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# Food Aid Quality Review

## Phase III Annual Report: Project Year 2



February 2017-January 2018

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## Acronyms

ACF	Action Against Hunger
CHW	Community Health Workers
CITE	Comprehensive Initiative on Technology Evaluation (MIT)
COR	Contracting Officer Representative
CRG	Commodity Reference Guide
CSB	Corn-Soy Blend
CSB+	Corn-Soy Blend Plus
CSWB	Corn-Soy-Whey Blend
DDL	Development Data Library (USAID)
DHMT	District Health Management Team
DMAP	Data Management and Analysis Plan
EED	Environmental Enteric Dysfunction
FACG	Food Aid Consultative Group
FANTA	Food and Nutrition Technical Assistance III Project
FAQR	Food Aid Quality Review
FBF	Fortified Blended Food, also Fortified Blended Flours
FEWS NET	Famine Early Warning Network
FFP	Office of Food for Peace (USAID)
FPAN	Food Policy and Applied Nutrition
FSQA	Food Safety and Quality Assurance
FVO	Fortified Vegetable Oil
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis and Critical Control Points
HEB	High-Energy Biscuit
HHL	Health and Humanitarian Logistics (Conference)
ICN	International Congress of Nutrition
IFT	Institute of Food Technologists
INFORMS	Institute for Operations Research and the Management Sciences
IRB	Institutional Review Board
IRSS	<i>Institut de Recherche en Sciences de la Santé</i>
LNS	Lipid-based Nutrition Supplement
LRP	Local and Regional Food Aid Procurement
MAM	Moderate Acute Malnutrition
MFFAPP	Micronutrient Fortified Food Aid Pilot Project
MOU	Memorandum of Understanding
MSF	<i>Médecins Sans Frontières</i>
MSU	Michigan State University
MUAC	Mid-Upper Arm Circumference
NGO	Non-Governmental Organization
OFDA	Office of Foreign Disaster Assistance (USAID)
PHU	Peripheral Health Unit

PI	Principal Investigator
POD	Personal Operations Division
PPB	Project Peanut Butter
PVO	Private Voluntary Organization
QWICR	Quarterly Web-Interfaced Commodity Reporting
REFINE	Research Engagement on Food Interventions for Nutritional Effectiveness
RUF	Ready-to-Use Foods
RUSF	Ready-to-Use Supplementary Food
RUTF	Ready-to-Use Therapeutic Food
SBCC	Social and Behavior Change Communication
SC+	Super Cereal Plus
SFP	Supplementary Feeding Program
SNFP	Specialized Nutritious Food Products
SPRING	Strengthening Partnerships, Results and Innovations in Nutrition Globally
TOPS	Technical and Operational Performance Support
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
ViM	<i>Victoire sur la Malnutrition</i>
WashU	Washington University in St. Louis
WBSCM	Web-Based Supply Chain Management
WFP	World Food Programme (United Nations)
WHO	World Health Organization
WHZ	Weight for Height Z-Score

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# FAQR PHASE III

## FOOD AID QUALITY REVIEW

Project Year 2 (Feb 2017-Jan 2018)



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### KNOWLEDGE SHARING: GLOBAL REACH

#### This year...

We attended

**30** formal meetings and events

We delivered

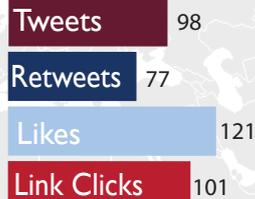
**14** presentations on research and findings

We reached an audience of

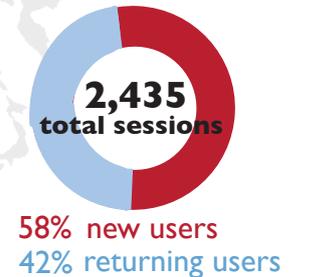
**35,250+** combined attendees



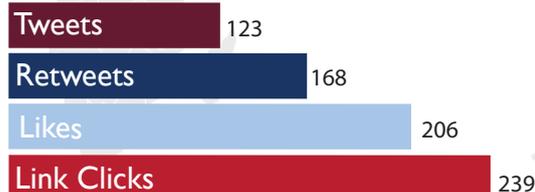
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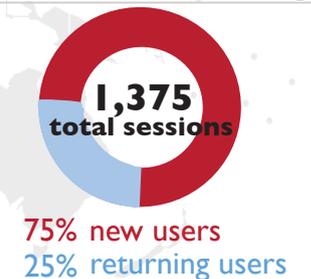
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### ACTIVITIES & OUTPUTS: MAJOR ACCOMPLISHMENTS

#### Evidence Generation



Published 3 papers on our findings from the Malawi Feasibility of Packaging & Messaging Study.



Presented findings from the Burkina Faso Study on prevention of undernutrition at 3 dissemination events.



Conducted 35 key informant interviews to assess and optimize the current food aid basket.

#### Efficiency Gains

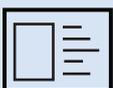


Developed the Beta-Version of an online Decision Support Tool for food aid selection guidance (currently being tested).



Assessed trends in past commodity procurement and transportation data to develop a supply chain optimization tool.

#### Industry Standards



Created 25 new or updated Food Aid Product Description Sheets for food aid baskets offerings.



Consulted with USAID/FFP to create new commodity specification sheets for 5 priority products.

#### Upcoming Events



**USAID**  
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June 27-28, 2018

**Food Assistance For Nutrition Evidence Summit**  
Organized by the Food Aid Quality Review (FAQR) Project

Washington D.C.

visit us at [www.foodaidquality.org](http://www.foodaidquality.org)

## Executive Summary

The world is currently a dangerous place for too many people. In addition to the 65 million people displaced by conflict or drought—more than at any time since World War II—there are millions of mothers, infants and children in 40 countries of the world who need help just to find food to stay alive.<sup>1</sup> Almost 10 percent of the world's population (815 million) do not have enough to eat<sup>2</sup> and roughly 100 million people receive food assistance.<sup>3</sup>

Ensuring that the U.S. Government has the right tools and resources to act decisively in humanitarian actions around the globe is a top priority. Since 2009, Tufts University's Friedman School of Nutrition Science and Policy has implemented a comprehensive Food Aid Quality Review (FAQR). Involving close engagement with the United States Agency for International Development (USAID), United States Department of Agriculture (USDA) and the U.S. Department of Defense's food research labs, the FAQR project has guided U.S. Government policies and programming on which foods to deliver to address different forms of malnutrition and how best to deliver foods to achieve lasting impact. Former USAID administrator Rajiv Shah called this the most significant series of changes to the U.S. food aid agenda since the 1960s.<sup>4</sup>

In FAQR's current phase of work, Phase III (February 2016-January 2019), the project focuses on building and translating evidence from the field into institutionalized processes and actionable policies. FAQR continues to push the boundaries of knowledge and practice to help U.S. food aid products and programming meet the challenges of delivering food aid most efficiently, effectively and cost-effectively in the face of growing need for timely and coordinated food assistance. The Food Aid Quality Review project's goal is to establish information systems, tools, data-gathering and evidence-sharing platforms to support the U.S. Government's humanitarian agenda until the project's end in 2019. FAQR's activities and outputs will support government-wide actions and public-private engagement around food aid for coming decades.

**EVIDENCE GENERATION:** Supporting best practices, FAQR identifies packaging solutions to optimize product integrity and reduce costs along the supply chain. It is also generating new field-based evidence to support cost-effective use of products.

**EFFICIENCY GAINS:** The FAQR project team is developing tools to support cost-effective product and programming choices to make the best use of taxpayer dollars.

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<sup>1</sup> [Gottlieb GC. Statement by Gregory C. Gottlieb Acting Assistant Administrator, Bureau for Democracy, Conflict, and Humanitarian Assistance, U.S. Agency for International Development Before the Senate Committee on Foreign Relations. March 2017.](#)

<sup>2</sup> [The State of Food Security and Nutrition in the World 2017. Building Resilience for Peace and Food Security. FAO, IFAD, UNICEF, WFP and WHO; 2017.](#)

<sup>3</sup> [The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. FAO, IFAD and WFP; 2015.](#)

<sup>4</sup> Remarks by former USAID administrator Rajiv Shah at the Center for Strategic and International Studies, April 10, 2013

**INDUSTRY STANDARDS:** To enhance food safety and quality standards, FAQR is working with the food aid industry on understanding and incorporating industry standards.

***The current FAQR Phase III Annual Report highlights Project Year 2 (February 1, 2017-January 31, 2018) accomplishments, challenges and lessons learned.***

This year the team advanced the FAQR objective areas with the following accomplishments:

## **I. EVIDENCE GENERATION:**

- I.1. FAQR supported enhanced Title II program design by disseminating the results of a tailored study in Malawi on food aid packaging, behavior change communication and appropriate preparation by beneficiaries of fortified blended food products. The study showed that messaging and behavior change communication to mothers/caregivers can achieve higher energy density in corn-soy blend (CSB) porridge prepared with oil as part of a USAID/Office of Food for Peace (FFP)-supported supplementary feeding program. The results were published in the journal *Maternal & Child Nutrition*.<sup>5</sup>
- I.2. As part of FAQR's ongoing research in Sierra Leone on treatment of Moderate Acute Malnutrition (MAM), the team designed a counseling card booklet for use by community health workers and mother support groups related to the food aid products used in the supplementary feeding program<sup>6</sup>. The effectiveness of the food aid product depends on its programming and proper use; therefore, education, behavior change and key messaging need to be integrated with distributing food. The FAQR team is assessing how all of these programmatic factors interact to treat MAM effectively.
- I.3. The team disseminated initial results from an FAQR study in Burkina Faso on the [effectiveness and cost-effectiveness of supplementary foods in the prevention of malnutrition in children](https://foodaidquality.org/burkina-faso-effectiveness-and-cost-effectiveness-study-first-round-results-presentation)<sup>7</sup>. Key initial conclusions include:
  - Ready-to-use supplementary food (RUSF) and Super Cereal Plus (SC+) performed similarly to Corn-Soy Blend Plus (CSB+) programmed with fortified vegetable oil (FVO), Corn-Soy-Whey Blend (CSWB) programmed with FVO performed worse than the other three foods on primary outcome measures for both wasting and stunting.
  - Each of the food aid products, including the RUSF, was widely shared. Beneficiary children did not consume the food supplements as intended, regardless of the study arm. This was most obvious in the arm programmed with Corn-Soy-Whey Blend (CSWB) with oil.
  - CSB+ with oil, which is the current standard of care, was the most cost-effective food aid product in this blanket supplementation context (intended to prevent stunting and wasting).

<sup>5</sup> <http://onlinelibrary.wiley.com/doi/10.1111/mcn.12393/abstract>

<sup>6</sup> <https://foodaidquality.org/focus/field-research>

<sup>7</sup> <https://foodaidquality.org/burkina-faso-effectiveness-and-cost-effectiveness-study-first-round-results-presentation>

- I.4. The team contributed to building evidence on food aid effectiveness through an assessment of the current food aid basket. The FAQR team completed a series of key informant interviews, literature scans and focus group discussions to identify how food aid products, processes and programming could be optimized from the implementing partner perspective. Most respondents said that technical guidance on how to use food aid products should be improved. Implementing partners did indicate that regular multi-stakeholder meetings focused on food aid product options and uses could be helpful.
- I.5. FAQR generated a report highlighting main challenges associated with food aid packaging. Alternative packaging technologies were identified that deserve further investigation:
- Standard-size cans for fortified vegetable oil would make procurement of packaging easier and cheaper.
  - Replacing or eliminating the current plugs in FVO cans could decrease leakage and spills.
  - Laminated bags with improved barrier properties against oxygen and moisture permeation are also being investigated for fortified blended food (FBF) which are prone to oxidation and spoilage.
  - The potential use of biodegradable film for the packaging of lipid-based nutrient supplements (LNS) is being explored.

## **2. EFFICIENCY GAINS:**

- 2.1. A “beta” version of a Decision Support Tool for guiding the selection of food aid products was developed and is now being tested with various stakeholders online. Its array of parameters allows users either to input information related to the program, product and product dosage, cost (of product, international freight and inland transportation, storage and handling), coverage and impact or to choose among a range of default options based on a comprehensive review of the literature. This tool will enable USAID and its partners to make more informed decisions based on the real cost of interventions in relation to more realistic expectations about program reach and impact.
- 2.2. A supply chain optimization tool is under development by the team using historical commodity procurement and transportation data. The team is using the tool to determine the magnitude of potential efficiency gains throughout the food aid supply chain and has assessed trends in prepositioning of commodities, warehouse locations and overall commodity routes. One of the main recommendations presented so far is to engage in advance purchasing for frequently-used commodities in the operational system.

## **3. INDUSTRY STANDARDS:**

- 3.1. FAQR created 25 new/updated USAID Food Aid Product Description Sheets which are more aligned with industry standards for food product information sheets. The new format modernizes and raises the profile of U.S. products and commodities offered in the food aid

basket. It seeks to present crucial information in an easy-to-digest manner, relevant to industry, implementing partners, USAID, USDA and other stakeholders.

- 3.2. FAQR Phase III, in consultation with USAID/FFP, created new commodity specifications sheets for five priority products (Fortified Milled Rice, Corn-Soy Blend Plus, Fortified Vegetable Oil, Super Cereal Plus and High-Energy Biscuits) as part of the process to harmonize specifications with WFP.

### **Future Priorities: FAQR Phase III Project Year 3**

In the final year of project implementation, FAQR Phase III will focus on completing all outstanding deliverables, ensuring effective sharing of project outputs to relevant stakeholders and providing the U.S. Government with resources and tools to respond more effectively and efficiently to the world's food aid needs.

## I. Background: FAQR PHASE III

The Food Aid Quality Review (FAQR) provides the United States Agency for International Development's (USAID) Office of Food for Peace (FFP) and its partners with actionable recommendations on ways to improve nutrition among vulnerable peoples for whom the direct distribution of food aid can make a significant impact. The *Food Aid Quality Review Project Phase III* runs from February 1, 2016 to January 31, 2019, with two option years.

The first phases of FAQR involved reviews of nutrition science. FAQR Phase I recommendations were published in [Delivering Improved Nutrition: Recommendations for Changes to U.S. Food Aid Products and Programs](#)<sup>8</sup>. This report led to FAQR Phase II's focus on reformulating fortified blended foods (FBFs), the inclusion of lipid-based products in FFP's commodity list and testing new products under field conditions. A full summary of FAQR Phase II accomplishments is highlighted in the [Food Aid Quality Review Phase II Closeout Report](#)<sup>9</sup>.

