



USAID/FFP FOOD SAFETY & QUALITY ASSURANCE FEEDBACK LOOP: A PROPOSED QUESTIONNAIRE AND DATABASE FOR COLLECTION OF FOOD AID QUALITY INCIDENTS

A REPORT FROM THE FOOD AID QUALITY REVIEW

OVERVIEW

Food Safety and Quality Assurance (FSQA) is a priority for the United States Agency for International Development (USAID)/Office of Food for Peace (FFP) as it continues to improve its food aid supply chain. In recent years U.S. Agencies have made great progress in optimizing food safety and quality across the food aid supply chain. This has included application of new technologies and innovations (e.g. introducing barcoding for domestic programs and exploring blockchain technology¹). Efforts to advance this domain are critical to impact the way food safety and quality issues in international food aid are handled and support the transition to a proactive and preventive approach to FSQA.

While FSQA incidents are rare in the international food aid supply chain they currently go underreported. The supply chain is lengthy and incidents may take place at the far end when it is too late to determine where the incident initiated. There is a need for a more streamlined feedback system starting with efficient reporting mechanisms.

The Food Aid Quality Review (FAQR) Phase III team reviewed several FSQA feedback loop systems² to identify best practices and determine if they would be effective for the international food aid supply chain. The main recommendations were for:

- 1) A simplified questionnaire and database to report, store, analyze, resolve and trend FSQA incident with no stigma to the reporting entity.
- 2) A dedicated minimum amount of personnel time to manage the system.
- 3) A system in alignment with already operational FSQA feedback systems for U.S. Government food assistance and distribution programs.

¹ Blockchain technology can be used to create a decentralized database and digital ledger of recorded transactions and is automatically updated and distributed wherever it is saved without having multiples or out-of-date versions.

² USAID Food for Peace Food Safety & Quality Assurance Feedback Loop Analysis: A Report from the Food Aid Quality Review. November 2018.

As a result, the FAQR team developed an updated Food Incident and Quality Questionnaire (FIQQ), and a corresponding FIQQ Feedback Spreadsheet for automatic data collection and storage, which was then vetted with stakeholders. The FIQQ and Feedback Spreadsheet promote timely identification of issues and incidents and together, create a mechanism for the aggregation and storage of data, including photographs. It is a simple, multi-platform system ready to be pilot tested. This report describes the process for developing the FIQQ and Spreadsheet and provides a method for further piloting.

DEVELOPMENT OF FSQA TOOLS

I. THE FOOD INCIDENT & QUALITY QUESTIONNAIRE (FIQQ)

As a first step, the FAQR team consulted key stakeholders from various steps along the supply chain who were familiar with the current USAID/FFP feedback loop system. Interviews with PVOs, in-country programmers, U.S. Government agency decision-makers, and other stakeholders, highlighted the need for an easy-to-use reporting module and feedback loop reporting system as essential to obtaining information downstream in the “last mile.” Based on their input and feedback, the FAQR team developed a simple questionnaire (see [Annex A](#)) designed to capture the most important characteristics of incidents/issues that occur within the international food aid supply chain.

The questionnaire requests essential information to help USAID/FFP identify causes of issues and FSQA risks that may occur along the supply chain, including: product lot number, packaging, volume of losses, incident type, point of contact. The FIQQ allows respondents to upload as many as ten photos per report, it can be accessed and completed on a computer, mobile phone or tablet, or on a printed paper version; the FIQQ³ takes only minutes to fill out.

II. FIQQ FEEDBACK SPREADSHEET

To accompany the questionnaire, the FAQR team developed a spreadsheet where information collected is automatically transferred and stored and allows the systematic tracking of incidents/issues, resolutions, and trends. This spreadsheet is designed to be a searchable database of all reported incidents/issues that arise:

1) how much food aid is lost, damaged, reconditioned or altered throughout the supply chain; 2) where in the supply chain most incidents happen; 3) what are the main causes of losses; and 4) whether some food aid products and/or suppliers are linked to a high percentage of incidents. The link to the FIQQ spreadsheet (Google Doc) is provided here:

https://docs.google.com/spreadsheets/d/IXIqbwrPYSYI86FpR9POicipH_tFjlLe3yHGqbui0vRI/edit?usp=sharing

³ The information collected from the FIQQ is compatible/aligned with USDA’s WBSCM Complaints Module for domestic food aid purchases, which could be adapted for the international food aid supply chain.

