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# Food Aid Quality Review Phase II: Quarterly Technical Report No. 10

**April 2018-June 2018**

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**Acronyms**

ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance
ACF	Action Against Hunger
AMS	Agricultural Marketing Service (USDA)
ASN	American Society for Nutrition
BFS	Bureau for Food Security (USAID)
CE2HA	Cost-Effectiveness to Humanitarian Assistance
CMAM	Community Management of Acute Malnutrition
ComPAS	Combined Protocol for Acute Malnutrition
CRS	Catholic Relief Services
CSB	Corn-Soy Blend
DIFD	Department for International Development (U.K.)
EED	Environmental Enteric Dysfunction
FACET	Food Assistance Cost-Effectiveness Tool (FAQR Decision Support Tool)
FANTA	Food and Nutrition Technical Assistance
FDA	Food and Drug Administration
FAPDS	Food Aid Products Description Sheets
FAPIG	Food Aid Products Information Guide
FAQR	Food Aid Quality Review
FAS	Food Agriculture Service
FBF	Fortified Blended Food
FFP	Office of Food for Peace (USAID)
FHI 360	Family Health International 360
FSQA	Food Safety and Quality Assurance
FVO	Fortified Vegetable Oil
FY 2018	Fiscal Year 2018
GMOs	Genetically Modified Organisms
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis Critical Control Point
HAZ	Height-for-age Z-score
HEB	High-energy Biscuit
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
ICN	International Congress of Nutrition
IFPRI	International Food Policy Research Institute
iLNS	International Lipid-based Nutrient Supplements
IPHD	International Partnership for Human Development
IRC	International Rescue Committee
IYCF	Infant and Young Child Feeding (WHO)
LNS	Lipid-Based Nutrient Supplements
MAM	Moderate Acute Malnutrition
MFFAPP	Micronutrient Fortified Food Aid Pilot Project
MINIMOD	Micronutrient Intervention Modeling Project
MSF	Medecins Sans Frontierés
MUAC	Mid-Upper Arm Circumference
NIH	National Institutes of Health

OFDA	Office of U.S. Foreign Disaster Assistance (USAID)
PATH	Program for Appropriate Technology in Health
PBOM	Pinch-bottom Open Mouth
PCI	Project Concern International
PI	Principal Investigator
POD	Program Operations Division
POMS	Production and Operation Management Society
QR	Quick Response
R4Act	Research for Action
REFANI	Research on Food Assistance for Nutritional Impact
REFINE	Research Engagement on Food Innovation for Nutritional Effectiveness
RPGD	Research Protocol Guidance Document
RTI	Research Triangle Institute (formerly)
RUF	Ready-to-Use Food
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SBCC	Social Behavior Change Communication
SC+	Super Cereal Plus
SMS	Soya, Maize, Sorghum
SOW	Scope of Work
SNFP	Specialized Nutritious Food Products
SPRING	Strengthening Partnerships, Results and Innovation in Nutrition Globally
TOPS	Technical and Operational Performance Support Program
UN	United Nations
UNICEF	United Nations Children's Fund
UPS	United Parcel Service
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WASH	Water, Sanitation and Hygiene
WBSCM	Web-Based Supply Chain Management
WFP	World Food Programme

**Food Aid Quality Review (FAQR) Phase III:**  
 Quarterly Technical Report Summary

**I. Summary**

Covering the third quarter of Fiscal Year 2018 (FY 2018), this report: a) documents the progress of FAQR’s third phase; b) highlights preliminary project findings; and c) outlines actions planned for the coming quarter. The report serves as a vehicle for documenting and communicating the output and impact of FAQR Phase III work.

The goal of the Food Aid Quality Review project is to support the U.S. Government’s humanitarian agenda by establishing evidence-based information systems, tools, and data-gathering and evidence-sharing platforms on food aid for nutrition. Planned to continue through January 2019, FAQR’s activities and outputs will enable government-wide actions and public-private engagement around food aid to achieve greater cost-effectiveness for decades to come. For a detailed overview of all FAQR activities, see Annex I.

EVIDENCE GENERATION	EFFICIENCY GAINS	INDUSTRY STANDARDS
<p>Generating new field-based evidence to support cost-effective use of products for wasting and stunting</p> 	<p>Calculating cost effectiveness of food aid products and programming</p> 	<p>Enhancing food safety and quality assurance systems along food aid procurement and shipping claims</p> 
<p>Identifying food aid packaging innovations</p> 	<p>Optimizing food aid supply chains</p> 	<p>Promoting public-private partnerships in food aid</p> 
<p><b>EVIDENCE GENERATION:</b> Supporting best practices, FAQR identifies food aid packaging solutions to optimize product integrity and reduce costs along the supply chain and is generating new field-based evidence to support cost-effective use of products.</p>		
<p><b>EFFICIENCY GAINS:</b> Across the food aid supply chain, FAQR is developing tools to support cost-effective product and programming choices to make the best use of taxpayer dollars.</p>		
<p><b>INDUSTRY STANDARDS:</b> To enhance food safety and quality standards, FAQR is working with food industry partners on incorporating industry standards into the food aid agenda.</p>		

This quarter, the team advanced FAQR objectives in the following areas:

- I. To facilitate dialogue on the **current state of evidence regarding food assistance for nutrition programming, an Evidence Summit was organized** by FAQR in Washington, D.C. on June 27 and 28, 2018. The two-day event served as an opportunity to take stock of existing studies, discuss their relevance to policy and programmatic decision-making, and identify critical evidence gaps. More than 250 researchers, policymakers and representatives—from donors, industry and implementing partners—participated.

The Evidence Summit consisted of a mix of presentations, panels, lightning talks, demonstrations, discussions and poster/table displays covering:

- Current evidence on food assistance programming that has maternal and child nutrition or micronutrient deficiencies as explicit outcomes of interest;
- Future needs for development of nutritionally-enhanced products and programming, and optimizing resource allocation;
- Cost-effectiveness research;
- Innovations in packaging, ingredients, formulations and processing of food aid products;
- Research methods and metrics to determine nutrition impacts, cost-effective operations, and additional ancillary goals;
- Food aid supply chain optimization; and
- Food aid safety and quality.

The presentations and dialogue resulted in a set of broadly-agreed upon priorities:

- a. The same amount of research attention is needed on the cost-effectiveness of programming modalities as there is on the efficacy of products.
- b. The ways we measure success need to be refined and possibly expanded.
- c. Multisectoral collaboration should continue and expand across the food assistance ecosystem.
- d. Constrained resources and constantly changing environments require nimble thought and quick action.
- e. Collective learning must continue.

During the next quarter, the FAQR team will produce a series of outputs from the Evidence Summit center around the above themes.

2. FAQR finalized **online forms which have been designed to allow USAID and USDA to evaluate new product proposals more efficiently, effectively and transparently.** USAID and USDA will work collaboratively to:
  - a. Work with USAID and USDA's information technology teams to bring forms online through agency websites.
  - b. Agree on the content of the forms, allowing for a period of open comment.
  - c. Establish a structure for intaking, reviewing and evaluating the forms.

3. The FAQR team facilitated planning and organizing the **11<sup>th</sup> USAID-USDA Interagency Working Group meeting on March 22, 2018** in Washington, D.C. Thirty-two (32) representatives from U.S. Government agencies, offices and branches within USAID and USDA, as well as other food aid players participated. Presentations included: USAID and USDA agency updates; food aid product research updates; product updates and development, new product introduction and packaging issues; latest developments in food safety, auditing and testing; current supplier and procurement issues; and discussion about options for sustaining the Interagency Working Group collaboration.

### **Upcoming Activities in Fiscal Year 2018, Quarter 4, July-September 2018:**

In the coming quarter, FAQR is prioritizing completing some key deliverables and preparing outputs from the Food Assistance for Nutrition Evidence Summit. These include:

1. The FAQR team will facilitate the 11<sup>th</sup> Interagency Working Group for Specialized Nutritious Products in Brussels on September 10 and 11. The agenda will focus on agency updates, new member presentations, RUF specifications and new generation of RUF, programming and research updates, high-energy biscuits (HEBs), packaging, and food safety and quality.
2. The environmental enteric dysfunction (EED) and body composition sub-studies in Sierra Leone will commence close-out activities. This will include completing data collection and shipping all biological samples to U.S. labs.
3. FAQR will complete expert interviews, request case studies and finalize language for the research protocol guidance document (RPGD). The purpose of the guidance document is to provide an overview of rigorous research techniques for staff conducting research on food aid for nutrition. The RPGD comprises an accumulation of lessons learned and best practices shared by FAQR staff and expert panelists engaged in research on food assistance for nutrition in both emergency and development contexts. The purpose of the RPGD is to describe the latest available guidance on how to evaluate food assistance for nutrition products and programs. The guide seeks to capture administrative and logistic considerations in undertaking research; research design and implementation in relation to effectiveness and cost calculations; choice of outcomes of interest and corresponding indicators; methods for rigorous data collection and analysis; approaches to resolving the challenges of conducting research in programmatic field settings.

### **FAQR Reports and Manuscripts Published in Quarter 3 of FY 2018**

Joseph, Michael; Alavi, Sajid; Johnson, Quentin; Mohamedshah, Farida; Walton, Shelley; and Webb, Patrick. 2018. Improving the nutritional value of foods in the USAID food aid basket: Optimization of macro and micronutrients, food matrices, novel ingredients and food processing technologies. Report to USAID: Tufts University, Boston, MA<sup>1</sup>

<sup>1</sup> <https://foodaidquality.org/sites/default/files/publications/IFT%202017%20Roundtable.pdf>

## II. Key Activities for the Period April 1-June 30, 2018

The activities listed below are selected to showcase some of the major accomplishments over the quarter. All work streams have ongoing activities.

### A. Food Aid Basket

#### ***New Product/Supplier Proposal Forms***

FAQR held a meeting with USAID/FFP and USDA staff to present online forms which have been designed to allow USAID and USDA to evaluate new product proposals more efficiently, effectively, and transparently. After the FAQR team presented the online form templates that FAQR is recommending USAID and USDA implement (See [Annex 7](#) and [Annex 8](#)), the next steps identified are for USAID and USDA to work collaboratively to:

- i. Partner with USAID and USDA's information technology teams to bring the forms online through the agency websites.
- ii. Agree on the content of the forms, allowing for a period of open comment.
- iii. Establish a structure for intaking, reviewing and evaluating the forms.

As a way to pilot the proposed online forms, FAQR completed a review of the six foods developed under the Micronutrient Fortified Food Aid Products Pilot (MFFAPP) and a seventh novel product:

- i) Based on questions in the proposed "new product" form proposed; and
- ii) Using information provided directly from suppliers and from final-report documents submitted to USDA and USAID.

In light of these findings, FAQR recommends that USAID further consider adding two products to its procurement list:

- 1) Sorghum-cowpea fortified flour blend; and
- 2) Amino Acid-fortified RUF.

FAQR's full preliminary findings are:

<b>Product</b>	<b>FAQR Impression</b>
1. Spammy, piloted by Hormel	✗ Already on the procurement list; however, information provided to U.S. Government via final report documents would not have been sufficient for FAQR to assess and make a recommendation under the propose process.
2. RUF I, piloted by International Partnership for Human Development (IPHD)	✗ Information provided in final reports is not sufficient for FAQR to assess and make a recommendation.
3. RUF II, piloted by IPHD	✗ Information provided in final reports is not sufficient for FAQR to assess and make a recommendation.
4. Vita Mamba, piloted by Meds & Foods for Kids	✗ Information provided in final reports is not sufficient for FAQR to assess and make a recommendation.