FAQR Phase III responds to additional FFP priorities. The team will continue to work closely with several domestic and international collaborators: USAID, USDA and United Nations (UN) partners, all of whom are committed to strengthening the evidence base for use of specialized food products for targeted nutrition goals. The framework shaping current activities focuses on: C.3.1 Research and Development—Improving Existing Products, C.3.2 Improved Programming, and C.3.3 Improved Process for Commodity Procurement and Quality Assurance along Supply Chain. Year 2 Accomplishments, Challenges and Lessons Learned and Future Priorities section of this report is presented under these three rubrics. This delineation and numbering scheme also corresponds with the Statement of Work outlined in *Section C: Statement of Work: Conclusion of the Food Aid Quality Review (FAQR): Final Phase of Implementation of the Food Aid Quality Review Phase III Program Contract, AID-OAA-C-16-00020*.

### **C.3.1 Research and Development—Improving Existing Products**

FAQR Phase III is examining such mission-critical issues as: how food matrices (“the nutrient and non-nutrient components of foods and their molecular relationship to each other”<sup>10</sup>) affect bioavailability of nutrients and digestibility of products; the potential for thermal/non-thermal processing technologies to improve food matrices; potential uses for existing products rarely used today, as well as new products (which could include point-of-use fortificant powders) and novel packaging technologies to improve resistance to infestation, shelf life and efficiency of handling; dual-use products for emergency response; and completion of the data collection, analysis and reporting on field studies, assessing the effectiveness and cost-effectiveness of various newly-formulated food products.

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<sup>8</sup> [pdf.usaid.gov/pdf\\_docs/pnadz842.pdf](http://pdf.usaid.gov/pdf_docs/pnadz842.pdf)

<sup>9</sup> [pdf.usaid.gov/pdf\\_docs/PA00M9B8.pdf](http://pdf.usaid.gov/pdf_docs/PA00M9B8.pdf)

<sup>10</sup> Source: United States Department of Agriculture: National Agricultural Library (<https://agclass.nal.usda.gov>)

### **C.3.2 Improved Programming**

The work on improving cost-effectiveness of various intervention designs includes strategy development for pre-positioned specialized nutritional products, guidance on options for deployment of specialized products, elaboration of a strategy for responding to food needs in the initial stages of a sudden onset emergency and the dissemination of a decision support tool to help include cost-effectiveness in the decision-making process of specialized food aid programming. The project generates improved technical guidance, sharing details on research protocols used in testing new products in the field and making further progress in harmonizing product specifications across donor agencies.

### **C.3.3 Improved Process for Commodity Procurement and Quality Assurance along Supply Chain**

The goal is to provide recommendations on institutional and industry processes for capacity building, including the institutionalization and strengthening of interagency technical collaborations, mechanisms to ensure greater policy and product harmonization (domestically and internationally), enhanced supply chain oversight, establishing stronger and more user-friendly quality assurance feedback loops, as well as promoting food safety and quality standards which can also be applied to local and regional food procurement.

## **II. Year 2 Accomplishments, Challenges and Lessons Learned**

### **C.3.1. Research and Development—Improving Existing Products**

#### **Food Matrices and Bioavailability (C.3.1.1, C.3.1.2, C.3.1.3)**

The wide array of food products in the food aid basket involve different food matrices. These different food matrices result in different levels of nutrient release and absorption in the body. Thus, it is essential to understand and take into account food matrices as they influence effective delivery of nutrients in food. The project will examine evidence on how the composition and structure of food products affect the bioavailability, absorption and physiological utilization of nutrients.

The objective of this work is to determine the role of food structure on nutrient release to the gut, which has implications for satiety, rate of nutrient release and absorption.

#### **Accomplishments**

A literature review explored current science on factors affecting the bioavailability of nutrients in various food matrices. It concluded that minor changes in the existing processed food aid

products could improve the energy density and nutritional value of these foods. Evidence<sup>11,12</sup> suggests that the addition of diastatic malt could improve protein digestibility and assist in the reduction of sugar and phytate content in foods. Insights from the animal feed industry should inform food technology applied to products for human consumption. For example, in the feed industry, synthetic amino acids are used to improve protein quality and bioavailability.<sup>13</sup> If translated to food aid product formulation this could help lower the cost of foods by reducing the total crude protein and improving the required amino acid levels in the food.

To engage stakeholders and industry knowledge in this realm, FAQR organized a roundtable at the Institute of Food Technologists (IFT) meeting on “Improving the Nutritional Value of Foods in the USAID Food Aid Basket: Optimization of Macro and Micro Nutrients, Food Matrices, Novel Ingredients and Food Processing Technologies.” The event was attended by a variety of sectors—industry, non-profits, academia and government agencies. Discussion was divided into subtopics including macronutrients, micronutrients, processing, nutrient delivery techniques, bioavailability of nutrients and bioactive and functional compounds. Key recommendations were to try to increase the portfolio of processed food in the food aid basket from the current 20 percent to at least 40 to 50 percent. Additionally, participants recommended finding alternate sources of plant protein to lower the cost and increase the reach of food aid products, explore the use of pre- or probiotics to improve gut health and improve vitamin C heat stability.

### **Challenges and Lessons Learned**

Existing literature related to food matrices and processing technology for food aid products specifically is extremely limited. However, expert consultations have shown that some of the changes can be made to improve bioavailability and quality of the existing processed foods in food aid basket with minimal difficulty; other changes would require funding to establish data on the nutritional efficiency of these foods and enable their inclusion in food aid products. Finally, there is a lack of data in the literature related to the cost benefit of changes in different food matrices and it is difficult to accurately model these effects without this key information.

#### **Food Aid Basket (C.3.1.4, C.3.1.5, C.3.1.8, C.3.1.7, C.3.1.10, C.3.2.2, C.3.2.3, C.3.2.4, C.3.2.5)**

The current list of food aid products and the process for maintaining the list is suboptimal. There is no systematic process for maintaining the list of products and suppliers approved for use in FFP programs and no consistent source of technical guidance regarding foods and rations. USAID does not have an institutionalized, systematic method for either assessing new or

<sup>11</sup> Fageer, A.S.M., Babkiker, E.E., El Tinay, A. 2004. Effect of malt pretreatment and/or cooking on phytate and essential amino acids contents and in vitro protein digestibility of corn flour. *Food Chemistry* 88(2): 261-265.

<sup>12</sup> Herlache, J.L. 2007. Power flour (High Diastatic Milled Barley Malt). Its important and critical role in the care of weaning infants and the severely malnourished. Perin Press Inc., Wisconsin

<sup>13</sup> Kidd, M.T., Tillman, P.B., Waldroup, P.W., Holder, W. 2013. Feed-grade amino acid use in United States: The synergistic inclusion history with linear programming. *The Journal of Applied Poultry Research* 22(3): 583-590.

modified products or evidence relating to the effectiveness of food aid products and ingredients for improving population-wide nutrition in emergency and non-emergency contexts.

The project's work will produce recommendations for an updated list of food aid products to meet USAID/FFP's needs and will propose a systematic and transparent process for updating this product list, including individual product modifications, product additions or product removals.

### **Accomplishments**

FAQR held interviews with food-aid decision makers at eight partner organizations. Information was collected on the ways existing products can be improved, new products that should be considered and the need for more technical guidance on using products. Key takeaways from these interviews were presented to stakeholders through a webinar co-hosted by the Technical and Operational Performance Support (TOPS) Program and Core Group Nutrition Working Group. Results showed that the majority of participants feel the guidance on how to use food aid products should be improved. Implementing the practice that partners use a wide variety of tools and resources to design their programs based on personal preference and awareness that a tool or resource exists was suggested. As a result, improved guidance on food aid product options and uses for USAID/FFP is recommended.

The FAQR team also continued drafting a template for proposals of new food aid products, ingredients or packaging which potential suppliers can use to present to USAID and USDA for consideration. The template for proposals was developed from an existing draft USDA/USAID policy from 2014, in consultation with the USAID's Personnel Operations Division (POD), USDA, FAQR internal expertise and existing WFP policy. The proposed template requires the applicant to provide: i) contact information; ii) a basic description of and information about the product; iii) production capacity; iv) microbiology; v) product storage performance; vi) packaging; and v) nutritional content. To assess whether the draft application accomplishes the intended goals, FAQR tested the application on three of the Micronutrient Fortified Food Aid Pilot Project (MFFAPP) products: sorghum-soy blend, Spammy (a poultry-based spread) and a dairy-protein based paste. Centered on this pilot, changes were suggested to the application, which is in the process of being updated before being presented to USAID/FFP. In addition to the template, a policy detailing the recommended process through which applications should be reviewed has also been drafted for review and potential adoption.

In addition, FAQR continued to investigate new products and new suppliers.

### **Challenges and Lessons Learned**

It is difficult to assess the suitability of new products for food aid programming, as current product reports often do not provide sufficient information on the nutrition, food safety or

program design elements which are of concern to USAID/FFP. The application template FAQR is developing ensures all the necessary information USAID needs is provided when a new product is proposed.

### **Food Aid Packaging and Innovation (C.3.1.6)**

The integrity of food aid commodities must be insured from the date of manufacture until the end of the shelf life. Food aid products endure rough transport and storage conditions, often in high humidity and high heat environments over a long period of time. Packaging plays a key role in the protection of commodities throughout the supply chain and therefore must be optimized.

The objective of this work is to provide USAID/FFP with recommendations regarding the appropriate packaging technologies to be used to optimize protection and preservation of the commodities throughout the supply chain and shelf life.

### **Accomplishments**

FAQR generated a report highlighting the main challenges associated with current food aid packaging. The team reviewed the literature and interviewed food aid vendors, packaging suppliers, transporters and field workers to discuss challenges, including pest infestation and food spoilage, nutrient losses, packaging leakage and breakage, transportability and storability, and environmental impact. Opportunities for improvements to packaging were discussed with USAID/FFP and the need for updated performance requirements was confirmed.

In addition, the team reviewed available data on food losses throughout the supply chain and discussed the challenges in tracking and reporting damages with relevant stakeholders including commodity and warehouse managers. Data were obtained from the Quarterly Web-Interfaced Commodity Reporting (QWICR) system. In 2016, 1,100 metric tons of food aid were lost throughout the supply chain, valued at one million dollars. This does not include the losses in repositioning warehouses or by the UN, which do not report through QWICR. About 90 percent of the losses were prior to arrival in the implementing partner's warehouse. This suggests that international transport and port operations, and *not* in-country storage and handling, are the main cause of loss. However, reporting damage and losses is time-consuming and as a result, issues at the end of the supply chain remain unreported. These numbers also do not include reconditioning<sup>14</sup> operations to address packaging failure, which result in delays and additional expenses. Packaging inadequacy needs to be resolved. Although physical losses may not be high, the time and resources spent addressing challenges are significant.

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<sup>14</sup> Reconditioning operations refer to the repackaging of the foods in a new container to prevent or reduce losses due to breakage or failure of the original packaging. It does not include "voluntary" repackaging by the implementing partner to facilitate distribution (i.e., oil repackaged in individual bottles prior distribution to the beneficiaries). Reconditioning reduces the amount of food wasted but requires additional time and resources.

Several alternative packaging technologies were identified which should be further investigated to address some of the challenges mentioned above. Standard-size cans for fortified vegetable oil would make procurement of packaging easier and cheaper. Replacing or eliminating the current plugs could decrease leakages and spills. Metal packaging does remain the most promising option to provide adequate protection to fortified vegetable oil, but efforts must be made to prevent leakage and the consequent need for reconditioning prior to distribution to reduce the risk of micronutrient degradation. Laminated bags with improved barrier properties against oxygen and moisture permeation are also being investigated for fortified blended food (FBF) which are prone to oxidation and spoilage. The potential use of biodegradable film for the packaging of lipid-based nutrient supplements (LNS) and FBF packaged in small pouches, which cannot be repurposed and generate more waste, is also being investigated.

### **Challenges and Lessons Learned**

Feedback from the field remains scarce and difficult to collect in a systematic manner, which makes it challenging to identify priorities. In addition, because reported losses are low, it is difficult to demonstrate the cost-effectiveness of some of the solutions considered. However, most stakeholders interviewed highlight the strong need for packaging improvements.

Few publications focus on the performance of packaging technologies in the context of food aid. Ration sizes, distribution methods, storage environments and transport conditions vary greatly, so a given technology may significantly improve the situation in one context but introduce new complications in another. In addition, introducing changes to food aid packaging has an impact on many levels of the supply chain (production, transport, storage, distribution) and the feasibility of using new packaging technologies must be evaluated at all levels of the supply chain.

#### **Malawi Feasibility and Acceptability Study<sup>15</sup> (C.3.1.11)**

Some of the agencies implementing supplementary feeding programs choose to distribute foods with FVO already included in the supplement (such as SC+) because of the concern that if oil is provided separately, it will be diverted to other uses instead of being incorporated into the porridge preparation.

An FAQR study in [Malawi](#) was completed in FAQR Phase II. The study assessed the extent to which beneficiaries can be encouraged to use oil<sup>16</sup> as instructed by implementing partners to prepare corn-soy blend (CSB)<sup>17</sup> porridge for beneficiary children. The study also assessed the impact of packaging changes (providing CSB in 2-kilogram packages with printed messages rather than in bulk), in conjunction with behavior-change messages on the correct use of CSB and oil, and on intra- and inter-household sharing. This Phase II study concluded that *it is*

<sup>15</sup> <https://foodaidquality.org/focus/field-research>

<sup>16</sup> Specification found at: <http://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/Comm-Operations/procurement-and-sales/export/pdfs/vol5.pdf>

<sup>17</sup> Specification found at: [https://www.fsa.usda.gov/Internet/FSA\\_File/wsb13.pdf](https://www.fsa.usda.gov/Internet/FSA_File/wsb13.pdf)

*possible* to achieve high rates of compliance with recommended FVO: CSB ratio in porridge preparation and to increase the FVO: CSB ratio significantly, even when FVO and CSB are distributed separately. The average amount of oil per 100 grams of CSB in Intervention Group 1 was 28 grams. In Intervention Group 2 it was 25 grams, compared with 12 grams in the control group (and with only 7 grams in the intervention group at baseline).

These results are operationally significant for agencies implementing supplementary feeding programs. The study showed that by providing sufficient FVO and strong social and behavior change communication (SBCC), it is possible to get beneficiaries' mothers/caregivers to prepare porridge with high ratios of FVO: CSB.

