Food Aid Quality Review Phase III:
Quarterly Technical Report No. 19

July 2020-September 2020

Acronyms

BHA	Bureau for Humanitarian Assistance (USAID)
CIRBPR	Commodity Incident Reporting Business Process Review (FAQR)
DFSA	Development Food Security Activity (USAID)
FACET4SNF	Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods
FAQR	Food Aid Quality Review
FBF	Fortified Blended Food
FY 2020	Fiscal Year 2020
HHL	Health and Humanitarian Logistics
INFORMS	Institute for Operations Research and the Management Sciences
L&D	Loss and Damages
M&E	Monitoring and Evaluation
MAM	Moderate Acute Malnutrition
MUAC	Mid-Upper Arm Circumference
NGO	Non-Governmental Organization
PI	Principal Investigator
REFINE	Research Engagement on Food Interventions for Nutritional Effectiveness
SNF	Specialized Nutritious Food
SNFP	Specialized Nutritious Food Product
UN	United Nations
URL	Uniform Resource Locator
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WBSCM	Web Based Supply Chain Management
WFP	World Food Programme
WHZ	Weight-for-Height Z-Score

Food Aid Quality Review Phase III:
Quarterly Technical Report Summary

I. Summary

Covering the fourth quarter of Fiscal Year 2020 (hereafter FY 2020), this report documents the progress of the Food Aid Quality Review (FAQR) project overall, as well as detailing outputs and impacts of FAQR Phase III work.

Since its inception, the goal of the FAQR project has been 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. 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.

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

A. The commodity incident reporting business process review team engaged in a review of recent United States Agency for International Development (USAID) loss and damage incidents, conducted a series of key informant interviews, and began mapping the associated business process and drafting a final recommendations report.

B. Supply chain optimization team members made important progress and presented their latest updated findings in a series of presentations related to their FAQR work, and they participated in a panel at the virtual Health and Humanitarian Logistics 2020 Conference.

C. The FAQR decision support tool was rebranded as the Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF). An official launch of the tool was planned for October 20, 2020, the user manual was finalized, and a promotional video was produced.

D. The field study data mining team concluded several analyses related to quality of programming, care, and child growth, and presented interim results to members of the USAID Bureau for Humanitarian Assistance (BHA) team.

E. The BHA monitoring and evaluation data harmonization team received several more datasets and reporting documents, started the data pooling process, conducted preliminary analyses of the pooled data, and began working on a final report.

F. The Research Engagement on Food Interventions for Nutritional Effectiveness (REFINE) open-data study team collected 15 relevant datasets relating to research articles included in the REFINE database, conducted a thorough review of these data, and commenced work on a final recommendations report outlining the challenges in obtaining usable, open-access data and pooling these data due to their inherent heterogeneity and inconsistent availability of documentation.

G. The FAQR team continued planning *The Future of Food Assistance for Nutrition: Evidence Summit II*, including developing a virtual event platform, advertising the Summit, and lining up an impressive series of speakers from a wide variety of organizations around the world.

H. The REFINE team updated the search terms used to identify published studies and ongoing trials related to food assistance for nutrition research for inclusion in the REFINE database to ensure that it continues to be a comprehensive source of new evidence.

FAQR Manuscript Published during the Period July 1, 2020-September 30, 2020

Cliffer, Ilana R., William A. Masters, and Beatrice L. Rogers. Fortified blended flour supplements displace plain cereals in feeding of young children. *Maternal & Child Nutrition*, 2020; e13089. https://doi.org/10.1111/mcn.13089

II. Key Activities for the Period July 1, 2020-September 30, 2020

The activities listed below are selected to showcase some of the accomplishments of the past quarter. All workstreams had ongoing activities during this quarter.

A. Commodity Incident Reporting Business Process Review

The commodity incident reporting business process review (CIRBPR) team continued reviewing the 25-plus loss and damage (L&D) incidents shared by USAID, as well as additional relevant incidents:

(1) Incident Review – Deep Dive into USAID L&D Incidents: The CIRBPR team continued to conduct a thorough review of relevant emails, documents, survey reports, and photos to identify unique or recurring issues. Using these as trigger points, the team took a deeper dive into the most significant cases to seek insight into the process and steps for their reporting and resolution with an eye towards developing key recommendations for improving this process.

