

# Quality Assessment



**ERIC JABS**  
**QUALITY PROGRAM WORKSHOP**  
**MARCH 7-8, 2012**



United States Department of Agriculture  
Grain Inspection, Packers and Stockyards Administration  
Federal Grain Inspection Service

# Overview



- Quality assessment sent to all official service providers (OSP) to get input on FGIS's quality program.
  - 13 questions about quality program tools, supervision/monitoring, FGIS*online*, performance measurement and incentives, and local quality programs.
- 60 responses received
  - 50 official agencies
  - 10 field offices/sub-offices/duty points



# Question 1



- Based on FGIS's current quality program outlined in the quality handbook, what elements/programs should be continued, modified, or discontinued?



# Question 1: Elements/Programs to Continue



- Nearly all respondents indicated that SIMS and STEPS are excellent programs and should continue.
- The majority of respondents indicated that the other quality programs are working well and should continue including referee and survey samples, opinions, over-the-shoulder (OTS), grading seminars, and anchor agreements.



# Question 1: Element/Program Modifications



- Have the BAR send STEP separations back to the OSP to see the plus/minus portions
- Ability of OSP to increase local SIMS samples by flagging without increasing the national monitor samples
- Improve FGIS Official Service Provider Licensing (FOL) navigation and increase speed
- Increase referee/survey samples
- SIMS/STEPS comparison reports
- Select more U.S. #1 grades with SIMS
- Opinion, OTS, Performance Appraisal Sample (PAS), Referee and Survey Samples may be redundant
- Target SIMS samples more based on volume of OSP
- SIMS should include at least one interpretative with subjective factors
- SIMS on submitted samples requested within 3 days of inspection



# Question 1: Element/Program Modifications



- BAR initiated referee and survey sample exchange needs to be reported back to inspector timely
- Target SIMS based on OSP needs to include inspector experience level
- Some SIMS samples have little or no subjective factors to pick.
- Ability to print PAS reports
- No random numbers for OCIS (STEP samples increased to compensate)
- Increase local and decrease national percentage of SIMS to allow for quicker detection of grading problems and more in-house monitoring (2)
- SIMS inadequate at measuring inspector performance
- QAC reports needed



# Question 1: Element/Program Modifications



- Eliminate 922/938 forms and extract information from *FGISonline*
- More specific SIMS information including identification of factors and actual tolerance level instead of in or out of tolerance
- Increase SIMS rate on export samples to better assess equipment and inspector performance
- Increase opinion turnaround time
- Increase referee samples and crop studies at beginning of harvest to provide information about grading problems
- Increase intermarket monitoring program
- Supply mailing bags/tags for samples sent to KC
- Modify anchor agreements based on SIMS results
- Keep anchor agreements (8)
- Bring back the “189 reports” for inspectors to review their monitored samples



# Question 1: Programs/Elements to Discontinue



- **Anchor agreements (21)**
  - Replaced by Quality Assurance Quality Control (QAC) and Quality Management Program (QMP)
- **QMP Quality Manual**
- **Performance samples**
  - Only measure ability not performance
- **Intermarket monitoring program**
  - Comparison of submitted to official samples at domestic and export points
- **Local SIMS**
  - Regrading own samples



## Question 2



- What impact would it have if the current monitoring program was expanded to include all inspection level records including round lots in rice, official commercial inspections (OCIS), individual railcars from unit trains loaded under cu-sum, individual containers from an average grade booking, etc. to be transmitted into FGIS*online*?



# Question 2: Major Impact



- 16 respondents indicated it would have a major impact on their business
  - Increased inspection costs and fees
    - ✦ Time
    - ✦ Equipment
    - ✦ Personnel
    - ✦ Certification
  - Sample storage problem at onsite labs
  - Tax the FGIS*online* system
  - Multiple tolerance levels due to varying procedures



## Question 2: Minor/No Impact



- 12 respondents indicated that it would have minimal or no impact
  - Do not conduct a lot of these inspections
  - Increase in time would be acceptable
  - Want local SIMS on OCIS
  - OCIS data already monitored so data could be transferred to IDW



# Question 2: Other Comments



- Beneficial to have everything in the system for monitoring
  - May show trends for individual inspectors similar to old 920 forms
  - Improve the accuracy and integrity of the system
  - Better understanding of how official inspection is performing
- Okay if it can be transferred from current system
- Lack of roundlot inspections misses a large percentage of inspections on rice
- Leave OCIS separate to keep costs down



# Question 3



- What FGIS*online* applications including Inspection Data Warehouse (IDW), Inspection, Testing, and Weighing (ITW), and Quality Assurance/Quality Control (QAC) have the most and least value for your business and how would you improve them?