### **Accomplishments**

During the second year of FAQR Phase III, two manuscripts and one case study (in addition to the main findings paper, "[Program changes are effective and cost-effective in increasing the amount of oil used in corn-soy blend porridge for treatment of moderate acute malnutrition in Malawi](#)"<sup>18</sup>) were published. Additionally, in-home observation data from the Malawi study was uploaded to the USAID Development Data Library (DDL).

Published in the second year of FAQR Phase III:

- "[Effective delivery of social and behavior change communication through a Care Group model in a supplementary feeding program](#)"<sup>19</sup> in *Journal of Health, Population and Nutrition*
- "[Self-report vs. direct measures for assessing corn-soy blend porridge preparation and feeding behavior in a moderate acute malnutrition treatment program in southern Malawi](#)"<sup>20</sup> in *Journal of Hunger & Environmental Nutrition*
- "[Preparation and presentation of corn-soy blend for moderately malnourished children in Malawi](#)"<sup>21</sup> in *ENN online*

### **Burkina Faso: Effectiveness and Cost-Effectiveness Study on Prevention of Wasting and Stunting Field Study**<sup>22</sup> (C.3.1.12)

There is a gap in evidence surrounding the effectiveness and cost-effectiveness of food aid products in preventing moderate wasting and stunting.

The FAQR research in [Burkina Faso](#) is assessing the effectiveness and cost-effectiveness of the new Corn-Soy-Whey Blend (CSWB) compared to three alternative products (CSB+,

<sup>18</sup> <http://onlinelibrary.wiley.com/doi/10.1111/mcn.12393/abstract>

<sup>19</sup> <https://jhp.bimedcentral.com/articles/10.1186/s41043-017-0111-3>

<sup>20</sup> <http://www.tandfonline.com/doi/full/10.1080/19320248.2017.1374902>

<sup>21</sup> <http://www.ennonline.net/fex/55/csbmalawi>

<sup>22</sup> <https://foodaidquality.org/focus/field-research>

SC+ and RUSF) in the prevention of moderate wasting (moderate acute malnutrition or MAM), the prevention of stunting and the promotion of adequate growth in children 6 to 23 months old. In addition to examining the effectiveness and cost-effectiveness of these products, the study is evaluating the factors influencing effectiveness as well as assessing the “last mile” (the “last mile” is the final portion of the delivery process) in the food aid supply chain. The results of this research will allow USAID to make better-informed decisions about which of the four food aid products to use in their programs. There will also be an evidence base to justify how to incorporate social and behavior change messages, and how to address and quantify gaps in the “last mile” of the food aid delivery supply chain.

### **Accomplishments**

FAQR Phase III completed all data collection for the Burkina Faso cost-effectiveness of prevention study including collecting anthropometric data from 6,117 children, 709 porridge samples for fat content analysis, 1,672 water samples for E. coli analysis, and 2,263 surveys, qualitative interviews and focus group discussions. The team developed a costing matrix to calculate the expense of programming each of the four foods in the study as well as beneficiary opportunity costs. The team used the matrix, along with regression analysis results to calculate the comparative cost-effectiveness.

Data from paper forms continued to be entered until August 2017. Data were cleaned in the field from January 2017 to October 2017. Fully field-corrected datasets were transmitted to the Tufts data team in early November 2017. The team started data analyses in April 2017, and continue to finalize analyses. The effectiveness of the four foods was compared in preventing stunting (length-for-age z-score  $\leq -2$ ) and wasting (weight-for-length z-score  $\leq -2$ ) as used in a real-world programmatic setting. Stunting outcomes explored include prevalence of stunting at end-line, mean length-for-age z-score throughout the study period and time to first stunted measure. Wasting outcomes explored include total monthly wasting measurements throughout the study period, mean weight-for-length z-score throughout the study period and time to first wasted measurement. Further analyses will be conducted to look at other outcome measures, including rates of linear and ponderal growth.

Preliminary results were disseminated to study participants, enumerators, community health agents, community leaders from the communities studied, and program staff from the supplementary feeding program with which the study collaborated, the “Victoire sur la Malnutrition” (ViM) program in Kaya, Burkina Faso, May 9-10, 2017. The team disseminated final results in both Ouagadougou, Burkina Faso, and in Washington, D.C., United States. The dissemination in Ouagadougou was held on January 11, 2018 and targeted the Ministry of Health and other government and non-governmental organizations involved in nutrition programming in-country. The dissemination in Washington, D.C. was held on January 31, 2018 and was geared toward USAID staff, as well as other organizations who intervene in the

nutrition sector. Each results dissemination included presentations on the effectiveness and cost-effectiveness results and factors that potentially influence the comparative effectiveness of the four foods. The presentations were followed by question and answer sessions and discussion of operational relevance and policy recommendations.

The key effectiveness results shared during disseminations were that children in the CSWB arm experienced higher rates of stunting and wasting, while rates in the SC+ and RUSF arms were similar to CSB+. However, none of the foods prevented declines in either length-for-age z-scores or weight-for-length z-scores. Note that performance cannot be attributed solely to product composition; interpreting these results requires consideration of factors which may have influenced effectiveness. The results of analysis of factors potentially affecting effectiveness showed that study foods were generally not used as intended. Patterns of use of the study foods within the households varied by study arm, but sharing with people other than the target child was common among all arms. Furthermore, CSWB was shared more and eaten less frequently by beneficiary children. Of particular note was the anecdotal finding that CSWB was reported to be bitter after eight to nine months of storage time, which may have contributed to lower consumption rates.

Cost-effectiveness analysis was done for the completed Prevention Study in Burkina Faso, and the results were visualized and interpreted for policy implications. FAQR found that the cost-effectiveness results for the primary outcomes of prevention of stunting and wasting were similar: CSB+ programmed with fortified vegetable oil was the most cost-effective. RUSF was the most expensive product from the program perspective and SC+ was the most expensive when the program and caregiver perspectives were combined. After CSB+, CSWB had the second lowest cost but also had lower effectiveness.

### **Challenges and Lessons Learned**

Data entry and cleaning in the field took much longer than expected, which shortened the timeline for data analysis. We faced challenges in calculating program costs due to often-confusing, paper-based commodity tracking and warehouse record keeping. It was also difficult to get detailed financial data on expenditures from previous years from the ViM program, also due to less-than-optimum record-keeping. These challenges were overcome through close collaboration with ViM program staff members and administrators who were able to provide the necessary information, and allowed intensive review of their documents.

### **Sierra Leone: Effectiveness and Cost-Effectiveness Study on Treatment of MAM Field Study**<sup>23</sup> (C.3.1.13, C.3.1.14)

There is a gap in evidence surrounding the cost-effectiveness of food aid products in treating moderate wasting.

<sup>23</sup> <https://foodaidquality.org/focus/field-research>

The FAQR research in [Sierra Leone](#) seeks to determine the relative effectiveness and cost-effectiveness of alternative supplementary foods in the treatment of moderate acute malnutrition (MAM) in normal program settings. The study comparison is based on targeted food delivery to children 6 to 59 months old who are screened for MAM using mid-upper arm circumference (MUAC). Study participants receive one of approximately four isoenergetic test foods: SC+ with amylase, CSB+ and FVO, CSWB and FVO, or RUSF. The results of this study will guide decisions about what commodities to use in supplementary feeding programs and what factors need to be addressed to ensure maximum effectiveness in the treatment of moderate malnutrition.

### **Accomplishments**

Despite an almost three-month delay in food procurement, the study's implementing partners, Project Peanut Butter (PPB) and Caritas Bo, successfully piloted the field study's operations and pre-tested data collection tools. The study began enrolling beneficiaries on April 11, 2017.

Over the last year, the study has enrolled more than 1,400 beneficiary children, carried out 128 community questionnaires, conducted 102 in-home observations and 397 in-depth interviews, all excluding the pilot phase of the study. In July 2017, FAQR recruited a local consultant to lead the development of key messages and counseling aids for use as tools in a social behavior change communication (SBCC) program aimed at improving preparation and consumption practices of beneficiary households. In September, drafts of each counseling card were tested to gauge understandability and help to inform the mode of training that would be carried out in November to ensure the proper use of the counseling cards. The final cards were printed and the training implemented from November to December 2018 when more than 2,400 community health workers (CHWs) and Lead Mothers were trained on counseling techniques using the key messages and counseling card booklets.

### **Challenges and Lessons Learned**

The rates of moderate wasting in Pujehun District are approximately half of those which were predicted at the study's beginning. These low enrollment rates have raised concerns about the study being able to recruit a sample size of sufficient proportions for the initial planned analysis. To increase enrollment, the PPB team, in collaboration with the local district health management team (DHMT) developed a plan for peripheral health units (PHUs) which were not designated study sites to be able to refer MAM cases to the nearest study site. This helped to improve enrollment. Active community screening and partnerships with local CHWs has also assisted with identifying MAM cases in communities and increasing enrollment.

### **Sub-studies on Body Composition, Developmental Indicators and Environmental Enteropathy<sup>24</sup> (C.3.1.15)**

While supplementary foods have effectively treated children with MAM, supplementary feeding programs need to assess outcomes beyond anthropometric indicators. Three such outcomes are: change in lean mass (and fat mass)<sup>25</sup>, environmental enteric dysfunction (EED)<sup>26</sup> and neurocognitive function<sup>27</sup>.

In addition to studying the effectiveness and cost-effectiveness of the foods in achieving adequate mid-upper arm circumference (MUAC) and weight-for-height z-score (WHZ), three sub-studies are nested within the Sierra Leone study. The objectives of these studies are: 1) to compare the effect of the four foods on body composition (lean mass and fat mass) and correlation of changes in body composition with measures of recovery (MUAC and WHZ); 2) to compare the effect of the four foods in the presence of (as well as on) environmental enteric dysfunction (EED) in children recovering from MAM; and 3) to compare the effects of the four supplementary foods on children's neurocognitive function and recovery.

#### **Accomplishments**

The body composition and EED sub-studies in Sierra Leone successfully submitted study protocols and data collection tools to the Institutional Review Board (IRB), recruited and trained local sub-study staff and identified sub-study sites as well as local service providers and suppliers as part of study start-up activities.

In July 2017, data collection for body composition and EED sub-studies began. As of January 2018, body composition and EED sub-studies had recruited approximately 266 and 254 subjects, respectively. The body composition sub-study has graduated<sup>28</sup> 174 participants while the EED sub-study has had 117 graduates.

In Year 2, FAQR finalized the setup of a solar battery-powered laboratory for the neurocognitive sub-study and launched the pilot phase of the study in Pujehun, Sierra Leone. This sub-study examines neurocognitive function and recovery in children with MAM, and evaluates the effects of different supplementary foods on neurocognitive function in children. Using eye-tracking techniques as well as conventional neuropsychological assessment techniques, the study assesses children's cognitive development as a parameter which could reflect "full" recovery beyond physical growth. The eye-tracking tests developed in this study

<sup>24</sup> <https://foodaidquality.org/focus/field-research>

<sup>25</sup> Provides a better picture of the underlying mechanisms by which these foods improve nutrition status.

<sup>26</sup> A condition common in developing countries, characterized by physiological changes in the mucosa of the small intestine leading to alterations in barrier integrity and absorptive capacity, as well as inflammation.

<sup>27</sup> There is evidence linking malnutrition and impaired brain development, placing children at risk for lifelong cognitive, emotional, and social deficits.

<sup>28</sup> Graduation is defined as subjects who received four weeks of supplementation and provided a biological sample.

may also provide a quick, objective and fully-automated system for monitoring neurocognitive function and recovery in children in food aid programs.

By the end of Project Year 2, a total of 96 children with MAM or well-nourished controls were enrolled in the pilot phase of the neurocognitive study. The children were assessed with eye-tracking tests of saccadic reaction time (reaction to an unexpected stimulus) as well as behavioral measures of neurocognitive development.

### **Challenges and Lessons Learned**

The lower MAM prevalence resulted in slower-than-anticipated recruitment into the body composition and EED sub-studies. In response, the sub-study staff screened for MAM cases on the days where the sub-studies did not have any study subjects and were able to identify MAM cases to help with study enrollment.

The body composition and EED sub-studies had a loss to follow-up rate<sup>29</sup> of 8 percent and 23 percent, respectively. The IRB protocol for both studies was therefore amended to allow the sub-studies to collect samples from study subjects at home if they are not present at sub-study sites on scheduled dates. This was done because some subjects reported distance to the sites as a barrier and others forgot their scheduled date.

During the pilot phase of the neurocognitive study, there were challenges in recruiting children within the narrowly specified age-eligibility criteria of the study (7 months  $\pm$  14 days and 18 months  $\pm$  14 days). To facilitate recruitment, the age range was widened from 14 to 28 days for the two age groups. While this change will add age-related variability in the sample, the age ranges will still be relatively narrow and therefore suitable for the original goals of the study. Other more minor challenges were met in testing the youngest children with limited postural control, dealing with the hot temperatures at the test sites during the dry season and maintaining children's attention during the test in noisy environments. Using supportive equipment (baby carriers and fans) and adjustments to the study protocol (e.g., use of salient audiovisual stimuli) were determined to be the best solution for dealing with these challenges.

### **C.3.2. Improved Programming**

#### **Commodity Reference Guide (C.3.2.1)**

As USAID/FFP food aid products have improved and the offerings expanded to meet the nutritional needs of beneficiaries, there is greater need for program implementers and other

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<sup>29</sup> Participants who provided a sample at enrollment but did not show up for sample collection at the second-time point, which was after 4 weeks.

stakeholders to access and use well-presented information and resources which will support effective programming of U.S. food aid products.

The FFP Commodities Resource Guide on the web portal<sup>30</sup> has changed little since its inception, although it added the first set of Food Aid Commodity Fact Sheets created under FAQR II in recent years. USAID and the FAQR Phase III team will work together to create an updated and overhauled FFP Commodities Resource Portal to raise the profile of the U.S. food aid basket and better share and present commodity information to stakeholders online. The Portal will also be a “one-stop shop” providing a unified, transparent source of information that is user-friendly and easily navigated.

### **Accomplishments**

FAQR Phase III completed the landscape analysis of the current Commodities Resource Portal during Year 2 and consulted with USAID/FFP on the design, purpose and use of the current portal. Results from the landscape analysis informed recommendations which were provided and accepted for an updated Commodities Resource Portal.