(2) Key Informant Interviews to Probe into Issues and Analyze the Business Process: The bulk of the key informant interviews were conducted during the fourth quarter. The team discussed emerging questions, issues, and/or findings with the United States Agency for International Development's Bureau for Humanitarian Assistance (USAID/BHA) team during bi-weekly meetings and in separate interviews with key points of contact along the business process, including the U.S. Department of Agriculture (USDA), the World Food Programme (WFP), suppliers, and freight forwarders, as appropriate. The interviews with key informants were conducted under complete confidentiality to allow for more open and direct discussion.

(3) Mapping the Business Process: Based on the incident review and key informant interviews, the team started to bring together the pieces of the process in order to map the incident reporting and resolution process and identify points where it fits into the procurement and supply systems of the two agencies involved in the U.S. Government's food assistance supply chain (USAID and USDA). The team delved into the Web Based Supply Chain Management (WBSCM) complaints system used by USAID and USDA for procurement and WFP's process for L&D incident reporting, which is embedded in its food safety and quality system. Both systems have key elements that could be adapted or embedded in USAID's business process.

(4) Drafting Report: The team began drafting a final recommendations report.

B. Supply Chain Optimization Team Participation in HHL 2020 Conference

The FAQR supply chain optimization team participated in the Health and Humanitarian Logistic (HHL) 2020 Conference that took place virtually between September 29 and October 1, 2020, making a pair of oral presentations and presenting a poster. Ozlem Ergun made a presentation titled "Enhancing the Effectiveness and Efficiency of Food Assistance Supply Chains," which focused on highlights of the supply chain economic optimization workstream and emphasized recent modeling results associated with global warehouse locations and inventory pre-positioning. Stephen A. Vosti served as a panelist in the session on "Disasters & Development – Market System Analysis." Keziban R. Tasci presented a poster titled "Enhancing the Effectiveness and Efficiency of Food Assistance Supply Chains: An Economic Optimization Model for USAID Food for Peace Program's Operations in Ethiopia," which summarized the methods and results of the Ethiopia – Somali region case study.

C. FACET4SNF Promotional Video and Launch Planning

Following discussions with USAID/BHA, it was decided that the FAQR decision support tool would be rebranded as the Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF) to Support Programming Decisions. This change is intended to clarify that the tool was developed to be used in food assistance for nutrition programs employing specialized nutritious foods.

The FACET4SNF interface, a two-page, visual quick-reference guide, and the user manual were finalized during this quarter and updated to reflect the new branding for the tool. The URL for the interface transitioned to http://facet4snf.org/ and the shinyapps.io account hosting the online interface was upgraded to the professional plan to accommodate additional users. The FACET4SNF team continued to support the USAID information technology team on issues related to transferring and hosting the tool.

The FAQR communications and FACET4SNF teams produced a promotional video to provide an overview of the FACET4SNF tool with an emphasis on its value-added. The promotional video explains the benefits of using the tool and how it can support users making decisions on nutrition programs using SNFs. This video will debut at *The Future of Food Assistance for Nutrition: Evidence Summit II* during the Tools and Resources Marketplace session. It will be available for future dissemination purposes.

The official FACET4SNF Launch was scheduled for October 20, 2020. The FAQR communications team began working with the FACET4SNF team to plan the event, including determining the appropriate virtual platform, initiating a registration process, and advertising it through mailing lists, social media, and at the Evidence Summit.

D. Field Study Data Mining

The field study data mining team concluded various analyses during the final quarter of FY 2020 and presented interim results to members of the USAID/BHA team on September 8, 2020. The

presentation began with an overview of the field studies, which originated in FAQR Phase II and were designed to test the effectiveness and cost-effectiveness of recommended changes to commonly programmed food commodities for use in prevention and treatment programs. These studies were conducted in Burkina Faso and Sierra Leone.

