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SPRING TECHNICAL ASSISTANCE REPORT

Formative Research: Key Influencers of Household Food Access in the Western Highlands of Guatemala

MARCH 2015



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SPRING

Strengthening Partnerships, Results,
and Innovations in Nutrition Globally

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Food Access in the Western Highlands of Guatemala**

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ABOUT SPRING

The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project is a five-year USAID-funded Cooperative Agreement to strengthen global and country efforts to scale up high-impact nutrition practices and policies and improve maternal and child nutrition outcomes. The project is managed by JSI Research & Training Institute, Inc., with partners Helen Keller International, The Manoff Group, Save the Children, and the International Food Policy Research Institute.

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DISCLAIMER

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SPRING

JSI Research & Training Institute, Inc.
1616 Fort Myer Drive, 16th Floor
Arlington, VA 22209 USA

Phone: 703-528-7474
Fax: 703-528-7480

Email: info@spring-nutrition.org
Internet: www.spring-nutrition.org

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ACRONYMS

| | |
|----------|---|
| AGEXPORT | Asociación Guatemalteca de Exportadores |
| Anacafé | Asociación Nacional del Café |
| FFP | Food for Peace |
| FLNV | foods of low nutritional value |
| PAISANO | Programa de Acciones Integradas de Seguridad Alimentaria y Nutricional del Occidente (Program for Integrated Food Security and Nutrition Actions in the Western Highlands) |
| RVCP | Rural Value Chains Project |
| SEGAMIL | Seguridad Alimentaria en los Primeros Mil Días (Food Security in the First 1,000 Days) |
| SBC | social and behavior change |
| SPRING | Strengthening Partnerships, Results, and Innovations in Nutrition Globally |
| WHIP | Western Highlands Integrated Project |
| ZOI | zone of influence |

EXECUTIVE SUMMARY

The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project conducted formative research in August 2014 to explore factors that affect household-level food purchase and production decisions in the Feed the Future zone of influence (ZOI) of the USAID Guatemala's Western Highlands Integrated Program (WHIP). The study's findings are intended to inform and/or improve implementation strategies for strengthening household behaviors (production, purchasing, and consumption) that contribute to better nutrition. These findings are critical to supporting programming to improve year-round food access among poor, rural families. It is hoped that these findings will support achievement of USAID Guatemala's Country Development Strategy goal of reducing poverty and chronic undernutrition through the collaborative efforts of the multiple activities funded through Feed the Future, Global Health Initiative, and Food for Peace (FFP).

The SPRING project carried out the study in seven municipalities across four departments of the Western Highlands.¹ USAID implementing partners for the Rural Value Chains Project (RVCP) and for FFP activities collaborated by identifying two communities in each municipality and inviting their local activity clients to participate either in key informant interviews or in focus group discussions.² SPRING used an adaptation of the standard focus group methodology for gathering insights from participants. SPRING also conducted a rapid market survey that assessed the availability of both fresh and processed foods in local communities (shops) and markets. The market survey and focus group discussions were essential to better understand how participants' food purchase and consumption behaviors were affected by the following:

- market characteristics, including size, distance, seasonality, and prices;
- the stated roles of men and women with regard to food purchases; and
- purchasing power based on household cash flow and/or perceived increases in income from participation in Feed the Future activities.

The formative research provides several insights that could be used to develop strategies to improve food purchase and consumption/diet patterns and behaviors among target WHIP households in order to improve nutrition:

- Distance to food markets is a key factor in what families purchase, as the frequency of trips affects the types of food purchased.
- Across the target area, a wide variety of processed foods that could be considered foods of low nutritional value (FLNV) are available in shops and markets. Interviews showed that FLNV were consumed frequently (sometimes daily) by all segments of the population, including children.
- Similar to findings from FHI 360's Food and Nutrition Technical Assistance III Project's report on Optifood,³ focus group discussions revealed that participants' estimates of the cost of their weekly diet, if they were unable to produce food themselves, exceeded the cash resources they had to spend. This points to the importance of families' own food production in meeting basic needs, even among households that produce crops for export through value chain activities.

1 A municipality in Guatemala is similar to a county in the United States, and a department is similar to a US state or a Canadian province.

