3,281,034</u>	<u>3,248,868</u>	<u>3,114,680</u>
Total	3,402,359	3,383,261	3,219,438
Number of Grain Reinspections			
FGIS	471	457	411
Delegated States/Official Agencies	<u>36,185</u>	<u>23,985</u>	<u>25,305</u>
Total	36,656	24,442	25,716
Number of Grain Inspection Appeals			
Field Offices	3,440	3,395	1,855
Board of Appeals and Review	<u>256</u>	<u>288</u>	<u>182</u>
Total	3,696	3,707	2,037
Number of Official Commercial			
FGIS	9,809	12,286	10,953
Delegated States/Official Agencies	<u>1,254,536</u>	<u>1,231,825</u>	<u>1,248,800</u>
Total	1,264,343	1,244,111	1,259,753
Number of Barley Protein Inspections			
FGIS	373	0	3
Delegated States/Official Agencies	<u>7,381</u>	<u>6,590</u>	<u>4,756</u>
Total	7,754	6,590	4,759
Number of Corn Protein, Oil and Starch Inspections			
FGIS	3	4	0
Delegated States/Official Agencies	<u>821</u>	<u>899</u>	<u>6,675</u>
Total	824	903	6,675
<i>(continued)</i>			

⁵ Includes original inspections for grade, factor-only inspections, official criteria, and official commercial inspections.

Item	Fiscal Years		
	2010	2011	2012
Number of Wheat Protein Inspections			
FGIS	22,458	41,433	25,005
Delegated States/Official Agencies	<u>501,138</u>	<u>547,300</u>	<u>414,104</u>
Total	523,596	588,733	439,109
Number of Soybean Protein and Oil Inspections			
FGIS	16,966	18,765	15,767
Delegated States/Official Agencies	<u>40,829</u>	<u>15,269</u>	<u>12,973</u>
Total	57,752	34,034	28,740
Number of Sunflower Seed Oil Inspections			
FGIS	0	0	0
Delegated States/Official Agencies	<u>45,554</u>	<u>30,675</u>	<u>22,608</u>
Total	45,554	30,675	22,608
Number of Aflatoxin Inspections			
FGIS	28,367	23,819	19,850
Delegated States/Official Agencies	<u>114,046</u>	<u>127,576</u>	<u>180,909</u>
Total	142,413	151,395	200,759
Number of Deoxynivalenol Inspections			
FGIS	15,150	11,690	10,913
Delegated States/Official Agencies	<u>125,624</u>	<u>99,927</u>	<u>94,271</u>
Total	140,774	111,617	105,184
Number of Fumonisin Tests			
FGIS	83	23	59
Delegated States/Official Agencies	<u>10,975</u>	<u>6,101</u>	<u>7,033</u>
Total	11,058	6,124	7,092
<i>(continued)</i>			

Item	Fiscal Years		
	2010	2011	2012
Qty. of Rice Produced (Mmt) (rough basis) ⁶	11.0	8.5	8.4
Qty. of Rice Inspected (Mmt) (rough basis)			
FGIS	3.6	3.5	3.0
Cooperators	<u>0.3</u>	<u>0.4</u>	<u>0.6</u>
Total	3.9	3.9	3.6
Number of Rice Inspections			
FGIS	13,142	13,162	12,525
Cooperators	<u>20,436</u>	<u>20,855</u>	<u>29,048</u>
Total	33,578	34,017	41,573
Number of Rice Appeals	281	333	273
Number of Rice Board of Review Appeals	5	21	3
Quantity of Pulses Produced (Mmt) ⁶ (beans, peas, lentils)	2.5	1.3	1.4
Quantity of Pulses Inspected (Mmt)			
FGIS	0.7	0.6	0.5
Cooperators	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Total	0.9	0.8	0.7
Number of Pulse Inspections			
FGIS	13,673	10,936	9,744
Cooperators	<u>10,211</u>	<u>9,905</u>	<u>10,306</u>
Total	23,884	20,841	20,050
Number of Pulse Appeals	270	294	343
Number of Pulse Board of Review Appeals	22	26	25