The data mining activity for the field studies is divided into three themes: i) quality of programming, ii) quality of care, and iii) child growth. Preliminary results show distinct differences between children who graduated and those who were unresponsive to treatment or whose condition deteriorated, characterized by morbidity at enrollment and at exit and perhaps poor care and sanitation practices. In addition to completing the analyses, the team also agreed on the outline for the final report.

Related to the quality of programming theme, analysis of the sensitivity and relative specificity of mid-upper arm circumference (MUAC) compared to weight-for-height z-score (WHZ) was completed for both the Sierra Leone and Burkina Faso datasets to assess the degree to which children diagnosed with MAM by MUAC would be so diagnosed using WHZ. Analysis of potential influencing factors with regard to recovery and relapse was also completed using the in-depth interview datasets for Sierra Leone, as was analysis of clinical factors influencing responsiveness to the supplementary foods.

Related to the quality of care theme, preliminary analysis of the in-home observation qualitative notes from Burkina Faso and Sierra Leone revealed several key behaviors related to household water, sanitation, and hygiene practices and infant and young child feeding and care. Handwashing was observed to be uncommon among adults but, if occurring, was often done during food preparation, typically without soap. Ash was sometimes used as a replacement for soap, if soap was not available. Children's hands might be washed if they were going to eat or if they made a big mess, but, overall, limited child handwashing was observed during their daily activities.

Related to the child environment, children were frequently observed playing by themselves while seated on a dirt floor, mouthing household objects and toys that were in frequent contact with dirt or with domestic animals, and were observed consuming dirt and animal feces. Frequent presence of domestic animals (e.g. dogs, small livestock) around the children was commonly observed in Burkina Faso. The primary caregivers were the children's mothers and other adult women; caretaking practices included feeding, bathing, or playing with the children. Child diets were largely composed of staple grains, although fruits, vegetables, and animal-sourced proteins were also present in the typical diets of children. In both countries, the study foods were largely consumed when provided to the children. The beneficiary child's study food leftovers were occasionally shared with siblings or other family members. Qualitative analyses are ongoing, and all findings will be described in the final report.

Finally, progress was made on the theme of child growth velocity. The work consisted of methods research, data cleaning and analysis, and the first draft of a manuscript on longitudinal timing of growth faltering is in preparation. These analyses indicate that children in the lowest centiles of height for age were always growing at a slower rate than children in higher centiles, and they demonstrated more heterogeneity in growth curves than anticipated.

E. BHA Monitoring and Evaluation Data Harmonization

By mid-August, the FAQR team received baseline and end-line datasets and associated codebooks, evaluations, proposals, and annual reports for 12 DFSA projects implemented in Guatemala, Madagascar, Malawi, Niger, Uganda, and Zimbabwe. The pooling process began with an extensive review of all project datasets to identify variables for inclusion in the final, pooled datasets. By September, pooling of baseline and end-line child health and nutrition datasets was completed, and preliminary analyses on pooled prevalence of stunting, wasting, and underweight data had also been conducted. The team also began work on the preliminary draft of the final report.

F. REFINE Open-Data Study

The FAQR team identified 179 published scientific articles archived on the Research Engagement on Food Innovation for Nutritional Effectiveness (REFINE) repository between June 2015 and June 2020. After reviewing each study mention of data availability and reaching out to corresponding authors to confirm open accessibility of datasets, the team located 15 publicly available datasets. A detailed review of these datasets and accompanying documentation was conducted. The contents of the datasets and respective study designs were compared. This analysis revealed that the datasets and their accompanying studies (study design, variables measured) were sufficiently heterogeneous that creating a substantial pooled dataset from these data was not feasible. The final report for this activity will outline challenges associated with the open accessibility of datasets from food assistance for nutrition studies, comment on the heterogeneity of variables collected for similar outcomes, and will provide recommendations for data sharing best practices.

