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CONTENTS

Background Information	3
Welcome	3
Resolution Review	3
Field Management Initiatives.....	3
Mycotoxin Testing Program	4
LED Lighting Project.....	4
Rice Projects	4
Imaging Project.....	5
International Activities.....	6
Quality Assurance Initiatives.....	6
FGISonline.....	6
Next Meeting	6
Advisory Committee Resolutions.....	7

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Background Information

The Grain Inspection Advisory Committee (Advisory Committee), appointed by the Secretary of Agriculture, is comprised of 15 members who represent all segments of the grain industry. They include grain producers, processors, merchandisers, handlers, exporters, consumers, grain inspection agencies, and scientists. In past years, the Advisory Committee met twice annually to advise the Grain Inspection, Packers and Stockyards Administration (GIPSA) on the programs and services it delivers under the U.S. Grain Standards Act (USGSA) and the Agricultural Marketing Act of 1946, as amended. Recommendations by the Advisory Committee help the Grain Inspection, Packers and Stockyards Administration (GIPSA) to better meet the needs of its customers who operate in a dynamic and changing marketplace.

Welcome

Larry Mitchell, Administrator, GIPSA, welcomed everyone to the meeting and self-introductions of all members were made.

Resolution Review

The seven resolutions that the Advisory Committee passed in October 2015 were reviewed.

Field Management Initiatives

FGIS provided an overview of the Export Inspections and Tonnage-update on corn, soybean, wheat, and sorghum movements and the market forces that are driving the increase or decline for each; Reauthorization Proposed Rule; new service in Weslaco, TX; licensing program; GIPSA's Signature Process Improvement plan-objective and goals; and staffing initiatives.

Financial Review

FGIS provided updates on the October 2015 GIAC resolutions, program financial results (Inspection and Weighing (520) Program, Supervision of Official Agencies (530) Program, Rice Inspection (570) Program, and Commodity Inspection (580) Program), USGSA Reauthorization proposed rule and comments, and the suspension of the OA supervision fee assessment.

Mycotoxin Testing Program

FGIS presented progress on addressing three previous resolutions regarding mycotoxin testing programs. The quantitative test kit performance criteria were updated and effective January 1, 2016, for aflatoxin test kits and March 1, 2016, for deoxynivalenol (DON), fumonisin, ochratoxin A, and zearalenone test kits. Also presented the main updates, including evaluation of expanded concentration ranges for aflatoxin, DON, and fumonisin test kits. The evaluation program for qualitative test kits was eliminated as of February 1, 2016. Qualitative test kits will be phased out as certificates expire. FGIS is continuing to work on changing to use of two significant figures as the default certification procedure with optional certification at the request of the applicant to the whole number or nearest tenth.

LED Lighting Project

FGIS provided an update on FGIS's evaluation of LED lights for official inspection by reviewing the current Equipment Handbook requirements and discussing the work to date. FGIS created its own set of LED lights that met the Handbook specifications and preliminary testing showed no significant difference for grain factor analysis compared to using the approved fluorescent light. FGIS is working with Dazor Lighting Solutions who can manufacturer LED lights to meet the current Handbook specifications to evaluate different LED light options. The first option is a LED tube to replace the fluorescent tubes in the existing troffers or LED tubes that require a modification to the existing troffers. Another option is a task light that can be placed on the work desk.

FGIS has a meter that measures the Handbook criteria and provides the color spectrum for each light. Of the LED lights and approved fluorescent bulbs, it has been noticed that although the lights meet the Color Rendering Index requirement they have different Correlated Color Temperatures and different shapes to the color spectrum. These differences will be considered in the selection of samples and factors for the LED evaluation to determine if they meet the Handbook specifications and determine if the specifications should be modified for LED. Finally, FGIS will evaluate the feasibility of using task lights for official inspection.

Rice Projects

FGIS presented information on the evaluation of the Zaccaria Rice Mill system compared to the current FGIS approved equipment (GrainMan) and procedures. It was noted that this study was only to evaluate the agreement between the Zaccaria and current FGIS procedures and not to evaluate the Zaccaria for official determinations. The study was limited to long grain rough rice representative of the 2015 crop official inspection range in milling yield (percent whole kernel and percent total rice). The Zaccaria procedures were modified to remove similar amounts of bran as achieved with the FGIS procedures to establish a basis for an equal comparison of the equipment itself. The modifications included milling two 500 gram subsamples (Zaccaria size limit) and recombining before analysis; adjusting the milling time to achieve the same Degree of Milling based on the FGIS visual reference standard as the GrainMan; and further refining the milling time using the Satake Milling Meter whiteness value (measure of

bran removal and kernel color) to match the whiteness from the GrainMan. The study found that the Zaccaria, on average, was 2.8% higher for percent whole kernel and 0.8% higher for percent total rice. These differences are statistically significant but, depending on the trading contract specifications, may not be of practical significance. The whiteness values, on average, differed by 0.4% showing that the two systems were aligned to achieve equal bran removal.