2 This report will refer to individuals who took part in this study as "participants." Individuals targeted by or involved in Food for Peace or the RVCP activities will be referred to as "beneficiaries," though SPRING recognizes that in practice, they are often referred to as participants, actors, or clients.

3 FANTA, *Summary Report: Development of Evidence-Based Dietary Recommendations for Children, Pregnant Women, and Lactating Women Living in the Western Highlands of Guatemala* (Washington, DC: FHI 360/FANTA, 2013), <http://www.fantaproject.org/sites/default/files/resources/Guatemala-Optifood-Summary-Oct2013.pdf>.

- Besides cost, a limiting factor in consumption of animal source foods such as fresh meat and fresh milk products is lack of refrigeration, which means that any perishable fresh food that is purchased must be consumed the same day.
- Many young couples live with their extended families, and it is usually the mother-in-law who makes all decisions about food purchases and preparation in these households.
- In some households, women who were interviewed indicated that they have autonomy in decision-making related to food purchases and seeking health care, as well as in selling small livestock they have raised.
- Both men and women had opinions about and input into how expenses from additional income should be spent, whether on food or nonfood items. Men appeared to have a higher degree of autonomy and authority in deciding matters related to crops and large livestock, while men and women agreed that decision-making related to food purchases is more often led by women.
- Men and women had different spending priorities, but gender differences related to stockpiling food or investing in livestock were nonexistent. Both men and women prioritized these as expenditures/investments.
- When prioritizing purchase of food, both men and women said that extra income would be used to buy additional staples to store, rather than to increase food diversity.
- Participants indicated that with more steady/stable income from agriculture, they might shift priorities to meet longer-term needs such as building or improving a home, saving money, buying land, or buying a vehicle to transport produce.

Key conclusions and recommendations have been developed from the findings and point to the need for a more robust behavior change strategy across the WHIP ZOI and for continued coordination and collaboration among WHIP implementing partners.

- As noted above, young mothers living with their in-laws do not have much voice in deciding what foods to purchase or feed to their family. Therefore, it is critical that social and behavior change (SBC) strategies and messages include mothers-in-law as a key constituency to ensure that changes to women's and children's diets will be made and will sustain.
- Educational messages for RVCP beneficiaries may want to promote the concept that using some of their increased income to purchase a higher-quality diet (i.e., fruits, vegetables, and animal source foods) is an important investment in their children's future.
- Families in rural communities have no way to store fresh meat or milk products and are limited to consuming them the day they are purchased at the market. This limitation needs to be considered carefully when designing nutrition messages. However, creative solutions appropriate to the local context may be possible if developed by department- or municipality-level WHIP committees with the participation of community members themselves.
- More work is needed to promote behavior change around the issue of FLNV, not only because of nutrition, but also because of the diversion of family resources. The educational approach needs to also engage mothers (and grandmothers) in assessing value per expenditure and strategizing ways to negotiate with children.

BACKGROUND

Chronic undernutrition rates in Guatemala have remained stubbornly high. With 54 percent of children under five years old being moderately to severely stunted, Guatemala has the third-highest rate of stunting in the world.⁴ For rural and indigenous children in Guatemala, stunting rates nationally are 59 percent and 66 percent respectively, while stunting rates reach even higher levels in some regions of the Feed the Future ZOI, which includes 30 municipalities in the five Western Highlands departments of Totonicapán, San Marcos, Huehuetenango, Quetzaltenango, and El Quiché.⁵ As part of its effort to confront this challenge, Guatemala is implementing a multisectoral response through its Zero Hunger Pact and as a focus country of the Feed the Future initiative, which supports a country-driven approach to address the root causes of poverty, hunger, and undernutrition.

The two objectives of the Feed the Future initiative are inclusive agriculture sector growth and improved nutritional status of women and children. USAID is currently implementing approximately 19 separate activities in Guatemala that focus on nutrition, health, value chains, food security, family planning, democracy and governance, and education.

The Feed the Future initiative in Guatemala has adopted a value chain approach to move people out of poverty by improving their incomes and access to food. Complemented by activities that provide improved access to health services, access to potable water, and comprehensive hygiene and nutrition education, the income-generating value chain activities are expected to result in improved nutrition for the targeted population. The correlation between income and nutrition, however, is not always strong or inevitable. Hence, there is a need to identify additional avenues through which Feed the Future value chains can positively impact women's and children's nutrition.