G. Evidence Summit II Planning

During the fourth quarter, the FAQR team continued planning for *The Future of Food Assistance for Nutrition: Evidence Summit II* scheduled to take place live online October 5-8, 2020. Activities included finalizing the event agenda, developing a virtual event platform, opening up registration, and advertising the event through multiple platforms to ensure ample turnout, including social media using #Evidence4Nutrition2, the FAQR mailing list, and the mailing lists of partner organizations. The FAQR team also confirmed 103 individual speakers, moderators, Q&A leaders, and poster session presenters representing a wide range of academic institutions, international organizations, non-governmental organizations (NGOs), research institutes, and the private sector to participate from all over the world. The Summit will showcase new findings from international studies covering key food assistance for nutrition themes, including the impacts of pandemics and other disease outbreaks on programming and supply chain logistics, recent advances in science related to nutrition and specialized nutritious food products, and what we still need to know to improve programming.

H. REFINE Search Term Update

To ensure that REFINE continues to serve as a useful repository for the wide variety of food assistance for nutrition research being conducted around the world, the FAQR team conducted a review of the keywords associated with recent food assistance for nutrition publications and ongoing trials to determine whether the search terms used to identify appropriate resources to add to the REFINE database each month needed to be updated. As a result of this review, several additional search terms and abbreviations for existing search terms were added to the monthly search conducted of PubMed and other research databases to identify new resources to add to REFINE. These search terms included severe and moderate acute malnutrition, low birth weight, nutrition intervention, ready-to-use therapeutic food, complementary food, micronutrient supplement or powder, and associated acronyms. The REFINE search terms for ongoing trials and published studies will continue to be evaluated and updated on a regular basis so that REFINE will continue to expand and evolve in parallel with international food assistance for nutrition research.

III. Plans for the Coming Quarter (October 2020-December 2020)

The matrix below highlights some of the key planned activities for the coming quarter.

A. Commodity Incident Reporting Business Process Review

• Commodity Incident Reporting Business Process Review:
   ○ Conduct final key informant interviews and review of any additional incidents.
   ○ Finalize and submit report laying out the current commodity incident reporting process and highlighting any gaps or other issues identified during the research phase, including recommendations for how USAID/BHA can improve this process based on the key informant interviews and reviews of the incident reporting processes used by other humanitarian organizations and private sector partners.

B. Supply Chain Optimization

• Scenario Building and Analysis:
   ○ Improve global warehouse and inventory positioning model network by using more realistic warehouse data and adding new commodities to the supply chain operations in the scenario.
   ○ Continue to build scenario-based, stochastic planning algorithms to include emergency onset demand into the global warehouse network.
   ○ Finalize East African port study, including Ethiopia, South Sudan, Somalia, Sudan, and Kenya.
   ○ Share findings and insights from the global warehouse study with USAID/BHA.
• Demonstration Model and Tool Development:
   ○ Begin to add more data visualization functionality to the existing supply chain optimization demonstration model.

- o Share sample tool with USAID/BHA systems support team to verify policy requirements.
- o Begin drafting user manual for demonstration model.
- o Present overview of work at *The Future of Food Assistance for Nutrition: Evidence Summit II* and the Institute for Operations Research and the Management Sciences (INFORMS) 2020 Annual Meeting.

C. Cost-Effectiveness

- Food Assistance Cost-Effectiveness Tool for Specialized Nutritious Foods (FACET4SNF):
  - o Work with USAID/BHA to prepare for the FACET4SNF launch and to plan subsequent training sessions.
  - o Continue to develop demonstration case studies and training materials.
  - o Finalize knowledge transfer and trainings in preparation for handover of FACET4SNF to USAID/BHA.

D. Data Mining

- FAQR Field Study Data Mining Activity:
  - o Draft report(s) describing findings.
- BHA/M&E Data Harmonization Activity:
  - o Create baseline and end-line pooled datasets for household data and for women's health/nutrition technical sector.
  - o Conduct preliminary analyses of the pooled datasets.
  - o Finalize report/manuscript detailing data harmonization process, preliminary data analyses, and recommendations for further analyses of pooled datasets.
  - o Present progress update of findings to USAID/BHA and partners.
- REFINE Open-Data Study Activity:
  - o Finalize report outlining process of locating open-access datasets from REFINE studies, challenges that prevented pooling, and recommendations for streamlining policies and procedures for open data for food assistance for nutrition research.
  - o Present progress update of findings to USAID/BHA and partners.