5. Ultra Rice, piloted by Program for Appropriate Technology in Health (PATH)	✗ Already on the procurement list for USDA; however, information provided in final reports is not sufficient for FAQR to assess and make a recommendation to USAID.
6. Sorghum-cowpea FBF, piloted by Kansas State University	✓ Information is sufficient; FAQR recommends further consideration
7. Amino Acid (AA)-fortified RUF, piloted by Ajinomoto	✓ Information is sufficient; FAQR recommends further consideration

*USAID/FFP Partner Perspectives on Food Aid Formulation, Selection and Distribution*

FAQR met with the USAID/FFP team at the USAID/FFP offices to present recommendations resulting from interviews with USAID/FFP stakeholders held between October 2016 and November 2017. To act upon the findings from interviews with USAID/FFP stakeholders, FAQR shared the following recommended actions with USAID/FFP:

Key	
✓	Yes, this action is being addressed by existing activities
!	No, this action needs USAID/FFP attention to move forward

Key Takeaway	Priority Actions	What are concrete steps to complete the Priority Actions?	Is this being addressed by USAID/FFP or FAQR?
<b>1. USAID/FFP’s current standards of operating enable uninterrupted and rapid food aid response.</b>	Continue allowing commodity swaps and pursuing efforts to have more prepositioned stocks.	FAQR suggests that USAID/FFP maintain current levels of communications with implementing partners to ensure prepositioned stocks and commodity swaps can occur quickly and efficiently. As part of FAQR Phase III’s Supply Chain workstream, FAQR will be providing recommendations to USAID/FFP on how food aid products can be prepositioned to enable more efficient programming.	✓
<b>2. USAID/FFP provides useful tools for managing programs.</b>	Continue updating the Commodity Calculator, the Food for Peace Management Information System Ration Calculator, the Food for Peace Modality Selector Tool and the Country Desk Reviews.	FAQR suggests that USAID/FFP consolidate these resources under a single web location. As part of FAQR’s Commodity Management System workstream, FAQR is partnering with the USAID/FFP communications team to organize the USAID/FFP website.	✓
<b>3. More technical guidance for implementing partners will support “fit-for-purpose” goals.</b>	i. Develop a training series focused on: a) what is on the menu of food aid products; b) what principles partners should follow when making food choices; and c) how to use different food aid decision-making tools. Require that a representative from all partners take the training	This does not fall within the FAQR Phase III Scope of Work (SOW). FAQR suggests USAID/FFP work with the new technical group that will replace TOPS and SPRING to develop, implement and manage this training series.	!

	annually as part of their contract with USAID/FFP.		
	ii. Build up written technical guidance for the products: e.g. for specific nutrition goals, which products are appropriate and make these resources available on a single USAID/FFP landing website.	As part of FAQR's Commodity Management System work stream, FAQR updated the product fact sheets in the <a href="#">Food Aid Product Information Guide</a> . The USAID-USDA interagency group should make efforts to share this with partners.	!
		As part of FAQR's Food Basket workstream, FAQR will create a table for how products should be rationed for different programs directed at different populations.	✓
4. <b>Better transparency and better communications improves programming.</b>	i. Establish a single USAID/FFP landing website. Make the full menu of products, technical guidance for their use and information on their effectiveness available at this webpage. Update this information regularly.	As part of FAQR's Commodity Management System workstream, FAQR has been partnering with the FFP communications team to design a Commodity Resources Portal. A management plan for maintaining the site still needs to be developed.	✓
		USAID/FFP should discuss hosting regular meetings with members of the USDA-USAID interagency group (the FFP, AMS, and USDA) communications and web teams to coordinate the content pertaining to food aid on each group's website.	!
	ii. Create a subscription service that automatically sends alerts about order solicitations, changes to the list of available products and other important announcements.	As part of the FAQR Food Basket workstream, FAQR will deliver a memo about how information on changes to products should be communicated and what information should be shared.	✓
		FAQR suggests assigning the FFP communications and web teams to map out a chain of action for when changes are made to products, and to set up the internal mechanisms for these alerts.	!
5. <b>Implementers can best respond to recipient needs with an innovative menu of food aid products.</b>	i. Invest more in non-GMO food product formulations, particularly for use in Africa.	As part of the FAQR food basket workstream, FAQR recommends that USAID move forward with accepting the sorghum-cowpea blend into the list of approved food aid products. USAID/FFP must approve this so that FAQR can move forward with developing a product specification sheet as part of the FAQR Commodity Management System workstream.	!
	ii. Invest more in determining the cost-effectiveness of products for specific outcomes in various contexts.	As part of the FAQR Field Research workstream, FAQR is conducting field trials on the cost-effectiveness of four food aid products and will provide peer-reviewed scientific reports on the outcomes. The Decision Support tool currently under development as part of FAQR's Cost Effectiveness workstream will also address the lack of information available to compare the cost-effectiveness of products.	✓
	iii. Devise a component of USAID/FFP contracts which enables implementing partners to pilot test novel products in such a way as to determine their effectiveness and	This does not fall within the FAQR Phase III SOW. FAQR suggests that USAID/FFP works with the POD to devise a scheme through which (for a limited number of contracts) a partner has the option to use a product on a small scale to test its acceptability among the recipient population before putting in a larger order.	!

	cost-effectiveness relative to alternatives.		
6. <b>Changes to food aid products are best made collaboratively.</b>	i. When developing or making changes to foods, packaging and specifications, work to include a wide range of stakeholders involved in all steps from production to distribution before final changes are made.	Work already being done by USAID/FFP, USDA and the FAQR packaging workstream has been including manufacturers in decisions about product specifications and changes to packaging. FAQR suggests that USAID/FFP continue to do this.	✓
		As online forms for new products are being developed through the FAQR Food Basket workstream, all stakeholders in the food aid supply chain should be consulted.	✓
	ii. Adopt a set of guidelines for USAID/FFP products. Make these publicly available.	As part of the FAQR Food Basket workstream, FAQR has developed <a href="#">a set of guidelines based on existing guidance from USAID/FFP and internal expertise</a> . USAID/FFP needs to edit and approve of these guidelines so that they can be posted to the USAID/FFP website.	!
7. <b>There are opportunities to support institutional learning.</b>	i. In coordination with USDA, continue to host an annual forum where partners can share lessons learned.	USAID and USDA should work together within the USAID-USDA Interagency group to host regular (annual or biannual) food aid meetings. Historically, these have taken place prior to the World Food Prize annual meeting. This would serve as a forum for participants to discuss shared challenges and learn from successes.	!
		As part of FAQR's Commodity Management System work stream, FAQR is communicating regularly with the USAID/FFP communications team to help design the USAID/FFP website content. FAQR can help to identify where this content should be placed on the website.	✓
	ii. Develop a web tool (accessible via a single USAID/FFP landing website) which aggregates comprehensive historical programming information at the country level.	FAQR suggests that USAID/FFP start requiring that, at the close of each project, the partner provides some specific information about the food aid programming which was done and the successes and failures of that programming. This information should be consolidated and available to all prospective bidders. Essential pieces of information which should be collected include: <ol style="list-style-type: none"> <li>a. What product was chosen?</li> <li>b. Who was the recipient population?</li> <li>c. What were the program objectives?</li> <li>d. What ration was provided?</li> <li>e. Did recipients share the product?</li> <li>f. If a product was changed, why was it changed?</li> <li>g. What lessons did you learn from implementing this program?</li> </ol> In order to ensure this information is continually updated, USAID/FFP would have to identify either a position or team that would be responsible for maintaining this information.	!

## **B. Food Aid Safety and Quality Systems**

### *Food Safety and Quality Feedback Loop*

FAQR is working on improving food safety and quality assurance (FSQA) in the food assistance supply chain. The U.S. food supply is protected by the Food & Drug Administration's (FDA) Food Safety and Quality Feedback system which is designed to identify and prevent non-compliant materials and goods from spreading through the food supply system, including the international food aid supply chain. Although strict controls are set in place during the manufacturing phase, once food aid products arrive in the destination country, most incidents are underreported or completely unreported. Currently, information on incidents is available during manufacturing and early steps along the supply chain. As products move along the supply chain, it is more difficult to obtain feedback on FSQA incidents.

The USAID/FFP Feedback Loop is designed to address this information gap. It relies on a Food Aid Commodity Quality Report Questionnaire (Quality Questionnaire) to gather pertinent information from the Awardee so USAID/FFP can identify, analyze and resolve food aid FSQA incidents. The Questionnaire is a vital part of the FSQA feedback loop because it can track incidents, provide institutional memory and be a source of data for a trend analysis. Following trends allows USAID/FFP and key stakeholders to track incidents, and if an occurrence is repeated, to initiate a review of the product to identify the root cause, contributing to continuous improvement.

Key informant interviews were conducted with officials at U.S. Government agencies and partners and five different feedback loops were reviewed to understand the usability of current systems. The consensus was that the current USAID/FFP feedback loop does not allow for institutional memory of incidents and resolutions to be built up or for analysis of trends and identification of root causes of incidents. Recommendations included a simplified Feedback Loop and a pilot test of a short, streamlined questionnaire and a multiplatform response for real-time feedback which could be developed further in the future using mobile app technology and accommodating barcode scanning.

This quarter, there was an opportunity for a preliminary pilot to test the proposed questionnaire and the team incorporated feedback received from various stakeholders. FAQR is currently working on a user-friendly, effective feedback system which allows USAID/FFP and its food aid stakeholders to catalogue and analyze incidents, and prioritize potential solutions. This will also help decisionmakers determine where to invest time and money for product research and development, leading to improved, safer products which are delivered more cost effectively.

## **C. Interagency Harmonization (US Government)**

The FAQR team facilitated planning and organizing the 11<sup>th</sup> USAID-USDA Interagency Working Group meeting on March 22, 2018 in Washington, D.C. Thirty-two (32) representatives from U.S. Government agencies, offices and branches within USAID and USDA, as well as other food aid players participated. This meeting focused moving forward to sustain the Interagency Working Group and how to promote collaboration around issues identified by Interagency stakeholders and working group participants as priority areas. Presentations included: USAID and USDA agency updates; food aid product research updates; product updates and development, new product introduction and packaging issues; latest developments in food

safety, auditing and testing; current supplier and procurement issues; and discussion about options for sustaining the Interagency Working Group collaboration.

In discussing institutional agreements and potential interagency institutionalization mechanisms, presenters and stakeholders emphasized: 1) the importance of identifying common goals and issues to address through interagency work; 2) the need for leaders and “champions” within agencies, departments and missions to push forward on common interagency priorities; 3) the terms of reference and identification of resources to sustain the interagency institutionalization process; and 4) the benefits to incorporating interagency work into existing structures and working groups, when appropriate and possible, while maintaining a nimble structure that continues to work effectively on technical issues.

It was agreed that the current approach of small groups working on specific technical areas of mutual interest was effective and working well. These include: packaging innovation, web-based new product development process, shelf life testing of fortified milled rice and long-term procurement mechanisms.

#### **D. Knowledge Sharing**

##### *Food Assistance for Nutrition Evidence Summit*

The Food Assistance for Nutrition Evidence Summit took place in Washington, D.C. on June 27 and 28, 2018. The Evidence Summit sought to: i) synthesize the current state of research on food assistance for nutrition; ii) facilitate dialogue on key policy and program-relevant findings; and iii) identify priority domains for future investments.

More than 250 researchers, policymakers, implementing partners, donors and industry representatives attended the Evidence Summit. Through a series of three plenaries, eight concurrent sessions, a posters and display table session, an interactive tools and resources roundtable, and five lightning talks on the latest emerging evidence, the Summit reviewed the current state of evidence and provided evidence-based recommendations to the food assistance community regarding policies, programs and research priorities. The Summit presentations, discussions and displays sought to drive forward future investment in research on food assistance for nutrition. Summaries of all Evidence Summit sessions are in [Annex 2](#).

Outputs from the Evidence Summit discussions and proceedings are forthcoming.