FGIS also provided an update on the commercial rice mill study. FGIS has entered into a Cooperative Agreement with the University of California – Davis to investigate the agreement between commercial mills and the current FGIS procedures and approved equipment. Two mills in Arkansas, one in California, and one in Louisiana have agreed to participate in the study that will run for 2 years. The first year's data will focus on assessing the agreement between the FGIS generated results and the commercial mill results for milling yield. The potential outcomes are:

1. The current FGIS procedures provide comparable results to the commercial mills in which case the second year of data will be used to validate the assessment with additional samples and environmental factors.
2. A significant difference is identified and the second year data will be used to adjust the current approved equipment and procedures closer to the commercial results.
3. Adjustments to the current approved equipment and procedures are insufficient and a need is identified to evaluate other laboratory rice mill systems.

Imaging Project

FGIS provided an update on the status of a replacement imaging technology for rice inspection that is used primarily in California. FGIS is working with the official agency in California to extend the working life of their Foss GrainChecks they are using for rice inspection and developing performance criteria for evaluating new imaging technology. FGIS has entered into a Cooperative Research and Development Agreement (CRADA) with QualySense to research and develop the use of imaging and near infrared technology for grain inspection.

Dr. Dellendice provided information on QualySense and their QSorter Explorer that will be used the work outlined in the CRADA. He explained the process of acquiring data, developing a prototype algorithm, testing and optimizing the algorithm, and validating to achieve a robust algorithm for field testing. He also discussed the challenges in developing a robust algorithm using the current definitions for whole rice kernel versus broken rice kernel and chalkiness in the Rice Inspection Handbook as examples. A demonstration of the QSorter Explorer was given to the Advisory Committee members and attendees.

International Activities

FGIS provided updates on several international trade and outreach initiatives. A Memorandum of Understanding regarding continued cooperation between FGIS and the Canadian Grain Commission; efforts to revive the Asia Collateral Duty Officer program; FGIS Co-Chair with China to an Asia-Pacific Economic Cooperation (APEC) Sub-Committee on Grain Standards and Conformance; CODEX quality standards for Quinoa; the FAS Global Lite Conference to be held in Washington, DC the week of July 11; the Russian ban on U.S. popcorn and soybeans; Egypt's restrictions on Ambrosia and Ergot; Korea's agricultural import safety law; and discussion on five quality complaints.

Quality Assurance Initiatives

FGIS provided updates on reauthorization changes as it relates to the Quality Assurance and Compliance Division; status of several resolutions from previous Advisory Committee meetings; discussion on several reports that were developed based on SIMS and STEP data; also discussion and updates provided on several other reports which included the Certificate Accuracy Report; Quality Assurance Specialist Performance Report; Inspection Accuracy Report; and the Annual Quality Report.

FGISonline

FGIS provided information on two of the current projects for FGISonline for FY 16. A discussion on the current status of FGISonline and the future plans for development of FGISonline including a customer portal.

The benefits were also discussed which are greater customer access to information, reduced manual data entry, and reduction of errors.

Next Meeting

The Advisory Committee recommends the next meeting be held October 18-19, 2016, to be held in Portland, Oregon.

Advisory Committee Resolutions

The following resolutions were introduced and passed by the Committee:

1. The Advisory Committee commends FGIS on development of the USDA rice studio project and recommends continued work on imaging and NIR technology for individual kernel inspection for broken kernels and other quality factors for rice and other grains.
2. The Advisory Committee recommends continued work by FGIS on evaluating the Grainman Miller No. 65 for predicting commercial rice milling yields.
3. The Advisory Committee commends FGIS for its work with updating inspection laboratory lighting standards; and recommends continued work on lighting advancements and testing for grain inspection. The committee would also like to encourage FGIS to review how other governmental or industry groups involved in human-sorting-of-objects are utilizing new technologies in LED lighting for inspection purposes.
4. The Advisory Committee encourages the FGIS to secure funding for the placement of FGIS personnel on three month annual assignments to assist the USDA/FAS and overseas cooperator groups in providing needed technical training for buyers of U.S. commodities. A greater understanding through training of the U.S. grain grading system will reduce the number of quality complaints and promote the sale of U.S. agriculture products.