⁶Source: USDA-National Agricultural Statistics Service, Quick Stats

Weighing Program Data

Fiscal Years 2010-2012

Item	Fiscal Years		
	2010	2011	2012
Official Weight Certificates Issued			
FGIS			
Class X ¹	78,972	67,954	38,602
Class Y ²	<u>1,125</u>	<u>7,519</u>	<u>21,298</u>
Total	80,097	75,473	59,900
Delegated States/Official Agencies			
Class X ¹	140,699	184,581	194,192
Class Y ²	<u>82,082</u>	<u>81,105</u>	<u>59,768</u>
Total	222,781	265,686	253,960
Exported Grain Weighed (Mmt)			
FGIS	77.1	80.3	63.2
Delegated States	<u>29.0</u>	<u>29.1</u>	<u>27.4</u>
Total	106.1	109.4	90.6
Number of Certified Scales in Service			
Export Elevators	210	214	212
Number of Scales Tested			
Railroad Track Scales	220	149	140
Hopper Scales	530	505	718
Vehicle Scales	360	387	415

¹ Class X weighing involves 100 percent supervision of weighing.

² Class Y weighing involves a minimum of 25 percent supervision of weighing.

Volume of Export Grain Inspections by Port Areas October 2011-September 2012

Port Area	Million Metric Tons (MMT)	Percent of Total U.S. Exports
California	0.1	0.1%
Chicago	0.1	0.1%
Columbia River	20.7	19.7%
Duluth-Superior	0.5	0.5%
East Gulf	0.6	0.5%
Interior ¹	13.8	13.1%
Mississippi River	49.3	47.0%
North Atlantic	0.3	0.3%
North Texas	5.5	5.2%
Puget Sound	9.9	9.4%
South Atlantic	1.5	1.5%
South Texas	2.1	2.1%
Toledo	0.5	0.5%
Total	104.9	100.0%



¹ Figures include all rail and containers loaded in the continental United States destined for export. The primary destination for rail shipments is Mexico with containers shipped worldwide through established ports.

Section V: Management Initiatives

Meeting Future Staffing Needs

FGIS continues to have success with its intern program to ensure quantity and quality of our current and future workforce. Seventeen interns are in our first program that began January 2011. Interns were recruited from colleges and universities across the nation and reflect a cross section of the United States. The two year program includes rotating work assignments for building a broad base of inspection knowledge to help position FGIS with experienced employees.

Interns supplement on-the-job training by completing classroom and individual developmental assignments. After completion of their program and reaching grader status each has the opportunity to become a leader in a wide variety of areas.

Quality Management Program

FGIS manages a rigorous quality program to measure the performance of the official system and to maintain the accuracy and integrity of the official certificate. In fiscal year 2012, FGIS initiated a comprehensive review of its quality program with an overarching goal to create a Strategic Quality Plan that will guide FGIS for the next five years. FGIS gathered input from official agencies and field offices through a quality assessment and meetings and consulted with a leading private sector organization to learn about its quality program. As a result, FGIS has identified several quality initiatives in supervision, monitoring, performance, *FGISonline*, training, and communication areas to improve and strengthen its quality program. FGIS will work collaboratively with stakeholders towards implementation in succeeding years.



Quality Management Meeting

**Quality
Management
Program
(continued)**

A key component of FGIS's quality program is the Quality Management Program (QMP). The QMP is part of GIPSA's Strategic Plan to enhance program delivery, utilization of agency resources, and customer satisfaction. The QMP is an audit-based system that uses modern quality management principles to evaluate Federal, State, and private agencies. The QMP requires all official Federal, State, and private agencies to establish a program for providing official services based on the principles of quality control, quality assurance, and quality improvement. The QMP further enhances delivery of official services to the grain, feed, and processing industries while supporting FGIS efforts to manage costs and staff resources.

FGIS conducts QMP onsite reviews every three years. In fiscal year 2012, FGIS conducted onsite QMP reviews of one FGIS field office, three designated States, and 15 private agencies. The QMP review evaluates legal and management responsibilities, document control, record control and accuracy, communication programs, training, licensing, and supervision programs, equipment, facility reviews, local quality plan, internal audits, customer focus, and continual improvement.