# Question 3: Most Value



- IDW (9)
  - Helps with certification issues
  - Eliminate monthly volume report
  - Inability to correct certificates because when IDW rejects a certificate there is no record of original
    - ✦ Have to void or create a new certificate
  - Training video
- QAC (29)
  - Allows a quick review of the performance of individual inspectors/technicians
  - SIMS/STEPS
  - Need reports and easier search mechanism
  - Increase referee samples
  - Assign GSL members to agencies
  - Need to see returned sample separations on STEP/QAS picks
  - Select additional samples for Local SIMS without increasing National SIMS



# Question 3: Most Value



- **DDR (4)**
  - Easy to navigate
- **ECT (13)**
  - Requires too much information for lab scales
    - ✦ Data entered backwards for capacities and divisions
  - Show size of sieves in addition to serial number
  - Easier search capability
  - More training
  - Improve condition report for D/T's
  - Make it easier to enter information for multiple tests
  - Correct errors on mechanical diverter section to make it more user friendly



# Question 2: Most Value



- **FOL (11)**
  - Useful to maintain database of licensees and training/licensing needs
  - Need easier way to delete employees
  - Improve speed (too many timeouts)
  - Information isn't always transferred successfully
  - License expiration notice should include date and time
- **CRT (10)**
  - Add auto signature once license is entered
  - Discontinue time warning screen
  - Factors should appear in same order as pan ticket
  - Include error alerts/data checks to catch typos
  - Convert factors to a grade automatically
  - Use inspection logs



# Question 3: Most Value



- ITW (5)
  - More advanced error checking
  - Increase records per page
  - Reduced downtime due to power outages
  - More valuable when online versus distributed application
  - Reduce refresh rate (currently every few seconds)
- GIPSA Billing Application (2)
  - Plan to utilize in the future



# Question 3: Least Value



- IDW (15)
  - Minimal use
  - Not compatible with other customer programs
  - Still have to send 922/938 even though certificates are in IDW
  - Only use for pan ticket numbers and user fees
  - Certificate error messages
    - ✦ Ensure IDW requirements and required certificate data match
- ITW (6)
  - Unsure of capabilities
  - Use own databases



# Question 3: Least Value



- CRT (2)
  - Enter class X weight only once
  - Match certificate field and data input page to make it easier to make corrections
    - ✦ Data input page shows “Quantity/Official Weight;” certificate shows “Net Weight.”
    - ✦ Data input page shows “Grade and/or Commodity;” certificate shows “Kind.”
  - Carrier Information
    - ✦ Needs to truly reflect the inspection
      - Show tote bags as bulk versus count
  - DDR (1)



# Question 3: Other Comments



- Increase access to programs
- Seminar on how programs work and all of the facets they offer
- Increase educational modules and user-friendly guides



## Question 4



- What report information do you need from QAC to efficiently and effectively conduct your business?



# Question 4: Response



## Reports

- Location, Agency, Date, Specific Inspector Results, Grain, Factor, Grading Averages, Destination Grades
  - Include actual factor information
- Only report out of tolerance information
- SIMS/STEPS/PAS/Opinion Reports
  - Increase SIMS report frequency
- Ability to print PAS reports
- Reports on grade factor differences from intermarket grades
- Targeted reports that focus on large grading deviations
- Weekly reports to show agency versus FGIS inspection results
- Supervision reports to show site visits and when OTS was performed



# Question 4: Response



- Increased field visits by FGIS QAS
- Quicker notification when action limits have been exceeded
- Increased information in spreadsheet form and graphs/charts to evaluate individual inspectors
- Early Alerts beneficial
- Educational materials (damage posters, etc.)
- Allow data to be exported to Excel
- Training on how to extract data and use QAC
- Include protein, mycotoxin, and equipment



# Question 5



- Currently, FGIS field offices and the Grading Services Lab share the responsibility of monitoring and licensing official agencies. Please state your preference in the future and explain why.