### III. Plans for the Coming Quarter (July-September 2018)

Key activities planned for the upcoming quarter include:

<b>Food Matrices</b>
<ul style="list-style-type: none"> <li>• Submit the draft report of literature review on bioavailability of nutrients from food matrices.</li> </ul>
<ul style="list-style-type: none"> <li>• Submit final report of the literature review and recommendations for improving the bioavailability of nutrients from food aid products.</li> </ul>
<ul style="list-style-type: none"> <li>• Prepare and submit manuscript (for publication) on the literature review of food matrices and nutrient bioavailability.</li> </ul>
<b>Food Aid Basket</b>
<ul style="list-style-type: none"> <li>• Emergency Response: <ul style="list-style-type: none"> <li>○ Create guidance on emergency response activities as requested by USAID/FFP.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• New Products, Technologies and Formulations, and Deployment of New Specialized Products: <ul style="list-style-type: none"> <li>○ Create a database of all potential suppliers: identify characteristics of companies which produce food aid products; identify other companies which have these same characteristics but are not producing food aid commodities.</li> <li>○ Engage with industry groups and product manufacturers to identify potential new suppliers, including information gathering about whether or not they would consider producing food aid products; then produce a list of new potential suppliers.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Dual-use products: <ul style="list-style-type: none"> <li>○ Identify potential dual-use products for emergency and non-emergency contexts.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Food and Ration Technical Guidance: <ul style="list-style-type: none"> <li>○ Conduct a desk review to collect and synthesize current technical guidance on food aid rations.</li> </ul> </li> </ul>
<b>Commodity Management System</b>
<ul style="list-style-type: none"> <li>• USAID/FFP Portal: <ul style="list-style-type: none"> <li>○ Conduct a landscape analysis of the updated USAID/FFP portal to ensure that all links are updated (quarterly).</li> <li>○ Ensure that all links are working and in the correct order.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Commodity Reference Guide Fact Sheets: <ul style="list-style-type: none"> <li>○ Enhance the strategy for regular updating of the Food Aid Product Information Guide (FAPIG) and Food Aid Product Description Sheets (FAPDS).</li> <li>○ Develop mechanism for ensuring that the FAPIG and FAPDS are regularly updated, and that new sheets are developed when new products come on line.</li> <li>○ Create template for fact sheets on the new FFP Portal.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Harmonized Specifications and Templates: <ul style="list-style-type: none"> <li>○ Continue to support and facilitate the consultative process to adopt the unified product specifications and templates via a harmonization platform, standardizing formats that enhance interaction between USAID and USDA, between the government and the private sector, and between USAID and international partners.</li> </ul> </li> </ul>

<b>Food Aid Packaging Solutions</b>
<ul style="list-style-type: none"> <li>• Food Protection:               <ul style="list-style-type: none"> <li>○ Review the literature and gather information on packaging technology and performance.</li> <li>○ Develop a protocol for lab-testing selected packaging solutions to confirm their performance and suitability to use in food aid programs.</li> <li>○ Develop a tool to compare the costs of different packaging technologies for fortified vegetable oil (FVO) and other food aid products.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• “Last Mile:”               <ul style="list-style-type: none"> <li>○ Develop a report highlighting the three FAQR field studies (Malawi, Burkina Faso and Sierra Leone) and identify strengths and weaknesses, gaps in knowledge and areas in need of improvement.</li> <li>○ Summarize the costs specific to the “last mile” of distribution and highlight potential cost-effectiveness gains from alternative approaches.</li> </ul> </li> </ul>
<b>Food Aid Safety and Quality Systems</b>
<ul style="list-style-type: none"> <li>• Supply Chain Oversight:               <ul style="list-style-type: none"> <li>○ Complete report detailing the current FFP supply chain procurement process and make recommendations to improve the supply chain.</li> <li>○ Analyze and understand the use and distribution of commodities from international preposition warehouses.</li> <li>○ Continue to analyze and understand in-country supply chains for Ethiopia.</li> <li>○ Continue error testing on supply chain optimization tool developed from the mathematical model of supply chain optimization.</li> <li>○ Start to prepare database prototype.</li> <li>○ Get in-country data from Ethiopia division of implementing partner.</li> <li>○ Continue to run scenarios using the supply chain optimization tool.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Food Safety &amp; Quality Assurance Feedback Loop: Finalize Feedback Loop Assessment and Recommendations:               <ul style="list-style-type: none"> <li>○ Finalize the design and implement the pilot project to test the Feedback Loop Assessment recommendations. (Pilot is designed to provide information on deploying and scaling up to USAID/FFP.)</li> <li>○ Develop a multiplatform data collection tool (online) and Feedback Spreadsheet.</li> <li>○ Pilot test the Tool and assess its feasibility.</li> <li>○ Review the information collected using the new Feedback Loop system.</li> </ul> </li> </ul>

<b>Cost-Effectiveness</b>
<ul style="list-style-type: none"> <li>• Cost-Effectiveness in Response to Emergencies:               <ul style="list-style-type: none"> <li>○ Find matching data in available data sets related to the chosen rapid-onset emergency response.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Cost-Effectiveness Tools: Decision Support Tool, now renamed FACET (Food Assistance Cost-Effectiveness Tool):               <ul style="list-style-type: none"> <li>○ Complete development of all three nutrition purposes in FACET through web-interface programming (R Shiny), literature review and consults with FAQR and external teams.</li> <li>○ Seek and Address User Feedback on the tool from USAID and Implementation Partners.</li> <li>○ Develop materials demonstrating use of the tool, along with case scenarios.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Cost Methodology:               <ul style="list-style-type: none"> <li>○ Finalize Cost Matrix, collect and analyze cost data for the Sierra Leone MAM Treatment Study.</li> <li>○ Complete cost-effectiveness related manuscripts for Burkina Faso Prevention Study.</li> </ul> </li> </ul>
<b>Field Research</b>
<ul style="list-style-type: none"> <li>• Burkina Faso Prevention Study:               <ul style="list-style-type: none"> <li>○ Prepare reports and manuscripts.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Sierra Leone MAM Treatment Study:               <ul style="list-style-type: none"> <li>○ Continue distributing foods for study and continue enrolling participants.</li> <li>○ Continue collecting data for main study and body composition, EED and neurocognitive sub-studies.</li> <li>○ Implement the new Relapse Survey on IYCF indicators</li> <li>○ Begin data collection for a WASH sub-study as part of the EED sub-study research.</li> <li>○ Begin Body Comp and EED sub-study data collection close-out activities in August.</li> </ul> </li> </ul>
<b>Interagency Communications and Harmonization</b>
<ul style="list-style-type: none"> <li>• U.S. Interagency:               <ul style="list-style-type: none"> <li>○ Form small group from Interagency Working Group key participants to plan and discuss institutionalization strategy development and draft a framework/charter and terms of reference for participants, using the framework presented at an earlier Interagency Working Group Meeting as a starting point.</li> <li>○ Formalize Interagency follow-up through teleconferences, ad hoc working group discussions and joint participation in events and conferences.</li> <li>○ Continue with the FAQR facilitation of the Interagency Working Group meetings at least through FAQR III Year 3 and work on transition to a U.S. Government mechanism.</li> <li>○ Plan for next meeting before end of 2018, if scheduling permits.</li> <li>○ Continue to work on institutionalization plan for the interagency group collaboration.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• U.S.-Global Interagency (Harmonization)               <ul style="list-style-type: none"> <li>○ Provide ongoing support of International Interagency Working Group.</li> <li>○ Plan for September 2018 International Interagency Working Group Meeting.</li> </ul> </li> </ul>

<b>Knowledge Sharing</b>
<ul style="list-style-type: none"><li>• International Congress of Nutrition (ICN) 2017:<ul style="list-style-type: none"><li>○ Prepare proceedings from each Symposium and submit each for publication.</li></ul></li></ul>
<ul style="list-style-type: none"><li>• Evidence Summit:<ul style="list-style-type: none"><li>○ Produce Evidence Summit outputs.</li></ul></li></ul>
<ul style="list-style-type: none"><li>• REFINE (Research Engagement on Food Innovation for Nutritional Effectiveness):<ul style="list-style-type: none"><li>○ Disseminate quarterly REFINE resource updates.</li><li>○ Reassess criteria for REFINE search and inclusion.</li><li>○ Finalize food aid product studies methods scan and prepare for publication.</li><li>○ Finalize Research Protocol Guidance Document.</li><li>○ Update REFINE database on an ongoing basis.</li><li>○ Reach out to food aid researchers and principal investigators on an ongoing basis to update REFINE database.</li></ul></li></ul>
<ul style="list-style-type: none"><li>• FAQR Communications:<ul style="list-style-type: none"><li>○ Continue to disseminate FAQR outputs.</li><li>○ Continue to update the FAQR website.</li><li>○ Develop Research Uptake and Sustainability Strategy for final project outputs.</li></ul></li></ul>

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## Annex I.

### Overview of the Food Aid Quality Review (FAQR) Phase III Activities

For more information on FAQR Phase III, please visit the [FAQR website](#)<sup>2</sup>.

#### I. Background

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 people for whom the direct distribution of food aid can make a significant impact. FAQR Phase I recommendations were published in *Delivering Improved Nutrition: Recommendations for Changes to U.S. Food Aid Products and Programs*<sup>3</sup>. That 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>4</sup>.

FAQR III<sup>5</sup> focuses on generating links between research on food product formulation and recommendations on cost-effective programming and policy-level action among national and multilateral institutions engaged in food assistance. Tufts University's Friedman School of Nutrition is working closely with several domestic and international collaborators, including USAID, United States Department of Agriculture (USDA) and United Nations (UN) partners, all of whom are committed to strengthening the evidence base for use of Specialized Nutritious Food Products (SNFPs) for targeted nutrition goals. The work of FAQR III is framed under three major topics related to food aid: **1) Products, 2) Programming, and 3) Processes.**

#### Products

With a view to making actionable recommendations to USAID, Tufts is examining a number of priority issues, such as how food matrices ("the nutrient and non-nutrient components of foods and their molecular relationship to each other"<sup>6</sup>) affect bioavailability of nutrients and digestibility of products; the potential for thermal/non-thermal processing technologies to improve food matrices; potential roles for existing products which are rarely used today, as well as new products (which may include 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 which assess the effectiveness and cost-effectiveness of various newly-formulated food products for the prevention and treatment of malnutrition in children.

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<sup>2</sup> <http://foodaidquality.org>

<sup>3</sup> [pdf.usaid.gov/pdf\\_docs/pnadz842.pdf](http://pdf.usaid.gov/pdf_docs/pnadz842.pdf)

<sup>4</sup> [pdf.usaid.gov/pdf\\_docs/PA00M9B8.pdf](http://pdf.usaid.gov/pdf_docs/PA00M9B8.pdf)

<sup>5</sup> Contract awarded to Tufts University's Friedman School of Nutrition Science and Policy for the period covering Feb. 1, 2016 to Jan. 31, 2019 with two option years.

<sup>6</sup> Source: United States Department of Agriculture: National Agricultural Library (<https://agclass.nal.usda.gov>)

**Programming**

One important focus of FAQR field research and statistical modeling is the cost-effectiveness of various products used in operational settings. This includes strategy development for pre-positioned, Specialized Nutritious Food Products (SNFPs), guidance on options for their use, elaboration of a strategy for responding to food needs in the initial stages of a sudden onset emergency and dissemination of cost calculation tools. FAQR is generating improved technical guidance, sharing details on research protocols used in testing new food aid products in the field and making further progress in harmonizing product specifications among food aid donors.

**Processes**

FAQR III provides recommendations to USAID 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. This provides recommendations for enhanced supply chain oversight, establishes stronger and more user-friendly quality assurance feedback loops and promotes food safety and quality standards which can also be applied to local and regional food procurement.

**FAQR III organizes its activities into the following work streams**

([Additional information is available on the FAQR website<sup>7</sup>](#)):

<b>A</b>	Food Matrices
<b>B</b>	Food Aid Basket
<b>C</b>	Commodity Management System
<b>D</b>	Food Aid Packaging Solutions
<b>E</b>	Food Aid Safety and Quality Systems
<b>F</b>	Cost-Effectiveness
<b>G</b>	Field Research
<b>H</b>	Interagency Communications and Harmonization
<b>I</b>	Knowledge Sharing

<sup>7</sup> <https://foodaidquality.org/what-we-do>

## Annex 2. Summary of Food Assistance for Nutrition Evidence Summit

The Food Assistance for Nutrition Evidence Summit was held in Washington, D.C. on June 27 and 28, 2018. Below is a brief summary of the sessions held during the Evidence Summit. Further Evidence Summit proceedings and outputs are forthcoming.

### Opening Remarks and Keynote Addresses

The Evidence Summit commenced with a series of welcomes and a keynote address. Patrick Webb (Tufts University) set the scene by providing some welcoming remarks on the importance of the Summit. Elizabeth Brown (USAID/FFP) highlighted the relevance of the Summit to the current and future work of FFP. The first keynote address was provided by Thomas H. Staal, USAID Counselor. He reminded participants that FFP serves a much greater role than simply handing out food aid; they are the largest provider of emergency assistance and therefore have a large role to play in



USAID Counselor Thomas Staal delivers opening remarks.  
Credit: Adam Lowe Creative

supporting evidence generation. Mr. Staal asked that there be greater focus on the gap between crisis and development aid, especially as the need for emergency assistance has increased and changed to resemble longer-term crises with longer-term impacts on health and nutrition. Finally, he commended the strong partnership between FFP and FAQR which represents the focus on evidence and research.