FOOD INCIDENT AND QUALITY QUESTIONNAIRE AND SPREADSHEET PILOT TESTING

FAQR completed a small pilot test to assess the feasibility and appropriateness of the new, simplified FIQQ to collect necessary data. The goal of this pilot study was to ready the tools to be tested more fully throughout the supply chain⁴. The FAQR team completed the following steps:

- I. Developed and improved necessary tools, including the FIQQ, to identify and collect accurate data on incidents and issues in a streamlined, modern, and multiplatform system.
 - a. The FIQQ may be accessed using the following link:
<https://goo.gl/forms/twIgLermfuwdUO02>
- II. Reviewed the FIQQ and data collection tools with key informants from critical points of the supply chain to confirm its ease of use and ability to capture relevant and accurate information about food aid incidents.
- III. Developed a Feedback Spreadsheet to gather the information collected and build a database to establish institutional memory of food aid incidents.
 - a. This will allow USAID/FFP to identify trends and areas responsible for most incidents and to accurately report incidents to food suppliers and other stakeholders so they can take the appropriate corrective action.
- IV. Pilot tested the simplified FSQA system using the FIQQ with key informants and improved where necessary
 - a. This was an iterative process.

RESULTS FROM FOOD INCIDENT AND QUALITY QUESTIONNAIRE PILOT

Step IV (above) involved testing the Google Form version of the FIQQ with key informants at different points of the supply chain.

Key informants included respondents from or familiar with the following steps of the supply chain:

1. Prepositioning warehouse
2. Transport to and storage at in-country warehouses (e.g. commodity managers)
3. Transport to and storage at extended distribution points (e.g. storage/warehouse managers)
4. Distribution (e.g. food aid monitors, nutrition counselors, extension agents, etc.)
5. Household (e.g. program volunteers, food aid monitors, etc.)
6. Ocean transport and foreign port operations (e.g. freight forwarders)

⁴ USAID Food for Peace Food Safety & Quality Assurance Feedback Loop Analysis: A Report from the Food Aid Quality Review. November 2018.

7. Country Officers

They were asked to complete the FIQQ using an incident that had occurred previously and/or one of the shipments they had recently received/handled as an example. The key themes focused on simplicity of the system to reach the last mile; Organizations have their own commodity tracking systems to track damage and losses for insurance purposes (not the same as a FSQA feedback system); and vulnerability of reporting losses (i.e., no assurance that reporting would not have negative consequences). [Figure 1](#) summarizes the key informant responses.

Figure 1: Summary of Key Informant Responses

A system that is more active and can reach the “last mile” is the key to completing the Feedback Loop model



- Over **67%** of stakeholders have regular access to mobile devices (smartphones, computers, tablets, etc.)
- Many preferred the streamlined FIQQ to the current USAID reporting module citing its length and ability to upload photos directly
- There is still need for downloadable/printable PDFs to reach those without Wi-Fi
- Key informants cited being able to print out simple surveys essential for reporting incidents in the field, then filling out the FIQQ
- There is a current need for a multiplatform system including computer, tablet, paper, and mobile application input options
- QR codes were mentioned by several as an easy alternative to barcodes

There is a good handle on what occurs from production to shipping (upstream)



- Most implementing partners have their own in-house reporting systems to track losses
- **80%** of implementing partners interviewed mentioned “blame” as one of the limiting factors in underreporting incidents of food loss
- Ad hoc emails and follow-up make it difficult to resolve issues
- Development of a simple decision tree for incident resolution would allow a single person to monitor the system efficiently
- Linking to USDA’s reporting system (WBSCM*) provides a viable option allowing USAID to scale up quickly and develop a mobile application simultaneously

Stakeholders are more likely to report if the module is flexible and able to be accessed by everyone



- Although FSQA standards are set in the distribution of food aid products, secondary system checks are not fully used to ensure safe practices are being used
- **90%** of those interviewed said complex feedback loops with long questionnaires slow down the distribution and resolution process
- In-country partners normally receive “verbal” or anecdotal reports on food loss and/or issues further downstream
- Partners would record more issues/incidents if there was incentive/requirements to do so (e.g. included in program agreement)

*Web-Based Supply Chain Management: <https://www.usda.gov/topics/food-and-nutrition/web-based-supply-chain-management>

USAID/FFP FEEDBACK LOOP PILOT NEXT STEPS

The FAQR team recommends that USAID/FFP further pilot test the FIQQ and database spreadsheet tools. The team proposes the following next steps to fully test and bring the system to scale:

- I. Complete a pilot as described in Box I (below).
- II. Review the quality and relevance of information collected in the pilot.
- III. Develop a method to implement and scale up the system and integrate it with the WBSCM supply chain management system that USDA uses for all purchases, including food assistance commodities and product for USAID.
 - a. Consider adapting the multiplatform FIQQ data collection form to a mobile app that would capture the data and photos and automatically upload them to populate a database (similar to the one we developed with Google Forms)
- IV. Develop a flowchart/decision tree and system for resolving incidents with responsible parties identified and steps needed to close out incident/issue reports. Resolutions should be systematically documented in the database and reported back to those who raised the incident/issue.⁵
- V. Scale up! This would include incorporating requirements related to the FSQA Feedback Loop system and FIQQ in implementing partner contracts.