# Question 5: Response



- 11 respondents indicated that they would like GSL to do monitoring and licensing
  - Variances within field offices
  - One centralized monitoring location
  - Access to BAR
- 26 respondents indicated that they would like the local field office to do monitoring and licensing
  - Regional expertise for grains, inspectors, and challenges
  - Closer proximity, increased communication, and reduced licensing costs
- 11 respondents indicated that they would like the current process to remain unchanged
- 3 respondents indicated that all monitoring and licensing should be conducted by either the GSL or the Field Office
- 4 respondents indicated that the OSP's should conduct all or part of their own monitoring and licensing with supervision by FGIS



# Question 5: Response



- A few respondents indicated that the GSL and field offices should split duties
  - Field office for licensing and GSL for monitoring
  - Field office to answer day to day questions; GSL licensing and monitoring
- Other comments
  - BAR and field offices should conduct continuing education training together
  - GSL members should be assigned to OSP's



# Question 6



- Under FGIS's current QAC module of *FGISonline*, samples are selected by a stratified sampling rate. The current stratified sampling rate is: U.S. No. 1, 0.2%; U.S. No. 2, 0.7%; U.S. No. 3-6, 3.0%; U.S. Substandard, 3.0%; and U.S. Sample Grade, 0.6%. Please indicate how you think FGIS should select samples in the future.



# Question 6: Response



- 22 respondents indicated that the current stratified sampling percentages are adequate or have no preference
  - Want more flexibility in increasing local SIMS without increasing national SIMS
  - Actual monitoring level varies based on GSL workload
  - Some agencies have never had a #1 selected.
- 29 respondents indicated that the current stratification system should be changed
  - Draw samples randomly
    - ✦ Mistakes can be made on #1 and #2 grades (Odor, DLQ factors, stones, etc.) and 0.2% may be too low to monitor trends.
    - ✦ Supplemental monitoring if needed



# Question 6: Response



- Base monitors on volume per day regardless of grade
- Higher monitoring percentage if there is an odor
- Increase monitoring percentage and end STEPS
- All grades at the same percentage
- Target samples based on factor levels to reduce sampling rate
  - Example: DKT above 5%; FM above 2%
- Monitor at least one sample per lot regardless of grade
- Evaluate interpretative factors only
  - Test Weight and Moisture only supervises the equipment



# Question 6: Response



- During good quality periods, selection rate is too low to produce meaningful graphs/charts
- Select challenging samples based on critical factors in OSP market
- Increase supervision rate
- Increase export rate to at least 5 percent
- Incorporate “type of carrier” when selecting samples
  - Few supervisions are conducted on barges as they typically load U.S. #1 or #2.
- Ensure pan tickets match IDW records



# Question 6: Response



- U.S. #1 and #2, 0.2%; SG, 4%
- Decrease U.S. #1-2
- Increase U.S. #3-5 and SG percentage
- Select more total broken kernels on U.S. #1 and #2 rice
- Supervision rate is too low to evaluate the performance of equipment or inspectors
- Physically monitor data to look for interesting samples and trends
- Target grading problem areas
- Have the field office do unannounced sample collections



# Question 7



- The following percentages are used to evaluate the performance of an OSP: Exceeds: 90-100%; Satisfactory: 80-89%; Marginal: 70-79%; Unsatisfactory: 0-69%. Currently, the performance of an OSP is based on the supervision results of un-worked file samples and the proficiency of the OSP QAS and/or review team is based on the review of saved separations by the BAR. Do you think the percentages and performance criteria FGIS uses to measure OSP and QAS performance should be modified and please explain why?



# Question 7: Response



- 42 respondents indicated that the overall percentages and performance criteria are acceptable
- 8 respondents recommended a change
  - Poor quality grades, grading factor difficulty, and inspector experience should be considered when measuring performance
  - Percentages should be loosened as inspectors measuring inspectors is subjective
  - System measures ability not performance since graders can select samples and grade without time constraints
  - Same percentage for FGIS and agency personnel
    - ✦ Sampling variability with SIMS increases variability versus STEPS



# Question 7: Response



- Percentages/variability skewed by volume of OSP
- Lower the percentages on challenging factors
  - WOCL/DHV on bleached wheat
- Low damage sample proficiency can be skewed with one kernel and should be disregarded
- Appraisal weighted more on overall accuracy of inspector separations
- All factors should be evaluated, not just damage
- Central lab should do all monitoring to reduce bias
- Penalized when samples change condition prior to reinspection and are still entered into the system



# Question 8



- Should FGIS reward performance levels with incentives? Please list potential performance levels and incentives.