FAQR created 25 updated and new USAID Food Aid Product Description Sheets which are more aligned with industry standards for food product information sheets. Each Sheet provides product/commodity specific information including product description, programming uses, preparation and applications, as well as a table of key nutrients. The new Food Aid Product Description Sheets include graphics and photos of the raw product and primary packaging. The Sheets have links to product specifications (elsewhere on the USAID or USDA website) for more detailed manufacturing information, ordering and procurement. Once they are posted on the USAID/FFP website, the Sheets will replace those currently posted.

Below are examples of new [Food Aid Product Description](#) Sheets<sup>31</sup> for Fortified Milled Rice and Ready-to-Use Therapeutic Food (RUTF).

### **Challenges and Lessons Learned**

The Commodity Resource Portal redesign is constrained by USAID/FFP website limitations, including how prominently the Portal can be featured on the overall USAID website and the amount of information which can be included. The FAQR III team worked closely with USAID/FFP web design staff to create materials within these constraints while prioritizing crucial information to be posted.

<sup>30</sup> <https://www.usaid.gov/what-we-do/agriculture-and-food-security/food-assistance/resources/implementation-tools>

<sup>31</sup> <https://www.usaid.gov/food-assistance/resources/food-aid-product-descriptions>



inherent in the study designs selected, as well as limited comparability among studies due to highly variable sampling methods, populations of interest and interventions.

### **Cost-Effectiveness (C.3.2.7)**

The call for using cost-effectiveness evidence to support better decision-making in food aid policy and programming is increasing. However, there is a research gap in generating cost-effectiveness estimates. Furthermore, there is a policy gap in factoring effectiveness into cost-only programming decision-making.

The research gap on cost-effectiveness evidence is first addressed through FAQR's field studies. Then, building upon lessons learned from the field research methods used in cost data collection and cost-effectiveness analysis, guidance documents will be generated and workshops organized on cost-effectiveness methodology for future cost-effectiveness research. Furthermore, the project will link field research results with policy changes and will address the policy gap by producing deliverables to support better decision-making by considering cost-effectiveness in selecting specialized food aid commodities for nutrition programming.

### **Accomplishments**

The Decision Support Tool was designed to promote consideration of cost-effectiveness parameters in making choices about specialized foods. The beta version of what will be a web-based interactive tool was completed for MAM treatment and continues to be improved based on feedback from USAID/FFP as well as implementing partners. Tool tabs for other nutrition programming purposes, such as Stunting Prevention and SAM Treatment, are currently under development. User selection of parameters in the Decision Support Tool is guided by real data from USAID/FFP as well as global programmatic and scientific literature. The Tool allows sensitivity analyses of different programming scenarios and the results can be compared online as well as downloaded.

In Project Year 2, cost data for the MAM Treatment Study in Sierra Leone were regularly collected from the field and categorized for analysis based on the cost data collection plan finalized in Year 1.

### **Challenges and Lessons Learned**

The Phase II version of the Cost Projection Tool was developed in Excel, but the team recognized that for the purpose of the Phase III version of the Decision Support Tool, an interactive web-based interface would be crucial. In order to avoid significantly prolonging the process of web development by seeking an outside JavaScript web developer, the team took advantage of the Cost Specialist's existing expertise in R and developed the web-based Decision

Support Tool via an R package called Shiny. The graphic below shows a screen shot of the tool currently under development.

Figure 1: Decision Support Tool Online Interface

## Knowledge Sharing (C.3.2.8)

It is challenging to communicate FAQR's sustainable outcomes to a wide range of stakeholders.

FAQR Phase III will address this by communicating outcomes, lessons learned and recommendations to a variety of stakeholder groups using a variety of communication tools. Communications efforts will ensure that knowledge generated by FAQR Phase III's activities is disseminated effectively to enable evidence-based policy and practice.

## Accomplishments

Multiple presentations were made which provided: (a) an update on progress towards key objectives of FAQR Phase III; (b) an overview of interim or preliminary results from FAQR III; and (c) progress toward making food aid more cost-effective and of longer-lasting positive impact. See [Annex 2.2](#) for a list of key presentations. Notably, FAQR Phase III hosted two symposia at the 2017 International Congress of Nutrition (ICN) on "Addressing Child Malnutrition: Newer Measures to Advance Prevention and Treatment Outcomes" and "Food Aid Research: Update on Food Aid for Preventing and Treating Undernutrition." See [Annex 2.7](#) for more information on the ICN symposia.

FAQR launched an updated FAQR website (<http://www.foodaidquality.org>) at the end of Project Year 1. In Project Year 2 FAQR continued to update and use the new platform to

publicize FAQR's achievements to a variety of stakeholders with a focus on giving access to results useful to policymakers, programmers, researchers and industry. Additionally, in support of FAQR's strategic communications plan, Year 2 outputs were communicated through a variety of dissemination pathways including Twitter, the FAQR website, a variety of Listservs, and partnering with the Tufts University Friedman School of Nutrition Science and Policy, and USAID/FFP communications teams to promote key outputs.

<b>@foodaidquality Twitter Analytics</b>					
<u>Total Followers: 82</u>					
	<b>Tweets</b>	<b>Retweets</b>	<b>Likes</b>	<b>Link Clicks</b>	<b>Tweet Impressions</b>
<b>February 2017- January 2018</b>	98	77	121	101	37,623

<b>www.foodaidquality.org Google Analytics</b>			
	<b>Total number of Sessions<sup>17</sup></b>	<b>New Sessions<sup>18</sup></b>	<b>Average Pages Per Session<sup>19</sup></b>
<b>February 2017- January 2018</b>	2,435	1,410	(average) 2.98

FAQR completed a series of fact sheets highlighting FAQR accomplishments, the anticipated sustainable achievements of FAQR and the importance of food aid. The fact sheets are meant to serve as an informational tool for USAID/FFP aimed at informing the agenda for the 2018 Farm Bill and budget appropriation discussions. Fact Sheets are posted on the [FAQR website](#)<sup>32</sup>.

The REFINE (Research Engagement on Food Interventions for Nutritional Effectiveness) website<sup>33</sup> continues to make information on research and innovations related to food-supported interventions easily accessible. The website is updated monthly with the latest ongoing clinical trials and publications. This information is also disseminated through the REFINE Twitter feed, quarterly resource updates, and other organizations' monthly newsletters. To attract more visitors to the REFINE site, FAQR launched a one-year anniversary campaign in October and November 2017.

<sup>32</sup> <https://foodaidquality.org/faqr-fact-sheets>

<sup>33</sup> <https://refinenutrition.org>



Figure 2: Infographic from FAQR Fact Sheet "Why Food Aid Matters"

In Year 2, resources from REFINE were used to create preparatory documents for the Interagency Harmonization Working Group meeting, as well as several other meetings and presentations. Finally, REFINE is being used to inform the food aid research methods scan discussed above, as well as a knowledge gaps landscape scan. Both of these scans will be completed and disseminated in Year 3.

<b>REFINE Statistics FAQR Phase III Year 2</b>	
Studies tracked	57 studies in 29 countries
Publications in REFINE library	329 articles: 248 published trials and 81 other publications (e.g., systematic reviews)
Update newsletters	3

<b>@REFINEnutrition Twitter Analytics</b>					
Total Followers: 180					
	<b>Tweets</b>	<b>Retweets</b>	<b>Likes</b>	<b>Link Clicks<sup>34</sup></b>	<b>Tweet Impressions</b>

<sup>34</sup> Derived from Hootsuite, a social media management dashboard.

<b>February 2017-January 2018</b>	123	168	206	239	51,122
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<b><u>www.refinenutrition.org Google Analytics:</u></b>			
	<b>Total number of Sessions<sup>35</sup></b>	<b>New Sessions<sup>36</sup></b>	<b>Average Pages Per Session<sup>37</sup></b>
<b>February 2017-January 2018</b>	1,375	1,036	2.08

### **Challenges and Lessons Learned**

Operationalization of the Strategic Communications Plan continues to be a challenge, as there is a wide variety of outputs that need to be communicated to many different stakeholders, using a variety of communications tools. The communications team has been developing a Research Uptake and Sustainability Strategy for FAQR in Project Year 3 which will reinforce the Strategic Communications Plan and provide the entire project with defined channels for sharing of outputs and an overall strategy for research uptake.

### **Evidence Summit (C.3.2.9)**

Since FAQR Phase I began in 2009, considerable evidence has been generated on the nutritional effectiveness and cost effectiveness of specialized food aid items in terms of products, processes and programming. However, a forum has not been available to disseminate this evidence and assess the state of knowledge.

The Evidence Summit will provide a forum to synthesize the current state of research on food aid for nutrition, facilitate dialogue on key policy and program-relevant findings and identify priority domains for future studies.

### **Accomplishments**

The Food Assistance for Nutrition Evidence Summit will be organized by FAQR Phase III and be held on June 27 and 28, 2018 in Washington, D.C.

<sup>35</sup> "Session:" A user's interaction on the site from the time they log onto the site until they are inactive on the site for 30 minutes.

<sup>36</sup> "New Session:" A user's first visit to the site during that period of Google analytics.

<sup>37</sup> "Average Pages per session:" Average number of pages visited by a user during one session.

The team determined thematic areas for the Food Assistance for Nutrition Evidence Summit: ingredients and food aid product formulation, selection and programming of food aid products, and tools and technology for optimizing systems. Based on these thematic areas, a draft technical program has been developed to highlight important food aid for nutrition research from the last 10 years.

The Evidence Summit will bring together experts/researchers, policymakers, programmers and industry to understand the current state of knowledge, identify the evidence gaps, highlight current tools available for use by programmers and discuss evidence-based recommendations for future research, practice and policy.

### **Challenges and Lessons Learned**

The Evidence Summit will be an opportunity to share FAQR findings as well as a tool to engage others in disseminating results relevant to these areas related to food aid in practice. It is technically and logistically complicated to organize this key two-day event. To address this challenge, the FAQR team has established two committees: the Program Committee and the Logistics Committee. Each Committee is tasked with specific activities necessary for the technical and logistical organization of the Evidence Summit.

### **C.3.3. Improved Process for Commodity Procurement and Quality Assurance along Supply Chain**

#### **Interagency Harmonization (C.3.3.1, C.3.3.3, C.3.3.4)**

There is a profound lack of communication and harmonization among U.S. and international agencies related to food aid.

During Phase II, FAQR facilitated coordination between U.S. agencies, and across U.S. and international agencies. This was achieved through meetings, formal memorandum of understanding (MOU), formation of working subcommittees, continuity of engagement (repeat attendance), active involvement in the discussions focused on problem-solving and willingness to think about issues going beyond the immediate responsibility of each participating organization. FAQR Phase III continues these efforts.

### **Accomplishments**

FAQR Phase III planned, hosted and provided follow-up for the ninth U.S. interagency meeting. The team facilitated several planning meetings and consultations with USAID, USDA and other key stakeholders to identify priorities for the U.S. government interagency working group as next steps toward institutionalization of the group. In Project Year 2, the high-priority areas of common interest included: food aid specification collaboration, product packaging, launching fortified rice, the approval process for new/innovative products and shelf-life testing.

FAQR serves as secretariat for the International Inter-Agency Harmonization Group and held their 10<sup>th</sup> meeting in Copenhagen in June 2017 with representatives from USAID/FFP, USAID/Office of Foreign Disaster Assistance (OFDA), *Médecins Sans Frontières* (MSF), WFP and the United Nations Children’s Fund (UNICEF) in attendance. Key topics discussed were: a review of accomplishments since the June 2016 meeting; updates on the harmonized ready-to-use food specifications; recent Codex and World Health Organization (WHO) activities relevant to specialized nutritious food products; how the interagency group can work with standard bodies on key action items moving forward; a process of considering new member organizations to the interagency working group; food safety and quality including shelf life, joint inspection and auditing; and updates on current and ongoing research and emerging topics of interest to the group including reducing added sugars in specialized nutritious food products (SNFPs), understanding factors to promote linear growth and alternative products/ingredients including acceptability studies and measuring bioavailability. A full communique summarizing the proceedings of this meeting is available on the [FAQR website](#)<sup>38</sup>.

### **Challenges and Lessons Learned**

FAQR Phase III has found that the composition of interagency groups (both for the U.S. Government and for international interagency activities) is critical to ensuring actionable progress on interagency coordination priority items. The U.S. Government interagency group functions on an organic/issue driven basis, which makes it difficult to define roles and responsibilities for this group going forward. Recent reorganizations within USDA and USAID provided opportunities to work with new people, but the organic evolution is not as linear. There are challenges and loss of institutional memory based on the retirement of key personnel. Identifying agency representatives for the international interagency group has improved the group’s ability to make progress on priority items, but challenges remain when it comes to receiving feedback from interagency members. These challenges underscore the importance of institutionalizing these efforts so that meetings and working groups continue after FAQR Phase III is no longer available to serve as secretariat.

### **Harmonized Commodity Specifications (C.3.3.2)**

Food aid products are not harmonized among agencies and there are no unified specifications for products that are meant to be equivalent when programmed and consumed by beneficiaries.

Significant progress was made during FAQR Phase II to harmonize product specifications and availability with WFP. This work is part of the broader FAQR Phase III agenda to streamline and unify U.S. food aid products and production practices with international practices.

<sup>38</sup> <http://www.refinenutrition.org>  
[https://foodaidquality.org/sites/default/files/uploads/10th%20Inter-Agency%20Harmonization%20Meeting%20Communique\\_Final\\_reformatted.pdf](https://foodaidquality.org/sites/default/files/uploads/10th%20Inter-Agency%20Harmonization%20Meeting%20Communique_Final_reformatted.pdf)

## **Accomplishments**

FAQR Phase III, in consultation with USAID/FFP, created new commodity specifications sheets for five priority products (Fortified Milled Rice, Corn-Soy Blend Plus, Fortified Vegetable Oil, Super Cereal Plus and High-Energy Biscuits) as part of the process to harmonize specifications with WFP. The U.S./WFP Food Aid Specifications Comparison Matrix Template (“Matrix”) developed during Project Year I was used during the harmonization effort to present and compare the current and emerging product requirements. Some of the changes to the specifications included: updating the microbiology and contaminant requirements, harmonizing across specifications and with WFP food safety regulations, updates to packaging and packaging performance requirements.

## **Challenges and Lessons Learned**

Aspects which differ between the current U.S. and WFP specifications required special attention during harmonization to take account of both policy and technical considerations.