The second keynote was provided by Roger Thurow, a senior fellow at the Chicago Council on Global Affairs and author of *The First 1,000 Days: A Crucial Time for Mothers and Children—and the World*. He provided a perspective on the importance of evidence in journalism in a time of increased “fake news” and recounted his experience in the field collecting stories to bring awareness to the first 1,000 days and the need for food assistance. Mr. Thurow reinforced the point that nutrition is not sufficient on its own and must be interwoven with other humanitarian sectors. He called for a future agenda focused on bipartisan partnerships, longitudinal research and improved data metrics and numbers. Lastly, he reminded the audience of the importance of stories from the field and explained how those can sometimes have the greatest impact as they have the potential to outrage and inspire people to action.

### Plenary Session I: Food Assistance for Nutrition: Where do we stand on current evidence?

This first plenary set the empirical foundation for the Evidence Summit, with experts reviewing the current uses of food aid for nutrition, what we have learned and still need to learn about the nutritional effectiveness of these products, and scientific controversies in the field. Participants gained an understanding of the importance of investing in research focused on food aid effectiveness, the evolution of food aid products and their use for malnutrition, and the remaining gaps in the evidence base around use of food aid.



Panel discussion during the first plenary session.

Credit: Adam Lowe Creative

Six speakers and panelists, representing private and public agencies around the world, focused their presentations and discussion on the evidence around food aid in a variety of contexts, and the remaining gaps in the knowledge base. Patrick Webb (Tufts University) introduced the plenary and gave background on the history of food aid/assistance, and why evidence in this field is vital. He noted that the scope and type of research on food aid/assistance has changed over the last few decades, moving away from composition of foods toward cost-effectiveness of the programs. André Briend (University of Tampere and University of Copenhagen) gave a presentation on the formulation of food aid, what nutrients are needed by malnourished children, how food aid has tried to meet these needs and what needs are still unmet or unclear. A key issue highlighted by Dr. Briend is that the precise nutrient requirements of malnourished children are still not known. In addition, the requirements need to take into account what is actually absorbed by the child after consumption. Nancy Aburto (WFP, Rome) reviewed the existing evidence which has the most consensus: about the use of food aid for preventing and treating severe acute malnutrition (SAM), moderate acute malnutrition (MAM), stunting, and nutrient deficiency in

development and emergency contexts. She noted that overall, food assistance does have the ability to address malnutrition but can also have benefits outside of nutrition.

The three speakers were then joined for a panel discussion by three other researchers: Melissa Chapnick (Washington University in St. Louis), Steve Collins (VALID Nutrition) and Mark Manary (Washington University in St. Louis). During the panel discussion, Dr. Manary raised the importance of getting recognition of the need for food aid at all levels but especially among the individuals who require assistance understanding that this is valuable for them to engage in. Ms. Chapnick noted the positive shift away from a nutrient-specific focus toward overall quality of foods, for both treatment and prevention of severe acute malnutrition. Dr. Collins brought up the politics of food aid, the difficulty of getting new, innovative products to the market and the need for reducing barriers to using local production and getting more private sector investment in food aid.

### ***Plenary Session II: Evidence on Interventions and Program Components Beyond Effective Food Aid Products: Behaviors, Environment and Modalities***

This second plenary session focused on the evidence base on factors external to the food aid products themselves which influence the effectiveness of food aid. These factors include practices related to the sharing, diversion, preparation and consumption of the foods; the home and community environment; and delivery modalities (e.g. cash, vouchers, food). During the session, speakers and participants explored how programming decisions and considerations such as social

behavior change communication can be the vehicle through which these influential factors can work to the advantage of food aid programs.

Moderated by Erin Boyd (USAID/OFDA), Ilana Cliffer (Tufts University) spoke about home use of food aid products, using the FAQR field trial in Burkina Faso as an example and highlighting other current literature. She discussed sharing and diversion of food aid products away from the intended beneficiary, consumption of the products by the beneficiaries, preparation of the products by the caregivers, and displacement of complementary foods and breastfeeding. Blake Stabler (Cash Learning Partnership–CaLP) presented on how delivery mechanisms can influence program effectiveness. He explained that there is a limited but growing body of evidence on the impact of cash or vouchers on nutrition outcomes, but a moderate body on food security outcomes. Deanna Olney (IFPRI) then presented on whether or not there is a role for WASH interventions in food aid programs. She discussed studies focused on the relationship between WASH interventions and different nutrition related outcomes and concluded that from the available studies, WASH interventions (hand-washing and treatment of drinking water) did not reduce diarrhea, were unlikely to reduce stunting, but may reduce anemia. After the three presentations, Beatrice Rogers (Tufts University) joined the panel for a question and answer session.

Three key takeaways from this plenary session were: 1) Quality of programming and household use of food products matter at least as much as the composition of the product itself; 2) There is strong need to study how nutrition can be better integrated into multipurpose cash assistance and holistic humanitarian programs, and how aid providers can adapt to make nutrition a priority as affected populations gain a greater voice in what assistance they receive; and 3) WASH interventions, as they are currently designed and implemented, are unlikely to reduce stunting.

### ***Plenary Session 3: The Future of Food Assistance Evidence***

The final plenary session served as an opportunity, to reflect on the evidence presented over the two days of the Evidence Summit. Through a series of three panel discussions, representatives from key agencies involved in food assistance for nutrition policy making, programming and research discussed the evidence gaps identified and how to ensure that necessary resources are available to achieve long-lasting impacts in food assistance for nutrition.

The session began with a first panel “Reflecting on the Evidence Presented.” Moderator Elizabeth Brown (USAID/FFP) asked representatives from agencies with global mandates in food assistance for nutrition to address the evidence shared which most resonated with them over the two days of the Summit. Erin Boyd (USAID/OFDA) spoke to the need to make programs simpler in order to increase reach, accelerate scale up and ensure quality. She also noted the increasing evidence related to malnutrition prevention. Melanie Thurber (USAID/FFP), Saskia de Pee (WFP) and Kerstin Hanson (MSF) touched upon the importance of considering context in how evidence of success or failure is interpreted, how evidence is adapted and operationalized. The evidence reinforces that a perfectly-designed product is of little use if it does not reach the correct beneficiaries. Dr. Hanson also highlighted the evidence pointing to the importance of nutrition beyond infant and young child feeding, focusing on both adolescents and pregnant and lactating women. Diane Holland (UNICEF) noted that the evidence presented highlighted the “elegant ecosystem” of food assistance for nutrition and that the multisectoral nature of the field requires a range of expertise and the ability to “speak each other’s language.”

The second panel of the session “Research Gaps and Priorities,” moderated by Saul Guerrero (ACF) focused on current research priorities. Rufino Perez (USAID/FFP) and Amy Mayberry (No Wasted Lives) both mentioned a continued need for scientific and applied research related to food science for food aid products including products, ingredients, formulations, dosage and local production. Ms. Mayberry also noted the lack of evidence related to an integrated protocol for treatment of SAM and MAM. Zeina Maalouf-Manasseh (FHI 360/FANTA Project) spoke about the divide between research on emergency and development contexts, and what data are needed to make decisions about programming across this divide. Dr. Manasseh also addressed the continued need for evidence generation on metrics for measuring nutritional status, noting that we still know little about how to truly measure a “thriving individual who is contributing to society” which is the ultimate goal of food assistance for nutrition interventions. Audience questions also illuminated that little is done to gather beneficiary input and understand what is needed from their perspective. To give visibility to the research agenda on food assistance for nutrition going forward, panelists proposed ensuring that the research outcomes are clear, including what the research agenda is and what the barriers are to addressing this agenda. It is also important to continue to sensitize the community to the evolving nature of evidence and the need to allocate funds properly to allow for growth and innovation, along with appealing more to the private sector for research support.

In the final panel of the session, “Supporting New Evidence” representatives from U.S. Government agencies active in interagency harmonization efforts around food assistance quality and research made the case for why investment in research on food assistance for nutrition continues to be critical. They explained the role of U.S. Federal Government collaborations in supporting ongoing research. Moderator Brian Bacon (USAID/FFP) was



**Audience comments during the final plenary session.**  
**Credit: Adam Lowe Creative**

joined by Elizabeth Brown (USAID/FFP), Diane DeBernardo (USDA/FAS), Omar Dary (USAID/Bureau of Global Health) and Daniel Raiten (NIH). In their remarks panelists focused on the need to fuel collaboration and ensure funding by defining and prioritizing common problem sets, generating and sharing the necessary data to secure resources to research and address these problems, and using agencies’ varied areas of expertise to collaborate and address problems efficiently and effectively. Panelists also highlighted the fact that existing collaborations on priority setting, like the U.S. Government Nutrition Coordination Plan, as well as ongoing collaboration with

research institutions, implementing partners, U.N. agencies and private industry has been effective in moving the research agenda forward. Panelists noted that the continual evolution of science necessitates continued investment in food assistance for nutrition research but also requires ongoing flexibility from U.S. government agencies to stay informed regarding new evidence and to evolve their thinking based on the most recent science.

The key message emerging from the final plenary session is that much has been achieved in the realm of food assistance for nutrition. Key research questions have been answered but as the focus of food assistance for nutrition moves from feeding individuals during a limited period of time to nourishing and sustaining individuals over the long term, the research questions and evidence need to support policy and programmatic decisions which change and evolve. Resources are needed to assist in addressing these new research priorities. Collaboration is critical to securing these resources and ensuring that these questions are answered.

### **Concurrent Sessions**

#### ***Applying Cost-Effectiveness in Research for Food Assistance & Nutrition Programming: Research Methods and Policy Applications***

Drawing from findings and experiences of researchers working on evaluating the cost-effectiveness of food assistance and nutrition programming, the session aimed to cover the following themes of cost-effectiveness research methods and policy applications:

1. The value of incorporating cost-effectiveness in research to inform food assistance policy and programming decisions;
2. Research considerations and methods to assess cost-effectiveness: study design, data collection, data analysis, and robustness check;
3. Interpretation and translation of cost-effectiveness evidence to facilitate engagement in policy and programming discussions; and
4. Gaps and challenges in generating cost-effectiveness evidence.

Jennifer Rosenzweig (WFP) introduced the session drawing from WFP Nutrition's perspectives and attempts on gauging cost and cost-effectiveness of WFP programs. The first presenter, Beatrice Rogers (Tufts University), spoke about the cost-effectiveness research methods and lessons learned from the FAQR field studies in Burkina Faso and Sierra Leone. Stephen Vosti (University of California, Davis) presented results from a variety of cost-effectiveness field research and modeling such as the International Lipid-Based Nutrient Supplements (iLNS), The Micronutrient Intervention Modeling Project (MINIMOD), and Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) projects. Natasha Lelijveld (The Hospital for Sick Children) described the cost-effectiveness and cost-efficiency research considerations in Community Management of Acute Malnutrition (CMAM) programs based on No Wasted Lives' Combined Protocol for Acute Malnutrition (ComPAS) cost-effectiveness study as well as the International Rescue Committee (IRC) CMAM programs cost analyses. Finally, Deanna Olney (IFPRI) presented results from the IFPRI/Food and Nutrition Technical Assistance (FANTA) III cost/cost-effectiveness study evaluating the "Preventing Malnutrition in Children under 2 years of Age Approach (PM2A)" which was conducted in Burundi and Guatemala.

Presentations and discussion during the session recognized that investing in rigorous research which generates policy-relevant cost-effectiveness evidence and encouraging the appropriate use of cost-effectiveness evidence in policy and program decisions are necessary to maximize impact/value for money of food assistance and nutrition programming. Session presenters drawing lessons from their teams' own cost-effectiveness experiences all pointed to a variety of important cost-effectiveness research methods considerations during study design, data collection and analyses, and results visualization and interpretation. In particular, costing perspectives and components/categories, measures/indicators of success, impact or effectiveness, uncertainty/sensitivity analyses, cost-effectiveness research planning and reporting were emphasized. Existing challenges in conducting and interpreting cost-effectiveness research were also raised by presenters and reflected in the audience questions. Discussions on robust cost-effectiveness research methods must continue.