E. Interagency Harmonization

- Domestic Interagency Technical Working Group on Food Assistance Quality:
  - o Work with USAID/BHA and planning committee to organize a final meeting to highlight updates from working group members on product specifications, packaging, food safety and quality assurance measures, and research, as well as to discuss next steps for sustaining collaboration.
  - o Complete and submit sustainability report to document collaboration and achievements of working group to date and provide recommendations for sustaining efforts going forward.

- International Inter-Agency Working Group for SNFPs:
  - Continue holding regular calls to encourage collaboration on priority areas related to programming, food safety and quality assurance, and traceability of specialized nutritious food products.
  - Continue discussion of secretariat transition with working group members.

F. Knowledge Sharing

- REFINE:
  - Disseminate quarterly Resource Review.
  - Update REFINE website with new resources on a monthly basis using the updated search terms, and regularly tweet about those resources from REFINE Twitter account.
  - Continue sustainability planning for REFINE website and updating tags for resources included in it.
- Communications:
  - Maintain and update FAQR website and Twitter account.
  - Share reports and information about events on FAQR website and Twitter.
  - Assist FAQR team members with report formatting and graphics.
  - Finalize FACET4SNF promotional video.
- *The Future of Food Assistance for Nutrition Evidence Summit II*:
  - Refine event agenda and finalize list of presenters.
  - Launch event website through WordPress with integrated Zoom webinar links.
  - Continue to promote the event on websites and through Twitter account, as well as through partner organizations.
  - Finalize materials for event, including an updated resource book.
  - Conduct *The Future of Food Assistance for Nutrition: Evidence Summit II* live online October 5-8, 2020.
  - Prepare and distribute post-event surveys in order to receive feedback from participants.
  - Make sessions recordings and presentation slides available to Summit attendees through an FAQR website.
  - Prepare a report on the event, including summaries of the sessions, data about the number of attendees and the countries from which they attended, and results of the post-event surveys.

Annex 1.
Overview of the Food Aid Quality Review (FAQR) Phase III Activities
For more information on FAQR Phase III, please visit the [FAQR website](#).

I. Background

The Food Aid Quality Review (FAQR) provides the United States Agency for International Development's (USAID) Bureau for Humanitarian Assistance (BHA) 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*. This report led to FAQR Phase II's focus on reformulating fortified blended foods (FBFs), the inclusion of lipid-based products in BHA'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*.

FAQR Phase III[1] 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 Science and Policy 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 the use of specialized nutritious foods (SNFs) for targeted nutrition goals. The work of FAQR Phase 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"[2]) 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 newly-formulated food products for the prevention and treatment of malnutrition in children.

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[1] Contract awarded to Tufts University's Friedman School of Nutrition Science and Policy for the period covering Feb. 1, 2016-Jan. 31, 2019 with two option years.
[2] 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 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 and cost-effectiveness 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 Phase III provides recommendations to USAID on institutional and industry processes for capacity building, including the institutionalization and strengthening of interagency technical collaborations and mechanisms to ensure greater policy and product harmonization domestically and internationally. This work 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 Phase III organizes its ongoing activities into the following workstreams:
(Additional information is available on the FAQR website)

A	Commodity Incident Reporting Business Process Review
B	Supply Chain Optimization
C	Cost-Effectiveness
D	Research: Data Mining
E	Interagency Harmonization
F	Knowledge Sharing

Annex 2. Meetings and Events during the Period July 1, 2020-September 30, 2020

Select meetings include the following:

- **Field Study Data Mining Progress Update (September 8, 2020)**

  FAQR team members met with USAID/BHA to provide an overview of preliminary findings from the field study data mining activity. A full description of this meeting can be found in Section II above.
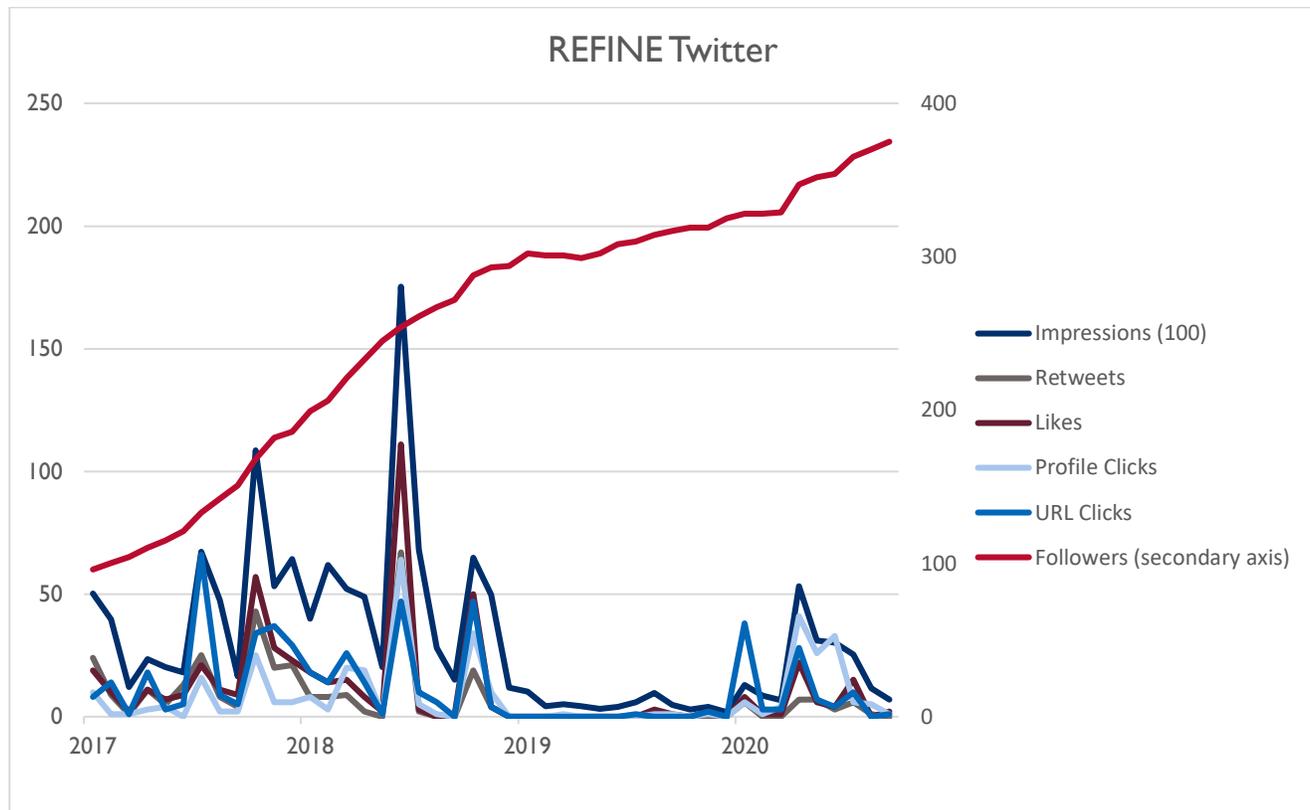
- **Health and Humanitarian Logistics 2020 Conference (September 29-October 1, 2020)**

  The FAQR supply chain optimization team participated in the HHL 2020 Conference. A full description of this meeting can be found in Section II above.

Annex 3. REFINE Twitter and Website Analytics

@REFINEnutrition Twitter Analytics (January 2017- September 2020)

Total Followers: 388

www.refinenutrition.org Google Analytics (FY2020 Q4):

	Total Number of Sessions[3]	New Sessions[4]	Average Pages Per Session[5]
July 2020	358	289	2.03
August 2020	213	173	1.73
September 2020	193	136	3.10
TOTAL	764	598	2.29
April-June 2020	865	664	3.47