Suppliers and implementing partners need to be included in discussions about recommendations for the harmonized specifications and templates to understand the practical implications of changes that are brought about through harmonization efforts.

There continues to be a need for shelf-life testing of food aid commodities and components (e.g., micronutrient premix) to accommodate product deterioration due to extended supply chain conditions which may inform both specifications and supply chain decisions.

### **Supply Chain Optimization (C.3.1.9, C.3.3.5)**

There are many challenges faced by USAID/FFP throughout the food aid supply chain.

This issue will be addressed by analyzing challenges to commodity production, prepositioning, shipment, transfer modality, storage and handling, including the “last mile” of distribution to beneficiaries. The work will analyze key concerns relating to potential threats to food safety, losses and cost-effectiveness, where “effectiveness” is defined in terms of timely delivery of products to their final destination in good condition.

## **Accomplishments**

Improving the supply chain model based on the findings from data analysis was the main focus of activities in the second year of the FAQR project. A report of procurement data from April 2011 to September 2016 was completed. The data report shows operational details of USAID/FFP Title II food aid operations and establishes an evidence base for potential improvements in the system. The report focuses on the cost of the operational (i.e., procurement, ocean transportation) changes based on other factors (procurement month,

service level, etc.) Based on the data report, specific modifications were made to the supply chain optimization model.

The team met with USAID/FFP to share possible improvement and pain points. Based on the procurement data from April 2011 to September 2016, FAQR found two potential areas for improvement: i) leaving service level selection to the model; and ii) engaging in advance purchasing for frequently-used commodities in the operational system. Additionally, FAQR linked procurement data from April 2011 to September 2016 and prepositioning warehouse data which is given by USAID. This allowed the team to follow the transactions in the system from procurement to departure from warehouse stages.

The team met with representatives from WFP working on food safety and quality, supply chain and logistics for WFP in Ethiopia to understand the work that WFP is doing to address supply chain optimization.

### **Challenges and Lessons Learned**

The FAQR supply chain team continues to be challenged in finding complete and reliable datasets to enter into the model for supply-chain optimization. Linking the datasets provided by different sources or related to different stages of food aid operations, is challenging. Interacting with in-country offices of program partners has helped the team access necessary data sets and identify the difficulties faced in the field during the distribution process.

#### **Food Safety and Quality Assurance (C.3.3.6)**

The food safety and quality assurance feedback loop is not effective in its goal to prevent, detect and contain incidents.

The project will review aspects of FFP's supply chain oversight, including assessing the existing food safety and quality feedback loop, and will review and identify best practices from commercial supply-chain oversight. In addition, the project will provide recommendations for improvements and redesign.

### **Accomplishments**

Informant interviews were conducted with U.S. agencies staff and partners on current food safety and quality feedback loops used by USAID/FFP. FAQR also reviewed commercial industry supply chain oversight feedback loops for lessons which might be applied to the USAID/FFP feedback loop. This review contributed to the USAID Food Safety and Quality Assurance (FSQA) Feedback Loop Analysis Report. Findings include: 1) the current USAID/FFP FSQA feedback loop is not a "real time" feedback loop which identifies incidents and returns feedback to/from USAID and stakeholders in a timely fashion; 2) supply chain information and incidents are not easily accommodated; 3) USAID lacks an institutional memory of food aid product

incidents and how specific incidents have been addressed/resolved; and 4) information is not passed back effectively to all members of the supply chain to drive continuous improvement.

The team recommends exploring the use of the Web-Based Supply Chain Management (WBSCM), a fully integrated, web-based ordering and procurement system used jointly by USDA and USAID to manage international food aid procurement. WBSCM is used for products procured for domestic USDA food and nutrition programs through the entire supply chain. A feature is in place for all stakeholders along the supply chain to submit feedback on food safety and quality issues. In particular, it allows USDA to obtain real-time feedback, pictures of incidents, complaints by supply chain stage and identify root causes and trending of complaints.

### **Challenges and Lessons Learned**

In USAID/FFP's current feedback system, incidents are only reported if the monetary value of damaged food aid products meets or exceeds a minimum value threshold. Few incidents trigger the use of the feedback system and because incidents are so rare, private voluntary organizations (PVOs) and other supply chain stakeholders aren't aware of the current feedback system. FAQR's recommendations for the feedback system are based on the following considerations: 1) provide real-time feedback as soon as possible; 2) improve traceability of food aid product incidents; 3) identify incident issues; 3) use current technologies available throughout the supply chain; 4) provide data aggregation and incident trending capabilities; 5) provide feedback to all stakeholders throughout the supply chain. The WBSCM system recommended for use by USAID/FFP does its best to incorporate all considerations but it is difficult to find a system that matches needs in the context of international food aid.

#### **Local and Regional Purchase (C.3.3.7)**

USAID/FFP is transitioning from Good Manufacturing Practices (GMP) to a Hazard Analysis and Critical Control Points (HACCP) approach to food safety in its supply chain. Simultaneously, USAID food aid procurement is adapting to include more local and regional food aid procurement (LRP) as a way to provide the right product at the right time in the right place.

FAQR Phase III will support the transition from GMP to HACCP and assist in maintaining the same standards of food safety and quality in both U.S.-sourced and internationally-sourced food aid commodities.

### **Accomplishments**

FAQR Phase III supported USAID/FFP in planning and setting priorities for ongoing local and regional food aid procurement supplier visits.

### **Challenges and Lessons Learned**

USAID/FFP is developing relationships with local suppliers as part of their LRP efforts. However, supplier visits and add-on food safety/quality meetings have been limited due to the priority and the status of this activity.

### **Last Mile**

The “last mile,” defined as the section of the supply chain between delivery of food aid products at the main in-country warehouse and disbursal to the beneficiaries at the distribution site, is not well understood. When the commodities are handed over to implementing partners upon arrival in-country, the USAID loses oversight of the food aid products and activities.

FAQR Phase III will try to generate site-specific and aggregate estimates of last mile costs, challenges, and opportunities based on the FAQR field research in three regions—Southern Malawi, Northeast Burkina Faso and Southern Sierra Leone—to better understand and address challenges that arise at the end of the supply chain.

### **Accomplishments**

The Last Mile Project began at the end of Project Year 2. The FAQR team identified five main questions to answer: i) What is the typical route taken by food aid products in the last mile?; ii) What are the typical storage conditions in the last mile?; iii) What are the costs associated with the last mile?; iv) How much food is lost or needs to be reconditioned throughout the last mile?; and v) How are the foods distributed to beneficiaries?. The team began gathering relevant data collected throughout the three field studies in Malawi, Burkina Faso and Sierra Leone.

### **Challenges and Lessons Learned**

The data collected during FAQR’s field studies was not gathered with the intention to answer the “last mile” questions above since the Last Mile Project was not yet part of FAQR’s scope of work. Some relevant information is therefore incomplete and because two of the studies are completed it is not possible to collect the missing data. Furthermore, there is little information available from other sources/groups.

In addition, since the “last mile” is often specific to a program, implementing partner and/or country, it is challenging to draw conclusions which are transferable to all contexts.

## **III. Priorities: FAQR Phase III Year 3**

### ***C.3.1. Research and Development—Improving Existing Products***

#### **Food Matrices and Bioavailability (C.3.1.1, C.3.1.2, C.3.1.3)**

- Conduct a series of tests to understand the effect of processing and preparation of FBFs on viscosity of porridges.

<ul style="list-style-type: none"> <li>• Complete literature review to establish the current state of knowledge related to these topics and food aid products.</li> </ul>
<ul style="list-style-type: none"> <li>• Complete the report on the pre-IFT roundtable discussions.</li> </ul>
<ul style="list-style-type: none"> <li>• Prepare recommendations for improving the nutritional quality of food aid products.</li> </ul>
<ul style="list-style-type: none"> <li>• Write manuscripts on different areas of food matrices and bioavailability of nutrients.</li> </ul>
<b>Food Aid Basket (C.3.1.4, C.3.1.5, C.3.1.7, C.3.1.8, C.3.1.10, C.3.2.2, C.3.2.3, C.3.2.4, C.3.2.5)</b>
<ul style="list-style-type: none"> <li>• Synthesize findings from desk review and qualitative activities to provide recommendations for improving the food basket.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify a short list of potential additional product suppliers.</li> </ul>
<ul style="list-style-type: none"> <li>• Propose an application and review process for new products and new suppliers.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify characteristics of emergency and dual-use products, and products which meet those characteristics.</li> </ul>
<ul style="list-style-type: none"> <li>• Update existing product ration guidance.</li> </ul>
<ul style="list-style-type: none"> <li>• Provide recommendations to USAID on how to build technical support mechanisms into existing institutional structures.</li> </ul>
<b>Food Aid Packaging and Innovation (C.3.1.6)</b>
<ul style="list-style-type: none"> <li>• Continue to gather evidence for existing packaging technologies, including reviewing the literature and conducting testing or trials to assess their performance.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensure collaboration and coordination of FAQR Phase III work with other research groups working on new packaging technologies.</li> </ul>
<ul style="list-style-type: none"> <li>• Generate recommendations regarding the most appropriate packaging alternatives and necessary next steps.</li> </ul>
<b>Burkina Faso: Effectiveness and Cost-Effectiveness Study on Prevention of Wasting and Stunting Field Study (C.3.1.12)</b>
<ul style="list-style-type: none"> <li>• Conduct data analysis to determine effectiveness, cost-effectiveness and factors influencing effectiveness of the 4 foods.</li> </ul>
<ul style="list-style-type: none"> <li>• Prepare manuscripts for publication and posters/conference presentations and final report for USAID.</li> </ul>
<b>Sierra Leone: Effectiveness and Cost-Effectiveness Study on Treatment of MAM Field Study (C.3.1.13, C.3.1.14)</b>
<ul style="list-style-type: none"> <li>• Finish data collection for the treatment study and start data cleaning.</li> </ul>
<ul style="list-style-type: none"> <li>• Close down field operations.</li> </ul>
<b>Sub-Studies on Body Composition, Developmental Indicators and Environmental Enteropathy (C.3.1.1.5)</b>
<ul style="list-style-type: none"> <li>• Body Composition and Environmental Enteropathy study: complete data collection, lab analysis and interpretation of findings.</li> </ul>
<ul style="list-style-type: none"> <li>• Neurocognitive study: complete the pilot study, evaluate the results and implementation experiences from the pilot study and use these results to design the main neurocognitive sub-study. Implement the main neurocognitive sub-study.</li> </ul>
<b>C.3.2. Improved Programming</b>
<b>Commodity Reference Guide (C.3.2.1)</b>
<ul style="list-style-type: none"> <li>• Develop protocol for regular updating of the new Food Aid Product Information</li> </ul>

Guide and 25 Product Description Sheets to propose a mechanism (internal to FFP) with clear allocation of responsibility for ensuring that the Food Aid Product Information portal and Food Aid Product Description Sheets are periodically updated.
<b>Research Protocol Guidance Document (C.3.2.6)</b>
<ul style="list-style-type: none"> <li>Disseminate research protocol guidance for use by researchers and USAID partners</li> <li>Disseminate the Malawi and Burkina Faso research protocol and data management, and analysis plans as models.</li> <li>Finalize and publish a research methods landscape scan.</li> </ul>
<b>Cost Effectiveness (C.3.2.7)</b>
<ul style="list-style-type: none"> <li>Develop and finalize the Decision Support Tool based on USAID and implementation partners' feedback, and disseminate the tool to key stakeholders.</li> <li>Complete Demonstration Paper and Training Materials for Decision Support Tool.</li> <li>Complete manuscripts for Field Research Costing and Cost-Effectiveness Methods and Results.</li> <li>Disseminate cost-effectiveness field research findings and lessons learned at relevant conferences, and organize relevant session at the FAQR Evidence Summit.</li> </ul>
<b>Knowledge Sharing (C.3.2.8)</b>
<ul style="list-style-type: none"> <li>Continue to identify and share ongoing and published studies on specialized nutritious food products and food-supported interventions via the REFINE website, email and Twitter feed.</li> <li>Develop a research uptake strategy for REFINE to promote the use and sharing of evidence and best practices among key stakeholders.</li> <li>Explore a sustainability plan for REFINE post-FAQR.</li> <li>Finalize and publish a landscape scan based on identified research gaps in REFINE.</li> <li>Continue to implement strategic communications plan and Research Uptake and Sustainability Strategy to communicate FAQR Phase III accomplishments and outputs.</li> </ul>
<b>Evidence Summit (C.3.2.9)</b>
<ul style="list-style-type: none"> <li>Finalize technical and logistical planning for the Evidence Summit, including outputs, sessions and speakers.</li> <li>Hold the Evidence Summit on June 27 and 28, 2018.</li> <li>Publish proceedings from the Evidence Summit and disseminate to key stakeholder groups (policymakers, programmers, researchers, industries).</li> </ul>

### **C.3.3. Commodity Procurement and Quality Assurance along Supply Chain**

<b>Interagency Harmonization (C.3.3.1, C.3.3.3, C.3.3.4)</b>
<ul style="list-style-type: none"> <li>Facilitate planning for and host interagency consultation meetings: U.S. government and international interagency harmonization.</li> <li>Coordinate and facilitate small working groups on priority topics and common issues.</li> <li>Finalize plans for institutionalization of both U.S. government and international group after FAQR Phase III.</li> </ul>
<b>Harmonized Commodity Specifications (C.3.3.2)</b>
<ul style="list-style-type: none"> <li>Finalize commodity specification documents for the five priority products (Fortified Milled Rice, Corn-Soy Blend Plus, Fortified Vegetable Oil, Super Cereal Plus, and</li> </ul>