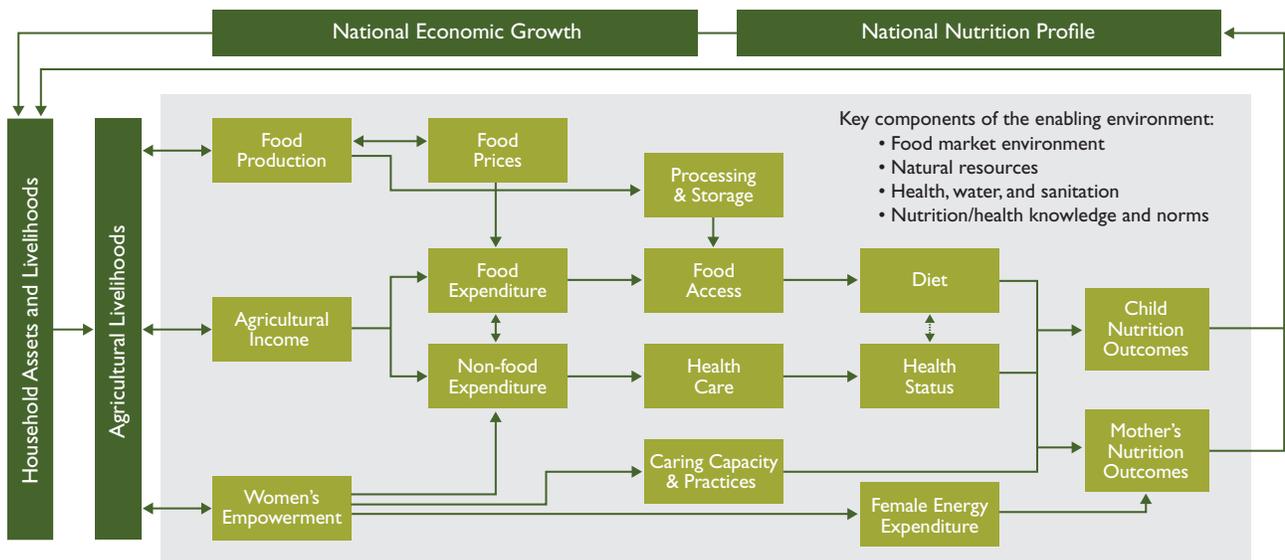
In order to bring agriculture and nutrition interventions closer to each other, and to ensure that the nutrition goals within Feed the Future activities are being met, USAID's nutrition project, SPRING, has introduced a framework: the agriculture-to-nutrition pathways for improving nutritional outcomes through agriculture. These pathways provide a summary of the current state of knowledge for leveraging agriculture to improve nutrition. While agriculture may be seen only as a source of diverse nutritious foods and income, in reality its effect on nutrition is multifaceted, especially considering the critical role women play in agriculture. First, agriculture supports a healthy, active life by producing foods within and for household consumption and by sourcing foods available in markets. Second, agriculture as a livelihood source provides income to purchase food and health care. Third—and an equally important though less obvious pathway from agriculture to nutrition—is the way agricultural livelihoods affect gender relations and the status of women. Women's time availability, energy expenditure, and access to and control over productive resources and household income affect their own and their children's health and nutrition status. These key pathways regularly interact and are not always linear. The figure presented below shows how various agricultural investments or activities could improve access to food and health care, how they affect and are affected by the enabling environment, and how they ultimately affect the nutrition of women and children.⁶

4 United Nations Children's Fund (UNICEF), *Tracking Progress on Child and Maternal Nutrition: A Survival and Development Priority* (New York: UNICEF, 2009), http://www.unicef.org/publications/files/Tracking_Progress_on_Child_and_Maternal_Nutrition_EN_110309.pdf.

5 See the Feed the Future "Strategy for Guatemala," in the Guatemala Country Profile on the Feed the Future website, <http://www.feedthefuture.gov/sites/default/files/country/strategies/files/GuatemalaFeedtheFutureMultiYearStrategy.pdf>.