### ***Innovations in Ingredients, Formulation and Processing: Where are we now, where can we go?***

This session began with a presentation by Michael Joseph (Tufts University). Dr. Joseph opened his talk by laying out high-priority challenges related to nutrient bioavailability in food aid. Dr. Joseph presented seven novel solutions to address these challenges:

1. Incorporating diastatic malt as an ingredient to improve energy density, starch and protein digestibility;
2. Incorporating defatted wheat germ as an ingredient to improve protein quality;
3. Compacting FBFs to improve shelf life;
4. Blending vegetable oils or using canola oil to achieve an improved omega fatty acid ratio for potential immune and neurocognitive development;
5. Using synthetic amino acids to provide highly bioavailable forms of limiting and/or lacking amino acids;
6. Adding yeast cell wall to bind mycotoxins; and
7. Adding oligosaccharides as a prebiotic as a possible means to improve beneficiary gut health.



**Juan Andrade (University of Illinois at Urbana-Champaign) presents a poster on innovative ingredients and technologies for food aid products.**  
Credit: Adam Lowe Creative

These suggested solutions have been endorsed by FAQR on two bases: 1) being cost-effective; and 2) being relatively easily adopted by food aid product manufacturers. Some of the suggestions presented could be implemented without any delay (i.e. adding diastatic malt and defatted wheat germ), whereas the remaining suggestions require further analysis and field trials before being incorporated into food aid products.

After the presentation, a panel of experts including Quentin Johnson (Quincan, Inc.), Omar Dary (USAID), Paul Alberghine (USDA), Gaurav Patel

(Abbott Laboratories) and Juan Andrade (University of Illinois at Urbana-Champaign) provided their reactions to the recommendations. The panelists were in agreement that all of the suggestions have promising potential to improve the nutritional quality and cost-efficiency of food aid products.

### ***Food Assistance & Complementary Activities: Linking Evidence to Programming Decisions***

This session investigated some important program design considerations in making food assistance programming decisions, with emphasis on exploring the roles of donors and implementation partners and the challenges in integrating activities which complement food assistance. Specific considerations which were covered in relation to nutrition outcomes included: WASH, agricultural development, maternal and child health and nutrition, disaster risk reduction, and natural resource management. After an overview of existing scientific literature for each of the five aspects, a panel of implementation partners, donors, and policymakers discussed successes, lessons and challenges, drawing from their respective organizations' experiences in integrating complementary activities in food assistance programming.

Heather Stobaugh (RTI International) presented an overview of research evidence for each of the five covered complementary activities and gave recommendations in relation to programming and policy decisions. The major part of the session was a panel discussion among donors/policymakers and implementation partners. This panel discussion was moderated by Judy Canahuati (USAID/FFP). The panelists began by discussing how to integrate complementary activities in food assistance programming, including barriers and challenges that organizations face in implementing evidence for complementary programs, what motivates and dissuades design teams to propose a complementary activity in a program design and what other complementary programming components should be taken into account or further researched. The panelists included Nancy Aburto (WFP), Sally Abbott (USAID/BFS), Jennifer Burns (CRS), Kathryn Reider (World Vision), Adam Reinhart (USAID/FFP), as well as Heather Stobaugh (RTI). Following this discussion, panelists took additional questions from the audience. These questions raised issues related to the implementation quality in research, the use of existing programmatic data, and the link between maternal mental health and nutrition.

The overview of scientific literature in the presentation suggested the need to appropriately produce and interpret relevant research appropriately in order to strengthen support for policy and program decisions related to integrating complementary activities into food assistance and nutrition programming. This was further elaborated during a panel discussion by some of the panelists and the audience. A lack of existing evidence, especially robust scientific evidence with evaluation of implementation quality, as well as a lack of understanding of impact pathways to explain research results, were found to be common in the areas of complementary activities covered in this session. Thus, it is important to incentivize research in this area to ensure appropriate study questions and outcomes, rigorous study design, and considerations of program implementation quality.

Furthermore, implementation partners, policymakers, and donors on the panel provided practical insights drawing from their organizations' relevant experiences on incentivizing and operationalizing integration of different technical sectors. Many panelists pointed out the practical challenge, including the fact that different technical sectors speak different languages and have different sets of objectives. In order to sensitize other sectors with a nutrition lens, it is also important to speak in other sectors' languages and address their respective goals. Panelists gave examples of factors at

organizational, program and local levels which had facilitated coordination and collaboration across sectors and led to inclusion of nutrition in the past, and especially emphasized the need to have institutionalized systems and mechanisms in place. Challenges in program integration related to SBCC implementation quality, local capacity building, and bandwidth, understanding of context, community engagement, long-term program sustainability, and the humanitarian-development nexus were also brought up during the panel discussion.

### ***Raising the Bar on Food Aid Research: Challenges and Methodological Considerations to Guide Policy and Programming***

This session reviewed the research methods and approaches which have been used in recent years to study food aid, discussed key issues and challenges in study design and data collection methods, and addressed some methodological considerations in examining the impacts of food aid products on nutrition outcomes in real-world programmatic contexts. The goal was to understand how to move from the current research landscape to "best practices" in order to generate more useful information for policymakers and programmers. This session was facilitated by Beatrice Rogers (Tufts University) and included presentations and a panel discussion by: Laetitia Ouédraogo (Institut de Recherche en Sciences de la Santé, Burkina Faso), Jennifer Rosenzweig (WFP) and Tahmeed Ahmed (International Centre for Diarrhoeal Disease Research, Bangladesh—icddr,b).



**Evidence Summit participants.**  
Credit: Adam Lowe Creative

Beatrice Rogers commenced with a presentation on findings from the recent FAQR/REFINE methods scan. She discussed the types of food aid studies conducted over the last seven years since the start of FAQR and identified three main challenges in conducting research on food aid for nutrition: 1) vulnerability to bias; 2) lack of comparability between studies; and 3) lack of generalizability. Each of the three panelists presented on strategies for improving the quality of food aid research and specific examples from their experiences. Dr. Rogers then facilitated a discussion.

There were several key takeaways. In terms of design, it was noted that programs should prioritize and plan for rigorous research and evaluation from the start and also consider cost analysis. The importance of cluster-randomized designs, mixed methods and direct observation was highlighted; alternatives were considered for situations when more robust designs are not feasible. The importance of partnerships was also highlighted. Programmers and researchers should be prepared to adapt to implementation realities. There should be good data monitoring systems in the field to minimize missing data and loss to follow-up. There was consensus that researchers need to agree on the questions they're trying to answer, have clear definitions of indicators and develop some common guidelines. Lastly, it was stressed that food aid research should be conducted by "researchers who know the context as well as the trade" and local interventions should be

promoted. To learn from the research, negative findings also need to be included in the literature.

### ***Improved Packaging for Optimal Protection of Food Aid Products***

This session, chaired by Quentin Johnson (Quican, Inc.), highlighted current challenges with food aid packaging and discussed ways to reduce food aid losses, optimize transport and storage, and preserve the integrity of food aid products from production to distribution in an effort to improve cost-effectiveness. Suppliers presented technologies they developed to address some of the issues with the packaging of FBF. In a panel, food aid stakeholders and packaging researchers discussed the future of food aid packaging research.

Vance Fortenberry (ProAmpac) presented their hybrid, pinch-bottom open mouth (PBOM) bags as a more resistant alternative to the multiwall paper bags for the packaging of fortified flours. This new bag has better puncture resistance, a design that minimizes corner breakage and has the potential to reduce infestation. David Silver (Didion Milling Inc.) presented changes they made to the packaging of SC+ to improve efficiency. They highlighted the possible savings associated with different transport modalities (rail car vs. trucks), the strength of different stacking patterns and the pros and cons of palletization. Shane Prigge (WFP) presented WFP's efforts to improve food aid packaging and their recent activities around packaging testing and re-engineering. He stressed the importance of conducting field visits, gathering data and considering how the foods will be used in the field.

In the second half of the session, a panel including Shane Prigge (WFP), Ruffo Perez (USAID/FFP) and Jo Ann Ratto Ross (U.S. Army Natick Soldier Research, Development and Engineering Center) discussed the future of food aid packaging. They shared their thoughts on the constraints particularly important for food aid packaging, including costs and prioritization of functionalities. They also discussed the evidence needed to prove the suitability of a technology for the packaging of food aid products and emphasized the need to demonstrate food safety and to conduct field testing. Finally, participants were asked to state what they thought the next priorities in food aid packaging research should be, and the following topics were mentioned: improved performance requirements, partnerships between all stakeholders to achieve common goals, sustainability, understanding the fitness for use, and overall supply chain efficiency.

The session demonstrated that packaging technologies can play a significant role in the efficiency of food aid programs. It also highlighted current gaps in knowledge and the need for more research on food aid packaging. There should be efforts to obtain quantitative and qualitative information on packaging-related incidents in order to build cost-effectiveness



**Innovations in packaging technology displayed at the Posters and Displays session.**

**Credit: Adam Lowe Creative**

analyses and accurately assess the potential gains of switching to alternative technologies or modalities. In addition, the constraints specific to the food aid supply chain must be considered when developing food aid packaging and the packaging technologies must be submitted to field testing/tests that mimic field conditions when their performance is tested in the U.S. prior to adoption for food aid products.

### ***Metrics of Food Aid Effectiveness for Nutrition: Beyond Z-scores***

This session focused on metrics of nutrition and health beyond traditional anthropometric z-scores, which can be used to give a more comprehensive picture of current health status and future outcomes. In a series of short presentations, six experts described the importance of and measures for body composition, nutritional biomarkers, environmental enteric dysfunction (EED) and neurocognitive tests.

Irwin Rosenberg (Tufts University), moderated the session. Daniel Raiten (NIH) set the stage for the session, describing the difficulty of relying on single measures to draw conclusions about functional roles of nutrition. Also key is recognizing that nutrition is a biological variable—that food does not equal nutrition, i.e. what is actually absorbed and utilized by the body. Dr. Raiten emphasized that we need more measures of nutritional status but we also must understand what we're actually measuring. Susan Roberts (Tufts University) then discussed the importance of body composition to determine the type of weight gain (fat or lean) during an intervention, which can have short- and long-term consequences. According to Dr. Roberts, all of the current body composition measures for the field have problems, so she uses a combination of traditional measures (MUAC and skinfolds). Carlos Grijalva-Eternod (University College London) presented on a newer measure of body composition called bioelectric impedance vector analysis, which is a field-friendly technique that identifies the quality of body composition rather than quantifying fat and lean mass as other measures do. However, more research is needed to interpret the data and use it for assessing nutritional status and outcomes. Mark Manary (Washington University in St. Louis) described the issue of neurocognition in malnourished children, saying that despite restored anthropometry, children treated for malnutrition do not regain neurological function at the same pace. Jukka Leppänen (University of Tampere) presented on one measure of neurocognition involving infrared eye tracking technology which can be used in the field. Tahmeed Ahmed (icddr,b) discussed the implications of EED in malnutrition, to which 40 percent of stunting is attributable; there are many potential biomarkers but more work is needed to define and scale them. Also, the microbiome may play a role in the etiology and treatment of malnutrition.

Key takeaways from the presentations and panel discussion were that the case needs to be made for nutrition as a biological variable, much more than simply what we eat. We need better indicators to capture the health and wellness of the population; single metrics often need more context to interpret. We are just starting to understand the role of inflammation in nutrition, but we need robust, simple biomarkers to measure EED. As there are multiple ways of measuring the same general category of outcomes (such as body composition and neurocognition). Since there are multiple ways of measuring the same general category of outcomes (body composition, neurocognition, etc), in choosing a metric for our programs and interventions, we should consider the importance of accuracy, but remember that lack of precision is less concerning since it can be corrected with large sample sizes, but we cannot get rid of bias.

***Food Safety and Quality: A Global Systems Approach to Ensuring Food Safety and Quality Assurance (FSQA) in Food Assistance and Humanitarian Programs***

The Food Safety and Quality Assurance (FSQA) session, led by Quentin Johnson (Quican, Inc.) and Nina Schlossman (Global Food & Nutrition Inc.) gave an overview of the importance of food safety and quality in treating and preventing malnutrition in the humanitarian context, with the end goal of providing the best possible products and nutrition to the target recipients and end users. Ensuring quality throughout the supply chain requires harmonized efforts and interactions among all key players. Through working groups, the food safety systems approach incorporates harmonized food specifications and qualifications to unify elements and ensure their consistency throughout agencies. Industry and vendor meetings with suppliers and the U.S. Government, and harmonization working groups, including USAID, USDA, WFP, UNICEF and MSF, are beneficial in terms of unifying standards and systems for global procurement.