# Chapter 8: Response



- 23 respondents said that FGIS should reward performance levels with incentives
  - Reduce supervision levels
    - ✦ Increase supervision for lower performance levels
  - Reduce user fees
  - Onsite BAR/GSL member presentations to OSP
  - Quality management reviews every five versus three years
  - Reward only the highest performance tier (90% and above) (4)
  - QMP internal audit every 2 years if SIMS  $\geq$  80% and STEPS  $\geq$  90%
    - ✦ Only look at damages  $\geq$  3%



# Question 8: Response



- Reward 80% + performance
- Yearly certificates/plaques for inspectors 90%+
- Reward federal employees with performance-based monetary awards or time off awards
- Performance based on random system versus hand selected PAS
- Extra referee samples



# Question 8: Response



- 22 respondents said FGIS should not reward performance levels with incentives
  - Agencies in markets with less subjective factors have an advantage
  - Staffing/time for each sample varies
  - Perform at highest level without incentives
  - Potential gaming of the system
  - Unnecessary rivalry between agencies
  - Incentive is designation and licensing of employees
  - Unintended consequences may damage integrity of system
  - Remove licenses of poor performing inspectors
  - Educate to reduce poor performance



# Question 9



- What is the fairest way to evaluate an OSP and please explain why?



# Question 9: Response



- Agency as a whole: 22 respondents
  - Must evaluate all inspectors
  - Work together as a team
  - Reflects all services by a OSP
  - Should be no quality problems at different service points or the agency as a whole is not performing adequately
  - Shows overall customer satisfaction/customers view as a whole
  - If agency is keeping up on monitoring and training of inspectors, all four requirements will be met
  - Service points, inspectors, and grains are responsibility of the OSP
  - One inspector can make the agency look bad
  - Evaluation includes USGSA requirements including inspection policies and procedures



# Question 9: Response



- **Agency by service point: 4 respondents**
  - QAS job is to work with inspectors
  - Required by the QMP
- **Agency by inspectors: 7 respondents**
  - Evaluating individual inspectors will identify weak points and pinpoint problems
  - Other options may mask poor performance
- **Agency by individual grains: 3 respondents**
  - Grain and subjective factors are unique to different OSP's
  - Identify problem areas



# Question 9: Response



- All four requirements: 30 respondents
  - Each OSP has different grains and challenges
  - To evaluate the whole agency, you must evaluate all components
  - All four are part of a OSP so they should all be evaluated
  - Allows OSP to evaluate weaknesses
  - Evaluate and score each element to identify where improvement is needed
    - ✦ The total score would represent the quality of the agency



# Question 9: Response



- Each element has an impact on the OSP's ability to meet its designation and/or delegation
- Each element represents a different potential issue therefore they all must be monitored
- If all elements are not evaluated, it may cause OSP's to only focus on those being evaluated
- Can progressively evaluate an OSP by looking at it as a whole, service point, inspector, and then grain



# Question 10



- As an OSP, what impact would it have on your timeliness of service, cost, and your business operations if separations were required to be saved for all inspections?



# Question 10: Response



- Nearly all respondents (56) indicated that saving separations would have a major impact on timeliness, service, and cost
  - Increase in storage requirements
    - ✦ Onsite labs not setup to store extra samples
  - Increase in personnel requirements
    - ✦ Double the employees needed
  - Increase in supply costs
    - ✦ Bags, containers, pans, envelopes
  - Increase in inspection and disposal time
    - ✦ Double the inspection time due to bagging, tagging, and storage
  - Increase in company vehicles
    - ✦ Transport more employees



# Question 10: Response



- Impractical based on onsite requirements for loading unit trains
- Decrease in timeliness of grades to customers
- Increase in fees to cover additional employees, time, and supplies
- 6 respondents indicated that separations could be targeted or collected at export only
  - Save separations for factors that don't meet the load order or that exceed a specified level (e.g., save one DHV separation <75% per month)
  - Save separations for inspectors having grading difficulties
  - Save a certain number of separations per day
  - Save separations at export locations



# Question 10a



- What benefits are there for the national quality system from saving separations?



# Question 10a: Response



- 21 respondents indicated that there are some benefits to saving separations, but a large majority said the cost and impact outweighed any benefit.
  - STEPS as part of QAC very beneficial
  - Identify inspectors ability and training needs
  - May resolve complaints, but reinspection process can be used
  - Identify damage quality during transit time
  - No sampling variance as with SIMS
  - Ensures inspectors are all following the same interpretive lines
    - ✦ Correction actions could be made quickly



# Question 10a: Response



- Increased confidence in results as inspectors may be more cautious on plus/minus
- Separations based on developed criteria could be saved if the data was input electronically and QAC provided immediate notification to “save separation”
- **28 respondents indicated that there is no benefit to saving separations**
  - SIMS and file samples can be used to check quality
  - Increase referee samples to compare grades/factors
  - Local QAC program should maintain the interpretative line



# Question 11



- Please describe the specific elements and the methods that you use to implement your Local Quality Plan as specified in the Quality Management Program?