High-Energy Biscuits) in consultation with USAID/ FFP, USDA, industry and international partners (WFP/UNICEF).
<ul style="list-style-type: none"> <li>• Support and facilitate the consultative process to adopt the specifications and templates via a harmonization platform, standardizing formats which enhance interaction between USAID and USDA, between government and the private sector, and USAID and international partners.</li> </ul>
<ul style="list-style-type: none"> <li>• Support USAID/FFP to develop a system for harmonizing and updating specifications including developing TORs, providing a strategy for the specification group, and develop a protocol for updating the specifications.</li> </ul>
<b>Supply Chain Optimization (C.3.1.9, C.3.3.5)</b>
<ul style="list-style-type: none"> <li>• Develop Excel-based decision support tool for supply chain optimization.</li> </ul>
<ul style="list-style-type: none"> <li>• Run scenarios to test the supply chain optimization model.</li> </ul>
<ul style="list-style-type: none"> <li>• Report on current FFP supply chain informed by completed data analysis and provide recommendations to improve the supply chain.</li> </ul>
<ul style="list-style-type: none"> <li>• Analyze warehouse-related data and write recommendations.</li> </ul>
<b>Food Safety and Quality Assurance (C.3.3.6)</b>
<ul style="list-style-type: none"> <li>• Review, revise and finalize Food Safety and Quality Assurance Feedback Loop Analysis and make recommendations to USAID/FFP for adopting the process.</li> </ul>
<ul style="list-style-type: none"> <li>• Design and conduct a pilot test of the recommended feedback system from the Feedback Loop Analysis Report. Provide a report on the findings from the pilot with recommendations for scaling up.</li> </ul>
<b>Local and Regional Purchase (C.3.3.7)</b>
<ul style="list-style-type: none"> <li>• Draft final close-out memo from this activity.</li> </ul>
<b>Last Mile</b>
<ul style="list-style-type: none"> <li>• Continue reviewing relevant data collected during FAQR's three field studies and conduct interviews to collect additional qualitative data as needed.</li> </ul>
<ul style="list-style-type: none"> <li>• Generate a report summarizing common "last mile" practices and challenges, and highlighting potential for improvement.</li> </ul>

## Annex I. Food Aid Quality Review Phase III Acknowledgements

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**Annex 2. FAQR Phase III Project Year 2 Activity Infographic**

# FAQR PHASE III

## FOOD AID QUALITY REVIEW

Project Year 2 (Feb 2017-Jan 2018)

**KNOWLEDGE SHARING: GLOBAL REACH**

**This year...**

We attended **30** formal meetings and events

We delivered **14** presentations on research and findings

We reached an audience of **35,250+** combined attendees

**@foodaidquality**

Tweets	98
Retweets	77
Likes	121
Link Clicks	101

**foodaidquality.org**

**2,435** total sessions

58% new users  
42% returning users

**@REFINEnutrition**

Tweets	123
Retweets	168
Likes	206
Link Clicks	239

**refinenutrition.org**

**1,375** total sessions

75% new users  
25% returning users

**ACTIVITIES & OUTPUTS: MAJOR ACCOMPLISHMENTS**

Evidence Generation	Efficiency Gains
<ul style="list-style-type: none"> <li> Published 3 papers on our findings from the Malawi Feasibility of Packaging &amp; Messaging Study.</li> <li> Presented findings from the Burkina Faso Study on prevention of undernutrition at 3 dissemination events.</li> <li> Conducted 35 key informant interviews to assess and optimize the current food aid basket.</li> </ul>	<ul style="list-style-type: none"> <li> Developed the Beta-Version of an online Decision Support Tool for food aid selection guidance (currently being tested).</li> <li> Assessed trends in past commodity procurement and transportation data to develop a supply chain optimization tool.</li> </ul>
Industry Standards	Upcoming Events
<ul style="list-style-type: none"> <li> Created 25 new or updated Food Aid Product Description Sheets for food aid baskets offerings.</li> <li> Consulted with USAID/FFP to create new commodity specification sheets for 5 priority products.</li> </ul>	<p style="background-color: #000; color: #fff; padding: 2px 10px; font-weight: bold;">June 27-28, 2018</p> <p style="font-weight: bold; color: #800000;">Food Assistance For Nutrition Evidence Summit</p> <p style="font-size: small; color: #800000;">Organized by the Food Aid Quality Review (FAQR) Project</p> <p style="background-color: #000; color: #fff; padding: 2px 10px; font-weight: bold;">Washington D.C.</p>

visit us at [www.foodaidquality.org](http://www.foodaidquality.org)

### Annex 3. Summary of FAQR Phase III Deliverables and Activities

#### 3.1 Meetings/Events (29)

The table below represents select meetings and events attended or hosted by FAQR team members either to present components of the project or to interact with other individuals or teams to exchange key information.

Meeting/Event	Purpose
<b>Visit to Natick Army Laboratories Combat Feeding Program in Natick, MA</b> <i>January 27, 2017</i>	The FAQR team visited Natick Army Laboratories in Natick to share information regarding FAQR Phase III's research areas and to discuss Natick's research regarding innovations in food processing, packaging technology, supply chain management and food matrices/bioavailability. FAQR Phase III team members identified overlap/synergy areas for follow-up.
<b>The Packaging Conference in Tampa, FL</b> <i>February 6-8, 2017</i>	FAQR Senior Food Technologist attended The Packaging Conference in Tampa. The conference provided an opportunity to connect with packaging engineers and vendors, and identify current trends in packaging technology useful to the activities and deliverables of the food aid protection/packaging work stream.
<b>Midwest Conference on Swine Nutrition in Omaha, NE</b> <i>March 13-15, 2017</i>	The Senior RA for Food Matrices and Bioavailability attended the Midwest Conference on Swine Nutrition in Omaha. It was of particular interest to the food matrices team because swine's digestion pathway has been considered the closest to human digestive system. The current knowledge on swine feed, its impact on the pigs' digestion and absorption of nutrients will be beneficial to the work stream.
<b>U.S. Government Interagency Coordination Meeting in Washington, D.C.</b> <i>March 28, 2017</i>	The Interagency meeting brought together 35 representatives from several U.S. Government agencies, offices and branches within USAID, USDA, National Institutes of Health (NIH) and others. The meeting focused on ongoing interagency efforts that streamline, facilitate and support continuing U.S. Government quality improvement activities related to food aid products, programs and processes. The meeting also included discussion of mechanisms to institutionalize interagency collaboration. Interagency stakeholders developed a list of high priority areas for ongoing and future interagency collaboration.
<b>Sierra Leone Treatment Study Start-Up Meeting in Pujehun, Sierra Leone</b> <i>April 19, 2017</i>	A start-up event to mark the official launch of the Sierra Leone treatment study was held on April 19, 2017 and provided a formal introduction to the study design, objectives and implementing partners. The

	<p>event was attended by community leaders, the Pujehun District Council, Pujehun District Medical Team, representatives from USAID/Sierra Leone's Office of Food for Peace and the Director of the Food and Nutrition Security Directorate in the Sierra Leone's Ministry of Health and Sanitation.</p>
<p><b>CORE Group Meeting in Baltimore, MD</b> <i>April 20, 2017</i></p>	<p>The FAQR Project Manager attended the CORE Group Meeting in Baltimore. Through the theme of "Integrated Approaches: The Social &amp; Behavior Change (SBC) Key to Community Health," the Project Manager learned about SBC applied to nutrition programming and shared the FAQR work focused on SBC for food aid products.</p>
<p><b>New England Food Technology Forum in Boston, MA</b> <i>May 2, 2017</i></p>	<p>FAQR attended the New England Food Technology Forum where new foods and new technologies for food processing, storage, and safety were showcased. Although technologies were mainly targeted to the commercial world and not directly applicable to food aid, the Forum offered some valuable insight into the current innovation trends in food technology.</p>
<p><b>MSU Packaging Workshop in East Lansing, MI</b> <i>May 23-25, 2017</i></p>	<p>The FAQR team attended the MSU Packaging Workshop which gathered more than 50 food aid suppliers, packaging suppliers, researchers and partners to discuss food aid packaging. The main challenges associated with packaging were confirmed and highlighted. Efforts to improve packaging will be organized around several focus groups in the following proposed areas: 1) oil packaging; 2) paper bags; 3) infestation; 4) systematic information gathering; and 5) shelf-life studies.</p> <p>The main challenge raised during the workshop was the lack of data and therefore the difficulty to quantify losses, prioritize areas in most urgent need of improvement and evaluate the cost implication of the packaging system. The importance of taking a cost-effectiveness approach, and of considering the economic impact of packaging decisions and innovations, was also mentioned.</p>
<p><b>Food Aid Consultative Group (FACG) Meeting in Washington, D.C.</b> <i>June 1, 2017</i></p>	<p>Members of the FAQR team attended the FACG meeting during which the current famines/food emergencies and food security responses, the proposed U.S. Government FY 2018 budget, carry forward and program implications were discussed.</p>

<p><b>Food Safety Supply Chain Conference in Rockville, MD</b> <i>June 5-6, 2017</i></p>	<p>Hosted at the U.S. Pharmacopeial Convention, the Food Safety Supply Chain Conference was an opportunity to learn from industry leaders about new tools, technologies and techniques to monitor food safety/quality in the global food supply chain.</p>
<p><b>U.S. House Agriculture Committee, Public Hearing on The Next Farm Bill in Washington, D.C.</b> <i>June 7, 2017</i></p>	<p>FAQR attended the House Agriculture Committee public hearing on June 7 to learn from international food aid stakeholders and to discuss the future of international food aid as part of ongoing work to revise the 2018 Farm Bill.</p>
<p><b>Interagency Working Group on Specialized Nutritious Food Products Meeting in Copenhagen, Denmark</b> <i>June 12-13, 2017</i></p>	<p>The International Interagency Working Group for Specialized Nutritious Food Products (SNFPs) met in Copenhagen, Denmark on June 12 &amp; 13, 2017. The meeting was attended by representatives from USAID, the World Food Programme (WFP), United Nations Children’s Fund (UNICEF), Médecins Sans Frontières (MSF) and the World Health Organization (WHO). The FAQR team serves as the group’s secretariat. Details of the meeting can be found in the meeting communique on the <a href="#">FAQR website</a><sup>39</sup>.</p>
<p><b>USAID/WFP Meeting in Copenhagen, Denmark</b> <i>June 14, 2017</i></p>	<p>FAQR helped coordinate a side meeting between USAID/FFP and WFP during the International Interagency meeting in Copenhagen. Topics included programming strategy, updates on use and development of fortified rice, high-energy biscuit (HEB) reformulation, joint auditing and updates on the FAQR Treatment study in Sierra Leone.</p>
<p><b>Co-PI Monitoring Visit in Pujehun, Sierra Leone</b> <i>July 9-22, 2017</i></p>	<p>The Co-PI visited the Sierra Leone Treatment Study for a monitoring visit. The trip’s objective was to monitor and evaluate the quality of data collection for the main study and the environmental enteric dysfunction and body composition sub-studies.</p>
<p><b>Neurocognitive Consultant Trip to Sierra Leone in Pujehun, Sierra Leone</b> <i>July 27-August 11, 2017</i></p>	<p>The Neurocognitive Consultant visited Pujehun, Sierra Leone to train the field research assistants on use of the eye-tracking machine and other testing methods for the neurocognitive function sub-study, and to begin to test the function of the machine in the field. The pilot part of the neurocognitive sub-study was launched after the visit in August 2017.</p>
<p><b>Super Cereal Plus (SC+) &amp; Corn-Soy Blend (CSB) Specification Update</b></p>	<p>FAQR attended the SC+ and CSB Specifications workshop with USAID/FFP and supplier representatives. Discussion focused primarily on</p>

<sup>39</sup> [https://foodaidquality.org/sites/default/files/uploads/10th%20Inter-Agency%20Harmonization%20Meeting%20Communique\\_Final\\_reformatted.pdf](https://foodaidquality.org/sites/default/files/uploads/10th%20Inter-Agency%20Harmonization%20Meeting%20Communique_Final_reformatted.pdf)

<p><b>Workshop in Washington, D.C.</b> <i>August 8, 2017</i></p>	<p>costs, data collection/use, packaging and questions regarding supply chain efficiencies.</p>
<p><b>USAID/FFP Mid-Project Meeting in Washington, D.C.</b> <i>August 9, 2017</i></p>	<p>The FAQR team met with the USAID/FFP COR and COR Alternate in Washington, D.C. to review the progress made by each workstream, evaluate planned activities for the second half of the project and look at outputs and deliverables for each workstream.</p>
<p><b>FAQR Team Meeting in Boston, MA</b> <i>August 23-25, 2017</i></p>	<p>The Annual FAQR team meeting was held in Boston, MA from August 23-25. It provided team members with an opportunity to receive updates from each workstream on the status of activities and future work plans. Additionally, team members met in smaller workstream groups to make progress on key areas of work. Finally, the team began to create a Research Uptake Strategy for the FAQR Phase III project to ensure dissemination of FAQR Phase III outputs across a wide range of platforms and stakeholders. The team also spent time developing ideas for the 2018 FAQR Evidence Summit.</p>
<p><b>FANTA Knowledge Sharing Meeting in Washington D.C.</b> <i>September 6, 2017</i></p>	<p>The Co-PI and Project Manager attended the FANTA Knowledge Sharing Meeting. The event highlighted the project's research and multi-sectoral nutrition activities and innovations over the last six years, and the impact of its work at the global, country and community levels.</p>
<p><b>CORE Group's Global Health Practitioner Conference in Baltimore, MD</b> <i>September 25-29, 2017</i></p>	<p>The Project Manager attended the Core Group's Global Health Practitioner Conference. The conference provided FAQR with the opportunity to learn about a new Nutrition Reference Guide which will be a helpful future tool for the team to determine which nutrition-specific tools and approaches to use for programming and research. The Project Manager also participated in the nutrition working group and was able to promote REFINE and FAQR activities as well as contribute to the work plan for the upcoming year to include FAQR initiative on food aid design and programming.</p>
<p><b>SPRING Nutrition Conference in Washington, D.C.</b> <i>October 4, 2017</i></p>	<p>SPRING hosted a learning event in Washington, D.C. to share key lessons learned and results achieved over the past six years, along with a wide range of tools developed to strengthen evidence-based nutrition programming.</p>
<p><b>Site Visit to Edesia in Kingstown, RI</b> <i>October 6, 2017</i></p>	<p>FAQR visited Edesia Nutrition's new facility in Rhode Island and discussed the potential for future research collaboration. Edesia expressed interest in working</p>

	with FAQR on possible formulation testing and packaging trials.
<b>Supplier Meetings for Fortified Milled Rice and Fortified Vegetable Oil in Houston, TX</b> <i>October 31-November 3, 2017</i>	USAID/FFP, in partnership with USDA, WFP and U.S based suppliers of two products (Fortified Milled Rice, Fortified Vegetable Oil), met to discuss the private/public partnership of these entities. The Fortified Milled Rice meeting focused on the changes in the specifications the suppliers would be seeing in the next 3-6 months, the approval of 2 technologies (Coated Rice Kernels & Extruded Rice Kernels) to fortify rice and the continued effort to scale up the use of Fortified Milled Rice in programming. The Fortified Vegetable Oil meetings focused on issues concerning food safety and quality issues of the product and packing.
<b>Supplier Meetings for Fortified-Blended Flours (FBFs) and Ready-to-Use Foods (RUFs) in Washington, D.C.</b> <i>November 8 &amp; 9, 2017</i>	USAID/FFP in partnership with USDA, and U.S. based suppliers of 2 products (FBFs and RUFs) met to discuss the private/public partnership of these entities. These meetings are a continuation of meetings that have been regularly held between USAID/FFP, USDA and suppliers. The FBFs meeting focused on changes to the products packaging (bags) specifically and a prototype of a new bag was presented. There were also discussions on FBF specifications changes related to microbiological testing and requirements as well auditing frequency. The RUF meeting focused on forecasting and contractual issues that were explained from both parties, as well as branding and auditing concerns from the suppliers.
<b>Meeting with Ajinomoto</b> <i>November 22, 2017</i>	Representatives from the food and chemical corporation Ajinomoto traveled to FAQR's Boston office to give a presentation on a Ready-to-Use food product formulated with Ajinomoto-manufactured amino acids, rather than whole proteins. They presented information about the company, details about the product itself and the results from a recent effectiveness trial which used this new product.
<b>Sierra Leone National Nutrition Fair in Freetown, Sierra Leone</b> <i>November 23-25, 2017</i>	This was the first national nutrition fair to be held in Sierra Leone. FAQR and 4 foods study partner organizations were represented as part of the Pujehun delegation to the fair.
<b>Food Aid Consultative Group (FACG) Meeting in Washington, D.C.</b> <i>December 7, 2017</i>	This semi-annual meeting provided an update on current and projected budgets for USAID/FFP, USDA/McGovern-Dole and USDA/Food for Progress. Research was presented from MIT's