Shane Prigge (WFP) introduced the target recipients and detailed examples of fluctuating contexts in which humanitarian assistance is needed. Mr. Prigge also presented WFP's use of local production and sourcing as an area in which future products may be able to expand, but detailed some of the difficulties considering related cultural uses and adaptations. Odile Caron (MSF) presented on the identification of food aid products fit for purpose, their characteristics, nutritional properties, packaging and labeling, shelf life, microbiology and contaminants, the processes and practices for quality assurance, and administrative needs for suppliers. Allowance for the specifications to evolve is essential to reach the appropriate balance between prescriptive requirements and flexibility for suppliers. Richard Boyd (USDA/AMS) focused on the desired elements needed from a supplier and food safety regulations for auditing and monitoring production. The inclusion of metrics for determining acceptability of products using lab testing (nutrients, microbiological, contamination), organoleptic evaluation, packaging exams, stability studies, GMP, and HACCP. Rufino Perez (USAID/FFP) highlighted the shift to prevention-focused FSQA. Being prevention-focused is cost-effective but difficult to measure in terms of determining what did not happen. The use of process capability monitoring as a tool is critical in a prevention-focused approach to food safety and quality.

Maintaining the mechanisms and systems of collaboration between the current stakeholders on FSQA with enough flexibility to accommodate new specialized foods and products is important moving forward. Communicating expectations and engaging with suppliers is essential for compliance with regulation, ensuring best practices, and encouraging partnerships. Next steps will be to determine how to establish a management system to incorporate future improvements into the existing food safety systems as science and technology advance.

***Optimizing the Food Aid Supply Chain: From Procurement to Distribution***

The goal of this session, chaired by Stephen Vosti (University of California, Davis) was to highlight the importance of optimizing the food aid supply chain to improve the cost-effectiveness of food aid programs. Gregory Olson (USAID/FFP) opened the session discussing the ongoing shift from execution to better planning, which could lead to savings for USAID. The session included two panels: in the first one, Koen Peters (WFP), Ozlem Ergun (Northeastern University), Hemant Bonde (Capgemini) and Jack Levis (UPS) discussed the impact of supply chain decisions on the cost-effectiveness of food aid programs and operations. A second panel, composed of Benjamin Safari (CRS), Richard Lankas (World Vision) and Charles Ibaale (WFP) focused on the "last mile" of

delivery. They discussed challenges and opportunities in the “last mile” and highlighted the need for tracking, oversight and distribution network structure.

In the first panel, WFP and FAQR presented Optimus and the FAQR Supply Chain Optimization Tool, two tools aimed to assist in making cost-effective decisions. They highlighted the importance of cross-functional efforts to identify the best systems. UPS provided insight from the industry, demonstrating the impact that even small gains can have when applied to the entire system. Capgemini shared their supply-chain expertise and emphasized that data sharing must be a priority. The panelists explained the potential for significant cost-effectiveness gains by optimizing supply-chain decisions. Using optimization tools to select foods, vendors, transporters, etc. increases the cost effectiveness of the systems and ensures that the right commodity reaches the right beneficiaries at the right time and at the best price.

In the second panel, CRS reminded participants of the importance of going to the field to develop an understanding of the local environment and culture and of what it really costs to move foods through the “last mile,” and emphasized that all the delivery options should be considered. WFP and World Vision then presented the tools they have developed to optimize the “last mile.” WFP’s LESS is a mobile application which uses QR (quick response) codes to capture all WFP food movements, thus improving oversight and tracking in the “last mile.” World Vision’s Last Mile Mobile Solution simplifies and standardizes beneficiary registration, distribution and monitoring. The panelists discussed how these tools can lead to significant efficiency gains.

Supply chain decisions have an important role to play in the cost-effectiveness of food aid programs, and there are tools being developed to help stakeholders assess the cost-effectiveness of different scenarios, including WFP’s Optimus and the FAQR’s Supply Chain Optimization Tool, and to streamline the “last mile,” whether it is by improving tracking of the foods (by using WFP’s LESS) or by improving beneficiary and distribution management (World Vision’s Last Mile Mobile Solutions). Analyzing data for insights, paying attention to both large and small details and gains, trusting modeling and believing in innovation for cost-effective food aid delivery were the main insights from this integrated session. The panelists all demonstrated that data analytics is the future of supply chain optimization and that focusing on better planning could lead to significant cost-effectiveness gains.

### **Closing Remarks**

Closing remarks were offered by keynote speaker, Representative Jim McGovern of Massachusetts, Patrick Webb (Tufts University) and Brian Bacon (USAID/FFP).

Representative McGovern provided a strong message to participants regarding the continued importance of food assistance for nutrition and a call to action, as conflict, natural disasters and climate change necessitate ongoing efforts to improve the quality of food assistance for nutrition across products, programs, processes and policies. He also called attention to the fact that “extreme hunger and extreme food insecurity are the greatest threats to our national security” and that in view of this we must work to “find the political will to end hunger,” which includes providing necessary funding and flexibility to implement evidence-based food assistance for nutrition policy.

Patrick Webb (Tufts University) offered thanks to the participants of the Evidence Summit, noting that the community has achieved a great deal and has come a long way in food assistance for nutrition research. But he also provided a call to action, stating that we must be honest about what we know and what we do not know, plus acknowledge that we can and will do better. There must be full transparency of what products can accomplish, but also transparency that success is not always



**Patrick Webb (Tufts University) offering closing reflections.**  
Credit: Adam Lowe Creative

achieved because other elements of the system in which food assistance is provided also matter. He said that we have a lot more to learn about how to help them achieve their goals, especially from the beneficiary perspective. Dr. Webb also noted that good, rigorous, evidence is clearly in high demand, from politicians, governments, institutions, and implementing agencies. He encouraged participants to view evidence as a water glass that must be constantly replenished, and it is the responsibility of all stakeholders to ensure this replenishment is achieved.

Brian Bacon (USAID/FFP) shared his closing reflections, noting that the Evidence Summit provided a unique opportunity to bring together the diverse group of stakeholders in food assistance for nutrition. While the community has made great progress, the impact of global hunger remains daunting and therefore interventions must be context adaptive in order to use resources in the most optimal way. Mr. Bacon reiterated USAID's commitment to practice based on rigorous evidence and noted that evidence generation, sharing, and collaboration have a significant impact on how the U.S. Government thinks about this problem set, identifies crucially-important questions, and ultimately devotes resources in ways that benefit the largest number of people in need.

## **Special Sessions**

### **Posters and Displays Session**

Fifteen posters and fifteen display tables were setup during the Posters and Displays Session. This session provided Evidence Summit participants with an opportunity to learn about current activities and innovations in food assistance for nutrition. Organizations and activities represented included innovations in food aid product formulations explored by the University of Illinois at Urbana-Champaign, TyraTech Inc., Kansas State University, Edesia, Tufts University, JUST Inc., MANA Nutrition and USA Rice; innovations in food aid packaging, safety and quality presented by TekPak Solutions, Fritz Water Vest, Didion Milling Inc., Greenwich University, and Global Food and Nutrition; and program and activities related to food assistance for nutrition presented by USAID, Project Concern International, FAQR, R4Act, CRS, ACIDI/VOCA, Save the Children and The Sackler Institute for Nutrition Science. The posters and displays session provided a key opportunity for networking and conversations with other participants regarding areas of mutual interest in food assistance for nutrition.

### **Emerging Evidence Lightning Talks**

This session provided an opportunity to highlight new evidence in food assistance for nutrition. Presentations were delivered through a series of short, concise presentations.

Dani Van Liefde (Washington University in St. Louis) introduced a study from a school feeding program in Ghana investigating the impact of added milk protein and micronutrients on cognition in school-age children. The study compared three different supplements, each with micronutrients and milk and/or rice protein added, against a control of just micronutrients with sugar. Results showed that children receiving the 8.8 grams of milk protein and micronutrients did demonstrate improvements on cognitive test scores and increases in fat-free mass but not in height-for-age z-scores (HAZ). The additional cost of this supplement would be \$0.06 per child within the current context of \$0.25 spent per child by the Ghanaian Government on school feeding.

Susan Roberts (Tufts University) presented test results of a novel supplementary food formulation in children aged 15 months to 7 years in Guinea-Bissau. The novel supplement emphasizes polyphenol-rich ingredients both for cognitive effects and as a source of micronutrients with the hypothesis that the new supplement will improve cognitive function as well as body composition, anemia and brain blood flow relative to traditional breakfast. This efficacy trial compared the novel supplement against SC+ and a traditional breakfast. The trial found that the novel supplement did show multiple benefits in both brain health and growth.

Andrew Seal (University College London) shared results from the Research on Food Assistance for Nutritional Impact (REFANI) study on unconditional cash transfers and malnutrition risk in three settings: Niger, Pakistan and Somalia. The study's primary question was whether or not cash-based interventions can protect nutritional status in children in crisis. The study found that diet diversity in children increased due to cash transfers but that cash and voucher transfers were only effective at reducing acute malnutrition in some contexts, with a small effect size. However, in Pakistan, they did find that cash and vouchers can increase mean HAZ and reduce stunting, with moderate effect sizes. Therefore, they concluded that cash-based interventions are a useful tool in humanitarian response but are unlikely to achieve nutrition objectives on their own. Full study results are available [here](#)<sup>8</sup>.

André Briend (University of Copenhagen and University of Tampere) presented results from the TreatFood project in Burkina Faso which looked at the impact on weight gain and hemoglobin status of corn-soy blend (CSB) versus lipid-based nutrient supplements (LNS); milk versus soy protein; and dehulled soy versus soy isolate. Findings indicated that like well-nourished children of the same age, children gained fat free mass, even when receiving LNS. Children also had a higher fat-free mass index with LNS. He indicated that concern regarding increased risk of obesity and chronic disease with food supplements including LNS in children with MAM is not supported by the data from this study. The study found no clear effect of milk compared to soy or of soy isolates compared to dehulled soy. Finally, LNS led to significantly higher hemoglobin concentration. Full study results are available [here](#)<sup>9</sup>.

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<sup>8</sup> [https://www.actionagainsthunger.org/sites/default/files/publications/REFANI\\_Synthesis\\_Report\\_online.pdf](https://www.actionagainsthunger.org/sites/default/files/publications/REFANI_Synthesis_Report_online.pdf)

<sup>9</sup> <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002387>

Steve Collins (VALID Nutrition) spoke to the importance of locally-produced supplements through results of an efficacy study of a soya, maize, sorghum (SMS) ready-to-use therapeutic food (RUTF) with amino acids made in Malawi. Results showed that the SMS RUTF had recovery rates equivalent to peanut-milk RUTF and superior anemia impact. The SMS RUTF recipe is lower cost to produce due to its use of local crops, and VALID argues that it has the added benefit of decreased environmental impact and greater sustainability due to its ability to be produced locally. Full study results are available [here](#)<sup>10</sup>.

### **Tools and Resources Roundtable**

This session featured 14 roundtables highlighting different tools/resources developed to make food assistance for nutrition more effective and cost-effective. Areas of focus include the selection of more efficient food assistance programs, improved logistics and the selection of more efficient products. Participants rotated to a different roundtable every 20 minutes and had the chance to learn about five different tools/resources and how to use them to make their work more effective. Discussions at the roundtables also focused on how to use the tool/resource, what existing needs this tool/resource addresses and how these tools and resources can be used to optimize food assistance programming from the perspective of policymakers, donors and implementing partners.

The tools/resources highlighted are listed below; additional information on each is available [here](#)<sup>11</sup>.