# Question 11: Response



- OSP's follow their QMP quality manual and use QAC tools, FGIS*online* applications, and/or their own programs to monitor their local quality
  - SIMS, STEPS, Over-the-Shoulder, Opinions, Referee/Survey Samples, Performance Samples, Anchor Agreements, QAC, ECT, ITW
    - ✦ Use flagging to select additional samples
  - Review test boxes
  - Site visits
  - Unannounced supervisions
  - Odor and “What If” sessions
  - Pass around separations
  - Annual grading school



# Question 11: Response



- Target specific grading criteria
  - Example: Corn pile with marginal quality
- OCIS
  - Track all OCIS through random number system maintained in a spreadsheet
  - Over-the-Shoulder on OCIS
    - ✦ 1 out of 25
  - 3 OCIS samples per inspector per month (3)
  - Minimum of 1 random OCIS sample per train
  - Minimum of 1 per month per grain per inspector



# Question 11: Response



- In-house program that monitors 20% of all inspections for grade and factor
  - Capability to monitor by grain, date, inspector, factor, type of inspection



# Question 12



- What internal databases do you maintain for monitoring performance of your agency and staff?



# Question 12: Response



- QAS supervision of inspections in *FGISonline* as Over-the Shoulder
- Supervision/training logs
- QMP quality manual and internal audits
- Track inspector accuracy in Excel
- Record training and supervision in log book
- Use Excel to calculate accuracy of random STEP samples
- Maintain a database program to review agency as a whole or individual
- AQAS log that includes inspector location, sample and supervision results, accuracy, inspector notes/concerns



# Question 12: Response



- Excel spreadsheets to track monitoring, re-inspections, form 922, and billing.
- QAC book to track employee performance through monthly separations
- AgTrax billing and certification programs to review inspector results
- Distribute excel spreadsheets with results to all offices on a monthly basis
- Supervisory Monitoring and Tracking System where individuals are critiqued.
- Tracking page for QAS submits/scores
- WHCB and DHV databases
- Critical Control Point analysis sheet for separation accuracy



# Question 12: Response



- Grain scale/check monitoring
- Program participation monitoring
- Rough rice turnaround monitoring
- Local accuracy quotient monitoring
- Mycotoxin and falling number comparison
- Local referees
- Local voluntary step
- OCIS monitoring
- Safety equipment distribution



# Question 13



- Please list any other recommendations that you have for the Quality Assurance and Control program.



# Question 13: Response



- Get everything working in the quality program including reports instead of concentrating on additional programs
- Have quality control seminars at official agencies for seminars every two or three years.
- BAR personnel visits to official agencies
- Increased interaction with the BAR/GSL
- Reduce separation review time by BAR
- Expand BAR
- Have BAR review ITW/QAC to target meaningful samples
- Mandatory annual QAS seminars
- Additional seminars/training opportunities



# Question 13: Response



- Conduct mycotoxin testing
- Shorten and simplify the quality program
- Reduce sample/separation turnaround time for quicker information
- Training for quality manual audits and FGIS *online* applications
- Increased QAS responsibilities delegated to the local field office
- Monthly or quarter difference data plot for the grain graded by service point
- Encouragement of local programs at the agency level as FGIS becomes more centralized



# Chapter 13: Response



- Increased Early Alerts or quality reports/samples for production region grain quality
- More effort in assisting/supervising newly licensed inspectors and reductions for experienced inspectors with high accuracy levels
- Select several factors that are the most important/troublesome for a particular region
  - BAR/GSL sends out portions to inspectors and makes corrections; results are posted to provide information on interpretative lines
- Have the field office request OCIS numbers and send the official agency random numbers for selection



# Chapter 13: Response



- SIMS/STEPS inspection percentage report
- Stress crack line print
- Maintain QAS staff at field offices
- Conduct announced and unannounced field visits to OSP's
  - Provides support to OSP and ensures that the U.S. Grain Standards Act is being followed
- IDW/QAC reports and charting
- Flexible SIMS process for increased sample selection
- Ease of access and interpretation of all *FGISonline* applications



# Questions