As part of the QMP, FGIS requires each official agency and field office to complete a yearly internal audit. In fiscal year 2012, FGIS received internal audits from 54 official agencies and six FGIS field offices. Internal audits are a comprehensive review of all QMP quality elements and address any problem areas.



An FGIS employee and Official Agency representative attending a Quality Management Meeting

Improving Work Environment

FGIS has taken a proactive approach to maximize FGIS employee satisfaction which includes maintaining safety, improving operational efficiency and effectiveness of work processes, and fostering an environmentally friendly workplace. FGIS is working with grain industry customers to ensure the location and condition of the grain weighing, inspection, laboratory, and office spaces foster employee safety.

On occasion, a new official inspection lab must be built or relocated. This may occur due to noncompliance with an FGIS safety directive, or when a new export elevator is constructed. Recently, an aging export grain elevator in the Louisiana Gulf was purchased by another company. As a part of the renovations, the grain elevator management was committed to building a showpiece lab that could be presented to trade groups and foreign buyers of U.S. grain. This created a unique situation, for the first time in decades, to design a new lab with full support from the industry.

To make the most of this opportunity, FGIS created a lab design team to look at how to improve service delivery and make our laboratories more efficient and ergonomic. Some of the biggest challenges in designing a grain inspection lab include dust collection, rodent control, temperature sensitivity, and efficiency. The group is helping design a model lab which implements ideas of spatial requirements, environmental controls, and ergonomics, which will be used as a basis for official inspection labs in the future. The lab design team is also keeping an eye to the future by looking at what efficiencies could be gained by implementing barcode technology and networking official inspection equipment to streamline service delivery, and improve quality. The first model lab is scheduled to open in Port Allen, Louisiana in 2013.



New FGIS Port Allen Lab

Focus on Safety

In March 2010, FGIS developed a policy that strives to eliminate employee exposure to existing and potentially hazardous working conditions and/or situations that are causing or likely to cause death or serious physical harm. A grain elevator or grain mill explosion is a serious concern for FGIS and its employees who are performing official duties within the head house, at the base of a head house, in or near any tall structures of these facilities. This concern also extends to areas in or near railcar dump pits, truck dump pits, and tunnels. The policy requires facility owners to relocate or improve existing equipment or handling equipment to an FGIS laboratory or other FGIS acceptable location that is a minimum of 100 feet from these areas of concern. This action will enable FGIS personnel to perform their official duty away from these areas of concern thereby eliminating their exposure to potentially hazardous working conditions and/or situations that could cause death or serious physical harm.

Since implementation of this policy, FGIS saw improvements in 17 facilities throughout the official system. Facility owners have relocated FGIS laboratories to permanent structures in areas 100 feet or greater from the areas of concern and employees have been removed from elevator head houses to create a safer workplace environment.



Storage area in the new Export Grain Terminal in Washington

Section VI: Financial Information

FGIS User Fee Accounts ¹				
	Revenue	Obligations	Profit/Loss	Retained Earnings
U.S. Grain Standards Act				
Inspection & Weighing	\$28,160,218	\$34,285,325	\$(6,125,108)	\$1,868,192
Official Agencies	\$2,082,600	\$1,271,124	\$811,476	\$4,886,136
Agricultural Marketing Act				
Rice	\$5,306,073	\$4,616,119	\$689,954	\$4,302,839
Processed Commodities	\$2,299,463	\$2,942,925	\$(643,462)	\$1,363,068
Total FY 2012	\$37,848,353	\$43,115,493	\$(5,267,139)	\$12,420,236

¹ Figures are estimates based on the Agency's Period 11 (i.e., through August 2012) Status of Funds Report and are subject to revisions.

Appropriations <i>Dollars in millions</i>							
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Appropriated Funds	\$18.19	\$17.61	\$17.61	\$17.93	\$18.27	\$17.79	\$16.48



United States Department of Agriculture