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[3] "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.
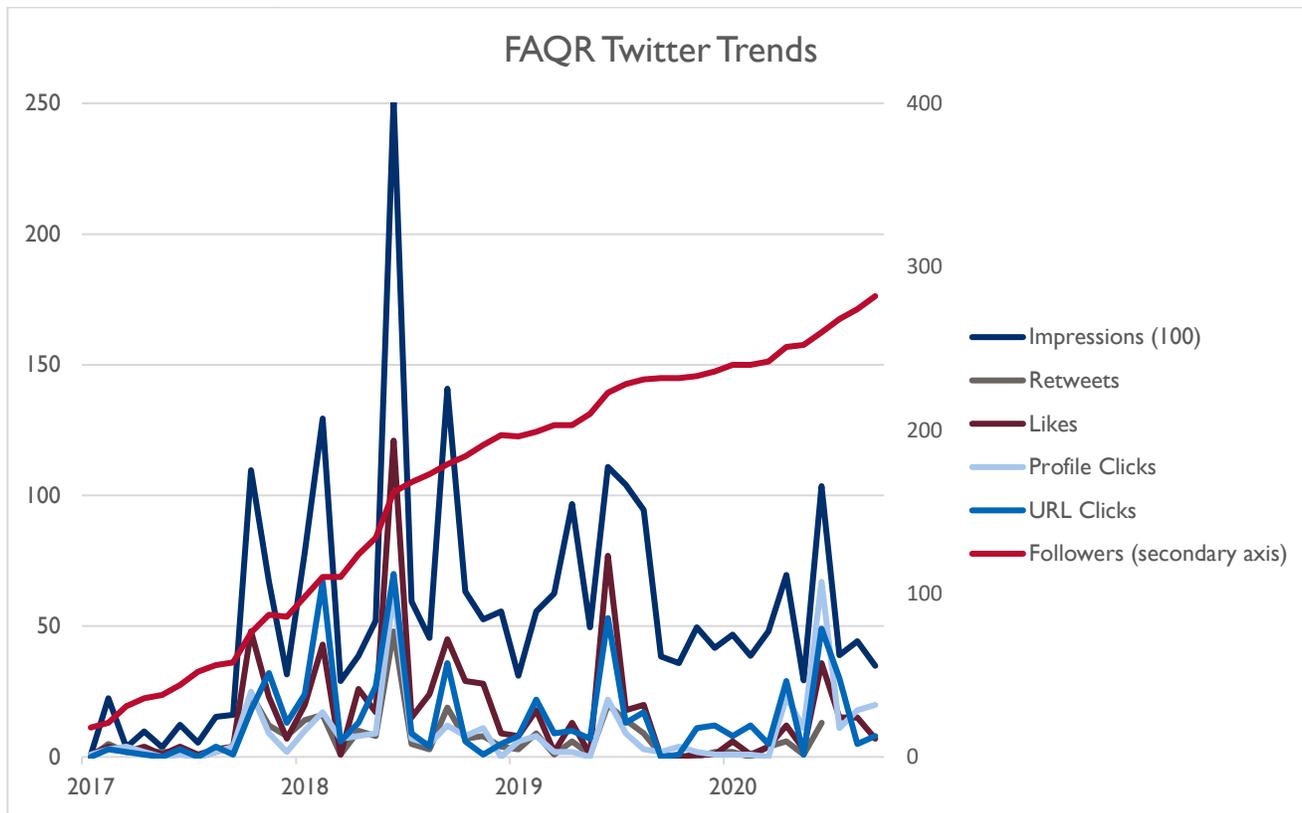
[4] "New Session:" a user's first visit to the site during that period of Google analytics.

[5] "Average Pages Per Session:" average number of pages visited by a user during one session.

Annex 4. FAQR Twitter and Website Analytics

@foodaidquality Twitter Analytics (January 2017- September 2020):

Total Followers: 309

FAQR Twitter Trends

Legend:
- Impressions (100)
- Retweets
- Likes
- Profile Clicks
- URL Clicks
- Followers (secondary axis)

www.foodaidquality.org Google Analytics (FY2020 Q4):

	Total Number of Sessions[6]	New Sessions[7]	Average Pages Per Session[8]
July 2020	424	260	3.02
August 2020	538	327	2.55
September 2020	883	536	1.81
TOTAL	1,845	1,123	2.46
April-June 2020	1,162	983	1.77
January 2017- September 2020	14,339	9,478	2.46

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[6] "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

[7] "New Session:" a user's first visit to the site during that period of Google analytics

[8] "Average Pages Per Session:" average number of pages visited by a user during one session