- FAQR Decision Support Tool
- NutVal
- WFP Fill the Nutrient Gap
- WFP SCOPE CODA
- IRC SCAN Model
- REFINE
- Nutrition Program Design Assistant & Guide to Anthropometry
- TOPS Tools
- SPRING IYCF Image Bank
- Commodity Management Toolkit
- WFP Optimus
- WFP LESS
- World Vision Last Mile Mobile Solution
- FAQR Supply Chain Optimization Tool

<sup>10</sup> <https://academic.oup.com/ajcn/article/106/4/1100/4652044>

<sup>11</sup> <https://foodaidquality.org/evidence-summit-tools-resources-booklet>

**Annex 3. Meetings and Events during the Period April 1, 2018-June 30, 2018**

Select meetings include the following:

- **CE2HA Logistics (April 9-10, 2018)**

The Cost-Effectiveness to Humanitarian Assistance (CE2HA) Workshop was hosted by USAID/FFP and IRC in April 2018. Overall, the focus was on cost efficiency and cost-effectiveness for the cash transfer modality in the humanitarian context but a few presenters also covered other modalities including in-kind food (e.g. the USAID Modality Decision Tool for Humanitarian Assistance). Attendees were from a variety of implementing partners, donors/policymakers (USAID, WFP, DFID and other UN agencies) and academia. The lessons and challenges of methods and indicators related to cost, impact and cost-effectiveness were useful to inform FAQR's cost-effectiveness work. The Cost Specialist/Data Analyst also contributed to discussions during the sessions on behalf of FAQR. A few relevant contacts were established at the workshop and some of them later presented at and attended the Evidence Summit.

- **Production and Operations Management Society (POMS) Meeting (May 4, 2018)**

The FAQR supply chain team presented high-level data findings and highlighted transfer modality options that were used in the supply chain optimization model prepared for USAID/FFP supply chain operations as part of a session entitled "Humanitarian Operations and Crisis Management." The session was attended by approximately 25 people.

- **U.S. Army Natick Soldier Research, Development and Engineering Center (Natick Labs) Review Panel (May 8, 2018)**

The Food Matrix RA visited Natick Labs as a panelist to review and provide feedback on ten food technology-based future projects currently being planned by the Combat Feeding Directorate under the Fiscal Year 2019-2020 Early Applied Research Portfolio. Some of the ideas presented there, such as compaction technology and the study of microbiome health of warfighters could be useful in the food aid context as well.

- **U.S. Government Interagency Harmonization Meeting (May 22, 2018)**

The FAQR team hosted the U.S. Government Interagency Harmonization meeting on May 22, 2018 in Washington, D.C. For more information see the Interagency Harmonization section [on page 11 of this report](#).

- **CORE Group Global Health Practitioner Conference**

This year's Core Group Global Health Practitioner Conference had the overall theme "Community Health Action for the Humanitarian-Development Nexus." The Cost Specialist/Data Analyst presented a summary of the FAQR Decision Support Tool (now renamed to FACET), and then walked through the interactive web interface at the New Information Circuit. Potential users from a number of implementing partners and research institutes attended and provided feedback on the tool. Contact information of these potential users of the tool were collected for future follow-up. Other contacts were also established during the conference, some of which attended/presented at the Evidence Summit.

- **American Society for Nutrition (ASN) Meeting (June 9-12, 2018)**

The FAQR team participated in the 2018 American Society of Nutrition (ASN) meeting in Boston, MA. Six posters and one oral presentation were given.

*Oral Presentation:*

- Comparative Effectiveness and Cost-Effectiveness of Four Supplementary Foods in the Prevention of Stunting and Wasting in children 6-23 months in Burkina Faso

*Posters:*

- [A Mobile Data Collection Tool Using Android Tablets for In-Home Observations in Sierra Leone Improves Data Quality<sup>12</sup>](#)
- [Behaviors Surrounding Ration Use in a Blanket Supplementary Feeding Program in Burkina Faso<sup>13</sup>](#)
- [Formative Research to Tailor Counseling Messages for a Supplementary Feeding Program in Sierra Leone Reveals Link Between Knowledge, Social Stigma and Recipe Adherence<sup>14</sup>](#)
- [Community Cluster Approach: Its Added Value in Surveys Conducted at Rural Community Level<sup>15</sup>](#)
- [Evaluating Opportunity Cost of Caregivers' Time and its Impact on Comparative Cost-Effectiveness of Supplementary Foods to Prevent Child Undernutrition in Burkina Faso<sup>16</sup>](#)
- U.S. Food Safety Modernization Act Standards Now Being Applied to Food Aid Products for Nutrition and Humanitarian Response

- **Meeting with Washington University in St. Louis on Sierra Leone Four Foods Study (June 12, 2018)**

On June 12, the Washington University in St. Louis Co-PI and research team; Tufts University PI and research team; and a representative from Caritas Bo met to discuss progress of the Four Foods Treatment Study and to begin planning for study closeout and dissemination activities. The low rates of MAM in Pujehun District continue to affect overall enrollment pace. The Body Composition and EED sub-studies will phase down and be closed out of field operations by September 12, 2018. The Neurocognitive sub-study will continue to enroll and collect data on participants until October 26, 2018. The Main Study will continue to enroll beneficiaries until September 1, 2018 with the last child expected to exit no later than November 24, 2018. All field operations in Sierra Leone are expected to close by December 22, 2018. Generally, the teams agreed that operations are on track and that dissemination activities and dates will need to be discussed in more detail following closeout of field operations in December.

<sup>12</sup> <http://foodaidquality.org/sites/default/files/publications/ASNposterMobileData.pdf>

<sup>13</sup> <http://foodaidquality.org/sites/default/files/publications/ASNposterBurkinaRationUseBehaviors.pdf>

<sup>14</sup> [http://foodaidquality.org/sites/default/files/publications/ASN%20Poster\\_SBCC.pdf](http://foodaidquality.org/sites/default/files/publications/ASN%20Poster_SBCC.pdf)

<sup>15</sup> <http://foodaidquality.org/sites/default/files/publications/CommunityClusterASN.pdf>

<sup>16</sup> <http://foodaidquality.org/sites/default/files/publications/ASN2018OpportunityCost.pdf>

## Annex 4. REFINE Twitter and Website Analytics

@REFINEnutrition Twitter Analytics for this quarter:

Total Followers: 251

	Tweets <sup>17</sup>	Retweets <sup>18</sup>	Likes <sup>19</sup>	Link Clicks <sup>20</sup>	Tweet Impressions <sup>21</sup>
<b>April</b>	12	2	8	14	4,874
<b>May</b>	1	1	2	1	2,019
<b>June</b>	32	67	111	47	17,500
<b>TOTAL</b>	45	70	121	62	24,393

www.refinenutrition.org Google Analytics for this quarter:

	Total Number of Sessions <sup>22</sup>	New Sessions <sup>23</sup>	Average Pages Per Session <sup>24</sup>
<b>April</b>	147	27	1.41
<b>May</b>	84	102	1.53
<b>June</b>	243	282	1.99
<b>TOTAL</b>	474	411	1.81
<b>January-March 2018</b>	322	242	2.41
<b>Change from last quarter</b>	+40.7%	+119.4%	-2.5%

<sup>17</sup> "Tweet:" A posting made on Twitter.

<sup>18</sup> "Retweet:" A repost or forwarding of a tweet.

<sup>19</sup> "Like:" An appreciation of a Tweet.

<sup>20</sup> "Links Clicked:" The total number of clicks on a URL in a tweet.

<sup>21</sup> "Impressions:" The total number of account Twitter streams a Tweet was delivered to.

<sup>22</sup> "Session:" A user's interaction on the site from the time a user logs onto the site until they are inactive on the site for 30 minutes.

<sup>23</sup> "New Session:" A user's first visit to the site during that period of Google analytics.

<sup>24</sup> "Average Pages Per Session:" Average number of pages visited by a user during one session.

## Annex 5. FAQR Twitter and Website Analytics

@foodaidquality Twitter Analytics for this quarter:

Total Followers: 164

	<b>Tweets<sup>25</sup></b>	<b>Retweets<sup>26</sup></b>	<b>Likes<sup>27</sup></b>	<b>Link Clicks<sup>28</sup></b>	<b>Tweet Impressions<sup>29</sup></b>
<b>April</b>	4	10	26	13	3,859
<b>May</b>	3	8	17	27	5,209
<b>June</b>	48	48	121	70	25,100
<b>TOTAL</b>	55	66	164	110	34,168

www.foodaidquality.org Google Analytics for this quarter:

	<b>Total Number of Sessions<sup>30</sup></b>	<b>New Sessions<sup>31</sup></b>	<b>Average Pages Per Session<sup>32</sup></b>
<b>April</b>	416	252	2.37
<b>May</b>	555	352	2.28
<b>June</b>	929	542	2.26
<b>TOTAL</b>	1,900	1,146	2.30
<b>January-March 2018</b>	855	482	2.76
<b>Change from last quarter</b>	+122%	+138%	-16.6%
<b>January 2017-June 2018</b>	4,099	2,635	2.36

<sup>25</sup> "Tweet:" A posting made on Twitter.

<sup>26</sup> "Retweet:" A repost or forwarding of a Tweet.

<sup>27</sup> "Like:" An appreciation of a tweet.

<sup>28</sup> "Links Clicked:" The total number of clicks on a URL in a Tweet.

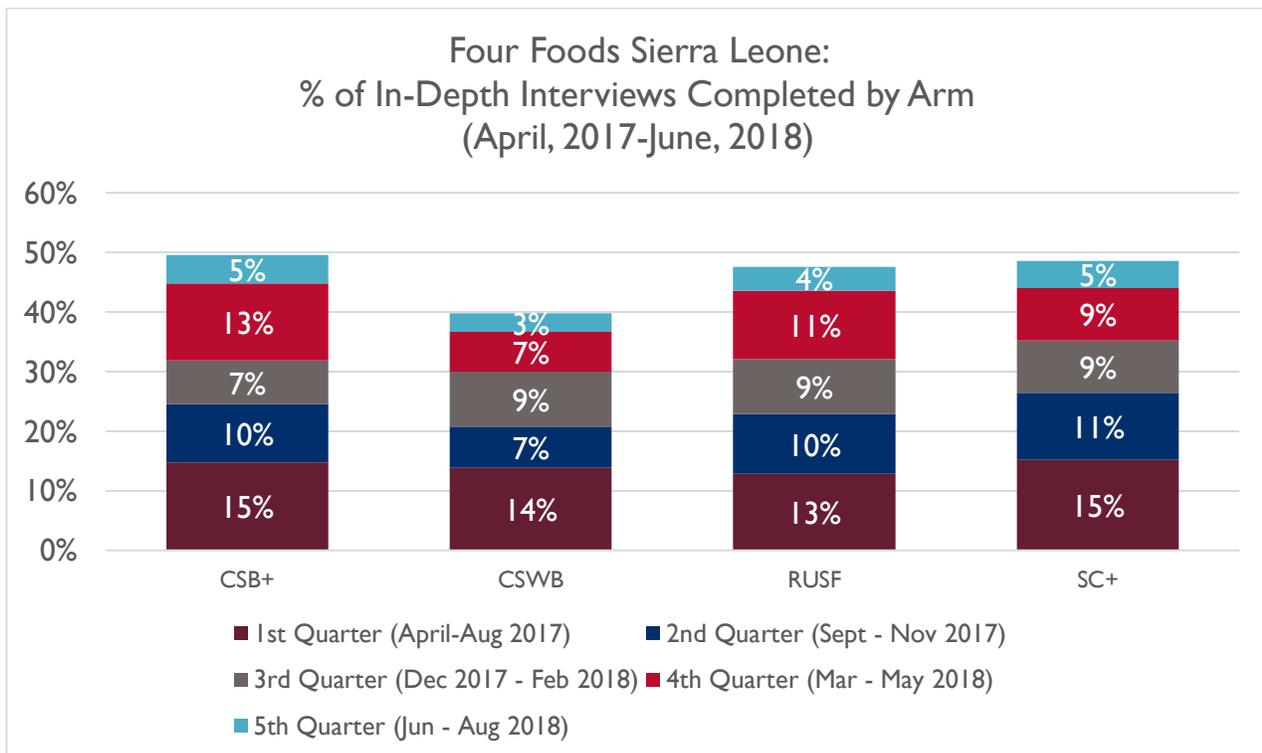
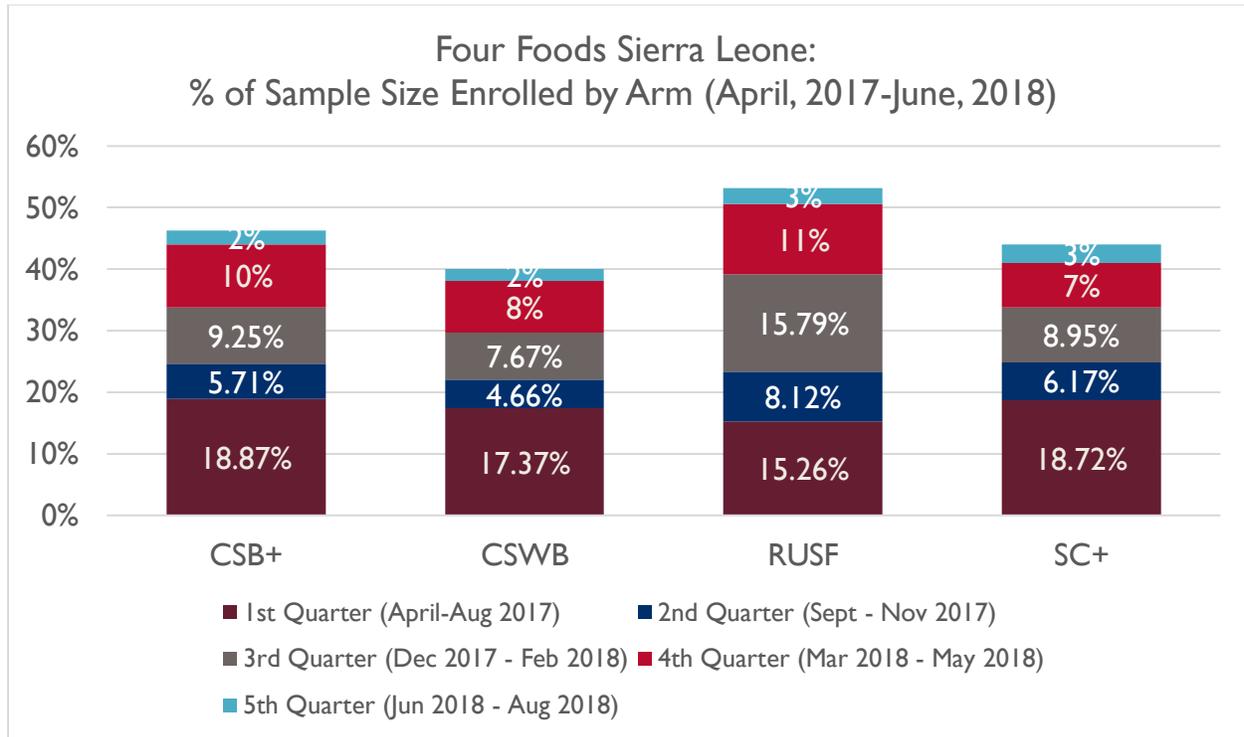
<sup>29</sup> "Impressions:" The total number of account Twitter streams a tweet was delivered to.