	Comprehensive Initiative on Technology Evaluation (CITE) group on possible improvement to packaging for bagged products. FEWS NET provided global food security and nutrition update with projections for 2018 for humanitarian assistance needs.
<b>USAID Sierra Leone Site Visit in Pujehun, Sierra Leone</b> <i>December 11, 2017</i>	Representatives of the Sierra Leone Missions' USAID Food for Peace office, visited Pujehun town and district. They were able to visit a supplementary feeding program site, a counseling card training and meet with the field survey team.
<b>FAQR III Project Year 3 Work Plan Review Meeting with USAID/FFP in Washington, D.C.</b> <i>January 29-30, 2018</i>	The FAQR team met with USAID/FFP to provide an update on progress toward FAQR deliverables in Project Year 2, review the FAQR Project Year 3 Work Plan and discuss planned activities for FAQR Project Year 3.

### 3.2 Presentations (14)

The table below represents key presentations delivered by members of the FAQR team.

Presentation	Purpose	Est. Number of Attendees
<b>3<sup>rd</sup> International Congress on Hidden Hunger in Stuttgart, Germany</b> <i>March 20-22, 2017</i>	FAQR Science Research Specialist, attended the 3 <sup>rd</sup> Congress Hidden Hunger in Stuttgart and gave a presentation on "Environmental Enteric Dysfunction as a causative factor in stunting and wasting: treatment trials in Africa," which included an overview of the FAQR Sierra Leone treatment study and sub-study on EED.	300
<b>Experimental Biology in Chicago, IL</b> <i>April 22-26, 2017</i>	The FAQR Co-PI, data team and partners at Global Food and Nutrition attended the 2017 Experimental Biology Conference in Chicago from April 22-April 26, 2017. Five posters were presented on the following topics: 1) Cost-Effectiveness protocol for the Sierra Leone Treatment Study; 2) Design and baseline characteristics of the Burkina Faso Prevention Study; 3) Delivery of social-behavior change communication through the Care Group Model in Malawi; 4) Experiences of beneficiary caregivers in a Supplementary Feeding Program in Southern Malawi; and 5) Accelerated Shelf-Life Studies: Testing Micronutrient Stability of New and Upgraded Food Aid Products. ( <a href="#">See Annex 2.7 for Poster Abstracts</a> ).	14,000

	<p>Participation in the Experimental Biology conference provided FAQR Phase III with a unique opportunity to publicize FAQR studies to a diverse scientific community. The FAQR Co-PI also received the Kellogg International Prize in Nutrition Lectureship in recognition of her work to advance the field of nutrition science and policy through a variety of projects including FAQR.</p>	
<p><b>Presentation on FAQR accomplishments to USAID/FFP in Washington, D.C.</b> <i>May 4, 2017</i></p>	<p>The FAQR Principal Investigator, Co-PI and Project Manager presented insights from the first year of the FAQR Phase III project to USAID/FFP senior staff and the USAID Wider Nutrition Group. This was an opportunity for the FAQR team to share findings from the first year of the project and receive input on USAID/FFP priorities.</p>	30
<p><b>Burkina Faso Prevention Study Preliminary Results Dissemination in Kaya, Burkina Faso</b> <i>May 9-10, 2017</i></p>	<p>FAQR, in collaboration with the Victory against Malnutrition (ViM) program and <i>Institut de Recherche en Sciences de la Santé</i> (IRSS), hosted a dissemination of preliminary descriptive results and insights from the Burkina Faso prevention of MAM and stunting study in Kaya, Burkina Faso on May 9 &amp; 10, 2017. More than 300 participants attended the dissemination event, including representatives from the communities involved in the study, health and nutrition promoters, data collection agents and community authorities.</p>	300
<p><b>Health and Humanitarian Logistics Conference in Copenhagen, Denmark</b> <i>June 7-9, 2017</i></p>	<p>FAQR organized a workshop as part of the 2017 Health and Humanitarian Logistics (HHL) Conference on maximizing food aid supply chain cost-effectiveness with panelists from WFP and World Vision. Two important issues which the workshop sought to address were: i) how to fill significant evidence and data gaps; and ii) what tools and frameworks could be used to improve predictive modeling.</p> <p>The session presented four food aid supply chain cost-effectiveness frameworks currently used by development and humanitarian organization decision makers at different levels. These included FAQR's Decision Support Tool and Supply Chain Optimization model, WFP's</p>	50

	<p>optimization model and World Vision’s “last mile” tool.</p> <p>A common theme was the importance of developing tools tailored to customer needs, that are user-friendly and tailored to address specific situations and contexts.</p> <p>The team also presented a poster on “Accelerated Shelf-Life Studies and Micronutrient Stability of Food Aid Products: Implications for the Humanitarian Supply Chain.” The poster shared the results of the FAQR Phase II accelerated shelf-life studies to determine the vitamin and mineral stability and integrity of Corn-Soy Whey Blend (CSWB), Super Cereal Plus (SC Plus), Corn-Soy Blend Plus (CSB+) and Ready-to-Use Supplementary Food (RUSF) over their intended shelf life.</p>	
<p><b>2017 Institute of Food Technologists (IFT) Meeting in Las Vega, NV</b> <i>June 25-26, 2017</i></p>	<p>A roundtable discussion was organized on “Improving the Nutritional Value of Foods in the USAID Food Aid Basket: Optimization of Macro and Micro Nutrients, Food Matrices, Novel Ingredients and Food Processing Technologies” on June 25, 2017 during the annual Institute of Food Technologists (IFT) meeting. The presentations and discussions focused on food aid products and food matrices, processing and bioavailability of nutrients and the impact on nutrition, challenges and the way forward to improve the nutritional quality of food aid products. During the day-long event, ideas were collected and discussed among scientists and researchers, industry stakeholders and government agencies. The focus throughout was on the latest science and practice relating to delivering bioavailability of nutrients in foods.</p> <p>FAQR’s Food Technologist gave a presentation on “Product Innovation for Humanitarian Food Assistance Interventions” as part of the symposium on “Dietary Protein for Food and Nutrition Security: Challenges and Opportunities.” The significance and impact of FAQR’s activities were shared with the audience, with an emphasis on the</p>	<p>37 roundtable participants 19,000 total IFT conference attendees</p>

	<p>improvements that followed FAQR Phase I's recommendations, as well as a presentation of current studies and FAQR Phase III activities.</p> <p>The team presented a poster: "Accelerated Shelf-Life Studies and Micronutrient Stability of Food Aid Products: Implications for the Humanitarian Supply Chain" (<a href="#">See Annex for Poster Abstracts.</a>)</p>	
<p><b>TOPS Knowledge Sharing Meeting in Washington, D.C.</b> <i>July 19-20, 2017</i></p>	<p>The FAQR team held a session at the TOPS Knowledge Sharing Meeting entitled, "What to Consider when Programming Food Aid Products: Operational Research Findings from the Food Aid Quality Review (FAQR) Project." The session provided more than 80 participants with key findings from the FAQR field research studies on the following themes of: (a) diversion of food aid products (sharing, giving away or selling); (b) behaviors surrounding food aid products in the household; and (c) messages and education on beneficiary uses of food aid products.</p> <p>Key presentation messages emphasized that food aid programming efforts should be focused toward beneficiary adherence in order to achieve intended impact. Programs should consider within-household sharing when determining ration amounts. In addition, challenges to proper preparation, consumption and use of the product should be well-understood when designing programs. It was acknowledged that effectiveness of specialized food aid products requires context-specific social behavior change communication which involves formative work and strong understanding of the local environment.</p> <p>Following the presentation of results, participants had a chance to discuss the findings and how the results related to their own experiences in food aid programming plus efforts to increase effectiveness and cost-effectiveness in programming. Participants also</p>	<p>80</p>

	<p>identified future research areas based on the findings presented and discussed.</p> <p>In addition to the FAQR session, the Cost Specialist hosted a lunchtime discussion on the Decision Support Tool to receive feedback on the beta version of the tool from food aid program staff.</p>	
<p><b>USAID Burkina Faso Preliminary Results in Washington, D.C.</b> <i>August 10, 2017</i></p>	<p>The Co-PI presented preliminary results from the Burkina Faso study to USAID/FFP Representatives. Results shared included preliminary effectiveness results, describing the relative effectiveness of the 4 foods in preventing stunting and wasting in children 6-23 months and preliminary cost-effectiveness results describing which of the 4 foods appears to be most cost-effective at preventing cases of child stunting and wasting.</p>	10
<p><b>International Congress of Nutrition (ICN) in Buenos Aires, Argentina</b> <i>October 15-20, 2017</i></p>	<p>The FAQR team attended the International Congress of Nutrition (ICN) in Buenos Aires, Argentina. FAQR hosted 4 symposia, presented posters and attended relevant sessions. For further information see <a href="#">Annex 2.6 for Poster Abstracts</a> and <a href="#">Annex 2.8 for a Summary of ICN Symposia</a>.</p>	400 total symposia participants 1,500-2,000 attendees to the ICN conference
<p><b>Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting in Houston, TX</b> <i>October 22-25, 2017</i></p>	<p>FAQR presented on the team's work on supply chain optimization at the annual INFORMS conference in Houston. The session was attended by stakeholders from academia, industry, U.S. Government organizations and implementing partners. It reviewed the impact data analytics can have on supply chain operations. The team showed examples gained from data analysis on how seasonality/service level might affect overall commodity cost.</p>	25
<p><b>ACF Research for Nutrition Conference in Paris, France</b> <i>November 13, 2017</i></p>	<p>FAQR participated in the Action Against Hunger (ACF) Research for Nutrition Conference in Paris and presented a poster "Who are we really feeding with specialized food aid products" which summarized descriptive statistics about sharing practices among beneficiaries of a blanket supplementary feeding program from the FAQR prevention study in Burkina Faso. <a href="#">See Annex 2.6 for the Poster Abstract.</a></p>	200

<p><b>Webinar “The USAID Food Aid Product Mix: Presentation of Stakeholder Feedback”</b> <i>November 16, 2017</i></p>	<p>In partnership with the CORE Group Nutrition Working Group, FAQR presented the responses gathered during a series of interviews with development, nutrition, and health practitioners working on USAID-funded programs which use food aid. In these interviews, FAQR asked: Does the mix of available food aid products meet programming needs? Is guidance on their use helpful and sufficient? How can donors better communicate about food aid with implementing partners? FAQR presented responses to these questions, elicited feedback from participants on their experience with these issues and explored possible solutions with participants.</p>	<p>35</p>
<p><b>Burkina Faso Dissemination in Ouagadougou, Burkina Faso</b> <i>January 11, 2018</i></p>	<p>In collaboration with IRSS, the FAQR team presented initial study results to the Burkina Faso Ministry of Health, other Ministries, and non-governmental organizations involved in Nutrition policy and programming in Burkina Faso. The results presented described the relative effectiveness and cost-effectiveness of the four foods in prevention of stunting and wasting, as well as factors potentially influencing effectiveness. Discussion of the results and Q&amp;A sessions followed the presentation.</p>	<p>150</p>
<p><b>Burkina Faso Dissemination in Washington, D.C.</b> <i>January 31, 2018</i></p>	<p>The FAQR team presented results from the Burkina Faso field study on Prevention of Stunting and Wasting to USAID, USDA and many non-governmental organizations who intervene in the realm of nutrition policy and programming. After a welcome session in which important study collaborators were presented, results were presented on the comparative effectiveness of the 4 foods in prevention of stunting and wasting, comparative cost-effectiveness and the factors influencing the effectiveness results. A culminating presentation focused on what we learned in doing this study and what we still need to find out. These presentations were followed by question and answer sessions and discussion of the implications of these results.</p>	<p>75</p>

### 3.3 Reports (8)<sup>40</sup>

- Quarterly Technical Reports to USAID (4): February 2017-December 2017
- Food Aid Quality Review Phase III Annual Report: Year I. March 2017.
- [Maximizing Food Aid Supply Chain Cost Effectiveness: A Report from the Food Aid Quality Review Workshop at the 2017 Health and Humanitarian Logistics Conference. 2017.](#)
- Schlossman, Nina; Koeppl, Leah; Fisk, Rebecca and Johnson, Quentin. 2017. *Food for Peace Commodities Resource Portal: A Landscape Analysis. A report from the Food Aid Quality Review*, managed by Tufts University's Friedman School of Nutrition Science and Policy. Boston, MA.