Box I: Pilot Proposal Details

- The USAID/FFP Country Officers to be asked to share the FIQQ with all active PVOs in their countries of action.
- The PVOs to be asked to fill out the FIQQ every time they receive or handle a new shipment and as incidents occur either using the online format or using the PDF that they will return to a designated person.
- Once enough data has been collected using the FIQQ, the FSQA Feedback mine the Spreadsheet to identify the nature of incidents/issues and trends within the data.
- Use the results of this analysis to inform the development of an incident resolution decision tree/flow chart to ensure that incidents get resolved properly, expeditiously and with timely feedback to the reporting entity.

We recommend this system be pilot tested using two approaches:

- I. Follow two products from production to distribution.
 - Corn Soy Blend Plus (CSB+) and Fortified Vegetable Oil, both of which have been identified as being vulnerable to a variety of issues that are not systematically reported.
- II. Identify critical points along the supply chain post-delivery and request that key informants report monthly on products as they go through their portion of the supply chain.
 - This would allow USAID to track what is happening with the products and help identify the frequency of incidents/issues, their locations, and help determine if they are critical points where FSQA risks emerge.

⁵ This could be based on the USDA Web Based Supply Chain Management system (WBSCM) complaints resolution system that USDA successfully uses for its domestic food and nutrition assistance program procurements.

ANNEX A: FOOD INCIDENT & QUALITY QUESTIONNAIRE (FIQQ)

Google Link to the online questionnaire: <https://goo.gl/forms/J0VLYCTqqr68pE872>



USAID
FROM THE AMERICAN PEOPLE

Food Incident & Quality Questionnaire

Please complete this form immediately after noticing an issue with food aid products and return via email to XXXXXXX@usaid.gov or via fax to XXX-XXX-XXXX.

Please make sure to attach pictures to illustrate the issues described below

(close-up of packaging damage, lot codes, infestation, discoloration, etc.)

If you are reporting an incident affecting more than one food product, please fill out a separate form for each food product.

*Organization: _____ Program name: _____ Type of food aid program: Other

*Contact name for follow-up: _____ *Title: _____

Phone: _____ *Email: _____

*Location of incident (country and town/village): _____ *Date incident was noticed: _____

*Organization/Office/Person in possession of the food at time of the incident: _____

*Food affected: Select one... *Packaging Type: Select one...

If other, please explain: _____ If other, please explain: _____

***Incident type: check all that apply** ***Context of the incident: check all that apply**

<input type="checkbox"/> Incident with the food product before cooking/preparation	<input type="checkbox"/> Ocean transport & port operations
<input type="checkbox"/> Incident with the food product during or after cooking/preparation	<input type="checkbox"/> Prepositioning warehouse
<input type="checkbox"/> Incident with primary packaging (i.e. bag, can, pouch, etc.)	<input type="checkbox"/> Inland transport to in-country warehouse
<input type="checkbox"/> Incident with secondary packaging (i.e. box)	<input type="checkbox"/> Storage in warehouse
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Inland transport to distribution site
	<input type="checkbox"/> Distribution
	<input type="checkbox"/> In beneficiary's home or during cooking/eating
	<input type="checkbox"/> Other: _____

*Lot number(s): _____ *Best Used By date(s): _____ *Delivery/Receipt date: _____

*Quantity affected (include units): _____ *Total quantity in shipment (include units): _____

*Description of the incident: (Include **Nature of the incident** (i.e. discoloration of the food, unusual odor, infestation, packaging breakage, leakage, etc.); **Location of packaging damage** if applicable (i.e. plug leaking, bottom corner of the bag torn, etc.); **Cause of the incident** if known; Etc.)

*Has the food been declared unfit for human consumption? Yes No Please explain: _____

*Has any action been taken to address the incident? Yes No Please explain: _____

*Has the food been reconditioned? Yes No If yes please specify reason, type of packaging used for reconditioning, packaging supplier: _____

Any other comment or information you would like to share: _____

*Name and contact information of person filling out the form: _____

*Did you attach pictures? Yes No If no, please explain why: _____

* Fields marked with a "*" are mandatory.