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

<sup>31</sup> "New Session:" A user's first visit to the site during that period of Google analytics.

<sup>32</sup> "Average Pages Per Session:" Average number of pages visited by a user during one session.

**Annex 6. Four Foods Study Sierra Leone Enrollment Figures**



## Annex 7. Proposal Questions for Existing Products (of existing foods & packaging) USDA/USAID Interagency Approval Process

I. Opening
<p>Thank you for your interest in U.S. Government food aid programs. This proposal should be completed by vendors who are interested in supplying:</p> <ol style="list-style-type: none"> <li>1. Packaging in accordance with an existing product specification, found in the <a href="#">Food Aid Product Information Guide</a></li> <li>2. Food products with defined product specifications, found in the <a href="#">Food Aid Product Information Guide</a></li> </ol> <p>To be considered, you must complete the remainder of this proposal. Please note:</p> <ul style="list-style-type: none"> <li>➤ Any information shared in this submission will be kept confidential.</li> <li>➤ The U.S. Government is under no obligation to use the product being submitted for consideration. Any investment made by prospective suppliers or interested companies to complete this form is made at the will of the company.</li> </ul>
II. Contact (4)
1. Name of prospective vendor/company
2. Name of contact person for this application
3. Phone Number
4. Email
III. Product Information (5)
1. Are you already a registered vendor with the USDA Agricultural Marketing Service (AMS)? (Yes/No)
2. What product are you proposing to supply? (If you would like to supply more than one product, you must submit separate proposals for each product)
3. Are you able to supply this product in compliance with USAID Commodity Specifications or USDA Commodity Document Requirements? (Yes/Other)
4. Are all of the ingredients in the product 100% grown in the United States?
5. Are all of the ingredients in the product 100% processed in the United States?
What additional information would you like to share?
By submitting this proposal, I agree that the entity proposing the product is willing and able to comply with legal requirements imposed on USAID, and is willing to be audited by USDA or any contracted parties.
Preview Before Submit
Submit: Your submission has been received and will be reviewed. You will be contacted if your product warrants further consideration. If you have questions, please contact the Program Operations Division of USAID.

## Annex 8. Proposal Questions for Novel Products USDA/USAID Interagency Approval Process

### IV. Opening

Thank you for your interest in U.S. Government food aid programs. Before you contact us, we'd like to clarify some important basic requirements:

- Food products are procured from food vendors registered with the USDA Agriculture Agricultural Marketing Service (AMS). You can check if you are registered or start the process for registering [here](#).
- Food products must be 100% grown and processed in the United States or its territories, with limited exceptions.
- Food products are suitable for consumption by nutritionally vulnerable individuals, including undernourished to healthy children and women (including pregnant women).
- Food products require few materials for preparation, including little to no potable water.
- Products must be produced in FDA or USDA licensed and approved commercial manufacturing facilities that possess a variety of food safety certifications, including GMP and HACCP.

If you agree with our focus and can meet our basic requirements, we would like to hear from you. Proposal Form >>

### V. Instructions

To be considered, you must complete the remainder of this proposal. Please note:

- Any information shared in this submission will be kept confidential.
- The U.S. Government is under no obligation to use the product being submitted for consideration. Any investment made by prospective suppliers or interested companies to complete this form is made at the will of the company.

### VI. Contact (4)

1. Name of prospective vendor/company
2. Name of contact person for this application
3. Phone Number
4. Email

### VII. Product Information (5;3)

1. What type of product are you proposing?
  - a. a food formulation or whole product NOT currently used in USAID or USDA operations (i.e. micronutrient sprinkles, blended food with premix, etc.)
  - b. a packaging technology NOT currently used in USAID or USDA operations
  - c. Other: \_\_\_\_\_

3. Please explain in 5-6 sentences: How will this product meet the needs of the U.S. Government's food assistance activities?

4. Please explain in 5-6 sentences: How does this product add to the portfolio of U.S. food aid products?

**(IF THE PROPOSAL IS FOR PACKAGING, the following questions are hidden)**

**(IF THE PROPOSAL IS FOR A FOOD FORMULATION, the following questions are visible in a different order)**

2. Can you guarantee that your product is fit for consumption at the end of 18 months? (Yes/No)

5. Are you already a registered vendor with the USDA Agricultural Marketing Service (AMS)? (Yes/No)
<b>VIII. Performance &amp; Safety Information (9;1)</b>
1. What changes would manufacturers need to make to production lines to incorporate this product? <b>(IF THE PROPOSAL IS FOR PACKAGING, the following questions are hidden)</b> <b>(IF THE PROPOSAL IS FOR A FOOD FORMULATION, the following questions appear)</b>
2. What is the minimum and maximum order capacity of the product that you can accommodate?
3. What is the best estimate of expected production time from order to production?
4. If 15 metric tons of the product were purchased today, what is your best estimate of the price range for this purchase (in \$ per ton)?
5. If 100 metric tons of the product were purchased today, what is your best estimate of the price range for this purchase (in \$ per ton)?
6. What type of shelf-life studies have you performed on the product? (Real time/accelerated/other)
7. Is the product shelf-stable through at least 110 degrees Fahrenheit and 50% humidity for at least 9 months? (Yes/No/Other)
8. What is the water activity of the product?
9. Please describe any known antinutrients or contaminants contained in this product.
<b>Performance &amp; Safety Information that should be provided at a follow-up meeting:</b>
1. In what cities is/are the factories that will manufacture the product?
2. Please have a HACCP plan for the proposed product ready for inspection
3. What are the toxin levels of the proposed product?
4. What are the chemical and physical characteristics of the proposed product?
5. What is the shelf life of the product (in months)?
6. Please share any reports or documentation on product shelf-life
7. What is the Bostwick Flow Rate of the prepared product at 45 degrees Celsius at the proposed preparation dosage?
<b>IX. Packaging Information (2;4)</b>
<b>IF THE PROPOSAL IS FOR A FOOD FORMULATION</b>
1. Do you intend to supply the product in packaging? (Yes/No)
1 (yes). Please explain in 3-5 sentences how your product is packaged.
2. How is the refuse from the product managed?
<b>IF THE PROPOSAL IS FOR PACKAGING</b>
1. What materials is the product packaging composed of?
2. What are the dimensions of the packaging/packaged product?
3. What other packaging dimensions would be possible to produce?
4. What is the weight (in grams or kilograms) of the packaged product?
<b>Packaging Information that should be provided at a follow-up meeting:</b>
1. Can the following information be included on the product's packaging, as required by USAID? Name of product, USAID logo, net content, contract number, batch number, manufacturing date, "Best if used by" date, a pictorial representation of how to prepare the product, storage instructions, ingredient list
2. Attach any reports on packaging durability
3. Is the packaging biodegradable?
4. Is the packaging reusable?
5. Is the packaging recyclable?
6. What materials is the product packaging composed of?
7. What are the dimensions of the packaged product?
8. What other packaging dimensions would be possible to produce for this product?
9. What is the weight (in grams or kilograms) of the packaged product?

10. Has the durability of the product packaging been tested?
11. How is the refuse from the product managed?
<b>X. Nutrition Information (7;0)</b>
<b>(IF THE PROPOSAL IS FOR PACKAGING, this section is hidden)</b>
<b>(IF THE PROPOSAL IS FOR A FOOD FORMULATION, the following questions appear)</b>
1. Is the product fortified with a fortification premix? (Yes/No)
2. What consumer group is this product intended for?
3. What is the serving size or dosage in grams?
4. What is the serving size or dosage in kilocalories?
5. What is the serving size or dosage in mL?
6. What is the energy density of the prepared product (in kcal/gram)?
7. Have trials been performed to evaluate this product's efficacy or effectiveness for outcomes relating to nutritional status? (Yes/No)
<b>Nutrition Information that should be provided at a follow-up meeting:</b>
1 (yes). Be prepared to share a table of the content of the fortification premix
2. Please provide the nutrient content of the product:
3. What is the product's Protein Digestibility Corrected Amino Acid Score (PDCAAS)?
4. What is the products Digestible Indispensable Amino Acid Score (DIAAS)?
5 (yes). Be prepared to share trial reports of product efficacy or effectiveness
6. Please share any peer-reviewed publications on this product
<b>XI. Programming Information (5;0)</b>
<b>(IF THE PROPOSAL IS FOR PACKAGING, this section is hidden)</b>
<b>(IF THE PROPOSAL IS FOR A FOOD FORMULATION, the following questions appear)</b>
1. How is this product prepared?
2. Does the product have any special transportation or storage needs? (Yes/No)
3. Please describe any special transportation or storage needs
4. What is known about the acceptability of the products sensory characteristics (i.e. taste, texture, smell, etc.)?
5. What is known about the product's social or cultural acceptability?
<b>Programming Information that should be provided at a follow-up meeting:</b>
1. What materials (i.e. pots, kerosene, wooden spoon) are needed to prepare this product?
2. If cooked, what is the total cooking time of the product?
3. How much potable water is needed to prepare the product?
4. Attach any reports on the product's sensory characteristics
5 Attach any reports on product social or cultural acceptability testing
6. How much fuel is needed to prepare the product?
<b>XII. Comments</b>
What additional information would you like to share?
By submitting this proposal, I agree that the entity proposing the product is willing and able to comply with legal requirements imposed on USAID, and is willing to be audited by USDA or any contracted parties.
Preview Before Submit
Submit: Your submission has been received and will be reviewed. You will be contacted if your product warrants further consideration. If you have questions, please contact the Program Operations Division of USAID.