### 3.4 Publications (6)

- [Preparation and presentation of corn-soy blend for moderately malnourished children in Malawi.](#) Field Exchange 55, July 2017. p. 26. [www.enonline.net/fex/55/csbmalawi](http://www.enonline.net/fex/55/csbmalawi)<sup>41</sup>, Rogers, B.L., Webb, P., Boiteau, J., Langlois, B.K., Maganga, G., Walton, S.M. and Suri, D.
- Langlois, B. K., Suri, D. J., Wilner, L., Walton, S. M., Chui, K. H., Caiafa, K. R., & Rogers, B. L. (2017). Self-report vs. direct measures for assessing corn-soy blend porridge preparation and feeding behavior in a moderate acute malnutrition treatment program in southern Malawi. *Journal of Hunger & Environmental Nutrition*, 1-12. doi:10.1080/19320248.2017.1374902
- Wilner, L., Suri, D. J., Langlois, B. K., Walton, S. M., & Rogers, B. L. (2017). Effective delivery of social and behavior change communication through a Care Group model in a supplementary feeding program. *Journal of Health, Population and Nutrition*, 36(1). doi:10.1186/s41043-017-0111-3
- Webb, P., Caiafa, K., Walton, S.M. for the Food Aid Quality Review Group, [Making Food Aid Fit-for-Purpose in the 21<sup>st</sup> Century: A Review of Recent Initiatives Improving the Nutritional Quality of Foods Used in Emergency and Development Programming.](#)<sup>42</sup> Food and Nutrition Bulletin, Vol. 38, Issue 4. December 2017. p. 574-584. <https://doi.org/10.1177/0379572117726422>
- [“Programme News: Tufts University-based Food Aid Quality Review activities.”](#) UNSCN News 42—A Spotlight on the Nutrition Decade, July 2017. p. 144.<sup>43</sup>
- Joseph, Michael; Alavi, Sajid; Johnson, Quentin. [Complementary Foods and Global Fortification Challenges.](#) *The World of Food Ingredients*. February 2017.

### 3.5 Datasets (1)

<sup>40</sup> All reports, unless indicated, can be accessed through the USAID Development Experience Clearinghouse (DEC): <https://dec.usaid.gov/dec/home/Default.aspx#>

<sup>41</sup> <http://www.enonline.net/fex/55/csbmalawi>

<sup>42</sup> <http://journals.sagepub.com/doi/full/10.1177/0379572117726422>

<sup>43</sup> <https://www.unscn.org/uploads/web/news/UNSCN-News42-with-Programme-News.pdf>

- Malawi Dataset: Malawi In-home Observation Data, Tracking Number: 312-1A (Submitted to DDL on August 22, 2017)

### **3.6 Scientific Poster Abstracts Presented (10)**

- Costing Methods for a Cluster-Randomized Cost-Effectiveness Trial Comparing the Performance of Four Supplementary Foods in Treating Sierra Leonean Children with Moderate Acute Malnutrition (*Presented at Experimental Biology 2017*)
- Design and Baseline Characteristics of a Study Comparing Four Supplementary Foods in the Prevention of Stunting and Wasting Among Children 6-23 Months in Burkina Faso (*Presented at Experimental Biology 2017*)
- Experiences of Beneficiary Caregivers in a Supplementary Feeding Program in Southern Malawi (*Presented at Experimental Biology 2017*)
- Effective delivery of social-behavioral change communication through a care group model in a supplementary feeding program: a descriptive analysis (*Presented at Experimental Biology 2017*)
- Accelerated Shelf-Life Studies and Micronutrient Stability of Food Aid Products: Implications for the Humanitarian Supply Chain (*Presented at the Health and Humanitarian Logistics Conference 2017 and IFT 2017*)
- Research Methods Used to Determine Cost-Effectiveness of a Supplementary Feeding Trial to Prevent Child Undernutrition in Burkina Faso (*Presented at ICN 2017*)
- Methods for rigorous in-home observation conducted during a food aid cost-effectiveness trial in Burkina Faso (*Presented at ICN 2017*)
- Changes in household food insecurity between enrollment and exit from a blanket supplementary feeding program for children 6-23 months old in Burkina Faso (*Presented at ICN 2017*)
- Accelerated Shelf-Life Studies: Testing Micronutrient Stability of New and Upgraded Food Aid Products (*Presented at ICN 2017*)
- Who are we really feeding with specialized food aid products? (*Presented at ACF Research for Nutrition Conference, November 2017*)

### **3.7 Session Symposia at the 2017 International Congress of Nutrition (ICN), Buenos Aires (2)<sup>44</sup>**

- [\*\*“Food Aid Research: Update on Food Aid for Preventing and Treating Undernutrition,”\*\*](#) Thematic Area: Track 8: Agriculture, Food Science and Safety
- [\*\*“Addressing Child Malnutrition: Newer Measures to Advance Prevention and Treatment Outcomes,”\*\*](#) Thematic Area: Track I: Advances in Nutrition Research

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<sup>44</sup> <https://foodaidquality.org/icn>

**Annex 4. Summary Table of FAQR Phase III USAID Deliverables and Status**

<b>Activity Number in Contract SOW</b>	<b>Deliverable</b>	<b>Target Submission Date (based on Oct-Sept Fiscal year)</b>	<b>Status</b>
<b>N/A</b>	<b>Overall Deliverables</b>		
	Comprehensive Management Plan	May 2016	X
	Quarterly Progress Reports	Quarterly	Ongoing
	Annual Report Project Year 1	March 2017	X
	Annual Report Project Year 2	March 2018	X
	Project Year 1 Work Plan	April 2016	X
	Project Year 2 Work Plan	March 2017	X
	Project Year 3 Work Plan	March 2018	X
<b>C.3.1.1, C.3.1.2, C.3.1.3</b>	<b>Work Stream: Food Matrices</b>		
	Literature Review	Q2 FY 2018	
	Report on Bostwick Testing Results and Analysis	Q3 FY 2018	
	Manuscripts (1-3) on key topic areas (peer-reviewed and popular)	Q1 FY 2019	
	Food Matrices Final Report: Final recommendations for priority areas, gaps, and future investments	Q1 FY 2019	
<b>C.3.1.4, C.3.1.5, C.3.1.8, C.3.1.10, C.3.1.7, C3.2.3, C.3.2.2, C.3.2.4, C.3.2.5</b>	<b>Work Stream: Food Basket</b>		
	Report 1: Strategy for responding to sudden onset emergencies, deployment of sudden onset emergency foods, decision tree matrix on dual use products	Q4 FY 2018	
	Report 2: Process for adding new products, modifying products, subtracting products, information on making new products public, new food innovations, food & ration technical guidance	Q4 FY 2018	
	Guidance on standards and process of accepting new suppliers or new or modified foods, ingredients, or packaging	Q3 FY 2018	
	Protocol on Accelerated Shelf-Life Tests for Fortified Rice	Q2 FY 2017	X

	Manuscript (I): Accelerated Shelf-Life Study Results from CSBs	Q4 FY 2017	
	Matrix of all products currently in the food aid basket and classified into relevant programming categories (as a mechanism for providing guidance on appropriate use)	Q4 FY 2018	
<b>C.3.2.1, C.3.3.2,</b>	<b>Work Stream: Commodity Management System</b>		
	Landscape analysis of current USAID FFP resources available through the FFP website	Q2 FY 2017	X
	List of recommendations for USAID FFP resources for an improved portal	Q3 FY 2017	X
	Portal Implementation Strategy	Q4 FY 2017	X
	Portal Template and Revised Material	Ongoing	Ongoing
	Commodity Reference Guide Fact Sheet Template	Q1 FY 2017	X
	CRG Fact Sheet Updates	Ongoing Updates	Ongoing
	Strategy Report on regular updating of the Commodity Reference Guide (CRG) Fact Sheets	Q1 FY 2018	
	Spreadsheet highlighting discrepancies/differences between WFP and USAID/USDA specs	Q2 FY 2017	X
	Harmonized commodity specifications templates for new and updated products	Ongoing	Ongoing
<b>C.3.1.6</b>	<b>Work Stream: Food Aid Packaging Solutions</b>		
	Complete a landscape analysis on packaging technology (e.g., number on actual food wastage, prep reports, internal reports to USAID and WFP, information collected during conversations with stakeholders)	Q4 FY 2018	
	Manuscript (I) Consider a publication on Successful Food Packaging Technologies, depending on tests performed and quality of results obtained	Q1 FY 2019	
	Develop a report and visual highlighting packaging issues and solutions/recommendations (components should include: technology currently in use, range of options for new or improved technology, recommendations, cost considerations)	Q4 FY 2018	
<b>New addition (no number)</b>	<b>Last Mile</b>		
	Develop a report highlighting the 3 FAQR field studies (Malawi, Burkina Faso and Sierra Leone) identifying strengths and weaknesses, gaps in knowledge and areas in need of improvement	Q4 FY 2018	
	<b>Work Stream: Food Aid Safety and Quality Systems</b>		

<b>C.3.3.5</b>	<b>Supply Chain Oversight</b>		
	Report detailing the current FFP supply chain and recommendations to improve the supply chain (detailed current FFP supply chain and recommendations to improve the procurement and ocean transportation sides of the supply chain)	Q2 FY 2018	
	Report on insights on the use of Prepositioned Inventory and suggested improvements	Q3 FY 2018	
	Report on in-country supply chains for Ethiopia, data prepared for the decision support tool	Q4 FY 2018	
	Develop an Excel-based decision support tool from the mathematical model	Q3 FY 2018	
	Manuscripts (1-2): Supply Chain	Q2 FY 2019	
	Final Report: Compilation of all reports, user-friendly decision support tools and full list of recommendations	Q2 FY 2019	
<b>C.3.3.6</b>	<b>Food Safety and Quality Assurance Feedback Loop</b>		
	Report with recommendations for improvements and/or redesign to enhance efficiency, effectiveness of the quality feedback loop/system	Q2 FY 2018	
	Write report based on the findings from the pilot study (based on 2 products) on how to scale up the system to include all food aid commodities.	Q4 FY 2018	
<b>C.3.3</b>	<b>Quality Assurance for Local and Regional Procurement-Overlapping with TOPS Commodity Task Force</b>		
	Draft a final close out memo as USAID/FFP has taken charge of this activity through site visits to local suppliers and coordinating discussions related to international standards for food safety and quality assurance	Q2 FY 2018	
	<b>Work Stream: Tools for Cost-effectiveness</b>		
<b>C.3.1.9</b>	<b>Cost-effectiveness in Response to Emergencies (linked with Supply Chain)</b>		
	Report on insights on Emergency Operations and suggested improvements	Q4 FY 2018	
	Manuscript (1): Supply Chain (Emergency Settings)	Q2 FY 2019	
<b>C.3.2.7</b>	<b>Cost-Effectiveness to Support Specialized Food Aid Decision Making</b>		
	Decision Support Tool	Q4 FY 2018	
	Manuscript (1-2): Demonstration Papers of the tool (how/why) with case scenarios—Using Cost-Effectiveness to Support Decision-Making in Specialized Food Aid Nutrition Programing; Cost Drivers Analysis using Phase II model	Q4 FY 2018	
	<b>Cost Methodology</b>		
	Cost Matrix Template with Annotated Examples from FAQR cost-effectiveness field studies	Q3 FY 2018	

	Final Methodology Paper on Costing for FAQR field studies	Q4 FY 2019	
	Methods paper on cost-effectiveness: discusses CE methods, interpretation of CE results, and how to use CE evidence to influence policy and programming from the researchers' perspective	Q4 FY 2019	
	Manuscripts (2-3)	Q4 FY 2019	
<b>Work Stream: Field Research</b>			
<b>C.3.1.11</b>	<b>Malawi Study-Feasibility</b>		
	Manuscript (1): Main Findings	Q1 FY 2017	X
	Manuscript (1): Sharing and Leakage	Q2 FY 2017	X
	Manuscript (1): SBCC	Q2 FY 2017	X
	Case Study: Packaging	Q2 FY 2017	X
<b>C.3.1.12</b>	<b>Burkina Faso Study—MAM and stunting prevention</b>		
	Final Report	Q4 FY 2018	
	Cleaned Dataset	Q1 FY 2019	
	Manuscripts (7)	Q4 FY 2018	
	Case Studies	Q4 FY 2018	
<b>C.3.1.13, C.3.1.14, C.3.1.15</b>	<b>Treatment of MAM study</b>		
	Final Report	FY 2019	
	Final Report on Sub-Study EED	FY 2019	
	Final Report on Sub-Study Neurocognitive	FY 2019	
	Final Report on Sub-Study Body Composition	FY 2019	
	Cleaned Dataset	FY 2019	
	Sub-Study Manuscripts (6)	FY 2019	
	Manuscripts (7)	FY 2019	
	Case Studies	FY 2019	
<b>C.3.2.6</b>	<b>Research Protocols</b>		
	Published Malawi Protocol and DMAP	Q4 FY 2018	
	Published Burkina Faso Protocol and DMAP	Q4 FY 2018	
	Published Sierra Leone Protocol and DMAP	FY 2019	
	Guidance document on designing a food aid study	Q3 FY 2018	
	Manuscript (1): Research Protocol Guidance Document (Linked with REFINE)	Q4 FY 2018	
<b>C.3.3.1, C.3.3.3</b>	<b>Work Stream: Interagency Communications and Consultations and Harmonization</b>		
	<b>U.S. Focused</b>		
	Final Proposal for Institutionalizing Interagency Group	Q4 FY 2018	
	<b>U.S.-Global Focused (Harmonization)</b>		

	U.S.-Global Meetings	Semi-Annual	Ongoing
<b>Work Stream: Knowledge Sharing</b>			
<b>C.3.2.8</b>	<b>FAQR II “Scorecard Report”</b>		
	FAQR Phase II Close-Out Report	Q4 FY 2016	X
	Summary and Full Scorecard	Q2 FY 2017	X
<b>C.3.2.9</b>	<b>Evidence Summit</b>		
	Toolkit Items	Q3 FY 2018	
	Manuscripts (4): Proceedings from Evidence Summit	Q1 FY 2019	
<b>Body Comp and EE Colloquium and New Research Colloquium</b>			
	Manuscripts (2): Proceedings from EED colloquium publication and New Research Colloquium	Q4 FY 2018	
<b>C.3.3.4</b>	<b>REFINE</b>		
	Resource Updates	Quarterly	Ongoing
	REFINE Website	Q3 FY 2016	X
	Manuscripts (2): Methods Scan and Gap Analysis	Q3 FY 2018	
<b>C.3.3.4</b>	<b>FAQR Communications</b>		
	New FAQR Website	Q2 FY 2017	X
	Press releases, policy briefs, and other communication materials	Ongoing	Ongoing
	Press releases, policy briefs, and other communication materials	Ongoing	Ongoing