6 For more information on the pathways, see the Improving Nutrition through Agriculture Technical Brief Series developed by the SPRING project and available on the SPRING website at <http://www.spring-nutrition.org/publications/series/improving-nutrition-through-agriculture-technical-brief-series>.

FIGURE 1: THE CONCEPTUAL PATHWAYS BETWEEN AGRICULTURE AND NUTRITION



OBJECTIVE

SPRING seeks to better understand how key household-level behaviors along the agriculture-to-nutrition pathways are being influenced by Feed the Future interventions. The SPRING project studies the assumption that activities with a primary objective of increasing household incomes will help beneficiaries move towards improved nutrition outcomes. This study attempts to better understand how families with increased incomes make decisions about what to purchase, produce, and consume, and whether the increases in income might in fact lead to more diverse diets or better nutrition.⁷ The study also examines how key components of the food market environment, including availability and diversity of foods, affordability, access to food markets, seasonality, and household nonfood needs influence these decisions. With a clearer understanding of how clients and beneficiaries are making decisions, spending their incomes, and interacting with the food market environment, SPRING hopes to identify ways to leverage agricultural investments in Guatemala to better contribute to improvements in nutrition.

To explore these topics, the SPRING project conducted formative research in selected municipalities across the Feed the Future ZOI to better understand household, gender, and community norms; knowledge and capacities; and environmental factors that influence people's decisions about what foods they produce, purchase, and consume. Market surveys and focus group discussions were conducted to better understand how participants' food purchase and consumption behaviors are affected by the following factors:

- market characteristics, including size, distance, seasonality, and prices;
- the stated roles of men and women with regard to food purchases; and
- purchasing power based on household cash flow and/or perceived increases in income from participation in Feed the Future activities.

⁷ This work is intended to complement the Trials of Improved Practices (TIPS) research being done by FANTA related to their Optifood tool. The Optifood assessment in Guatemala provides information regarding a minimum food basket based on locally available foods to ensure quality diets for all household members across the Feed the Future ZOI. For more information, see: <http://www.fantaproject.org/countries/guatemala/optifood-report-2014>.

METHODOLOGY

This study was conducted in August 2014 by a Guatemalan team fluent in all the local languages of the study area, under the guidance of an international consultant familiar with the Western Highlands of Guatemala. The methods used for data collection in each municipality included focus group discussions, key informant interviews, and market surveys and assessments. The schedule and the various data collection instruments are included in this report as annexes A and B, respectively.

GEOGRAPHIC FOCUS AND PARTICIPANT SELECTION

Four of the five Feed the Future target departments were involved in the formative research. The department of El Quiché, where there was reported survey fatigue on the part of Feed the Future beneficiaries, was excluded. Two municipalities were selected from each of the three departments of Huehuetenango, San Marcos,⁸ and Totonicapán (see table 1). Only one municipality was selected in the department of Quetzaltenango, because there were only two municipalities in Quetzaltenango that met the selection criteria (described below). The two eligible Quetzaltenango municipalities are contiguous and, therefore, did not afford the differentiation of market areas that could be found between the targeted municipalities in the other three departments. The municipality that was selected in Quetzaltenango was prioritized because it offered an artisan value chain activity.

TABLE 1. STUDY LOCATIONS AND LANGUAGES

| DEPARTMENT | MUNICIPALITIES | LANGUAGE |
|-----------------------|--------------------------|--------------|
| Totonicapán | Momostenango | K'iché |
| | Santa Lucía La Reforma | K'iché |
| Huehuetenango | Concepción Huista | Poptí |
| | Chiantla | Mam |
| Quetzaltenango | Concepción Chiquirichapa | Mam |
| San Marcos | San Lorenzo | Mam, Spanish |
| | Tajumulco | Mam |

The criteria for selecting target municipalities were as follows:

1. The municipalities have a high rate of stunting per Third National Stunting Census (2008),⁹ and are, therefore, reflective of the Western Highlands.
2. The municipalities include both RVCP activities, implemented by the Asociación Guatemalteca de Exportadores (AGEXPORT) and the Asociación Nacional del Café (Anacafé), and FFP programming, implemented by Programa de Acciones Integradas de Seguridad Alimentaria y Nutricional del Occidente (PAISANO; Program for Integrated Food Security and Nutrition Actions in the Western Highlands) and Seguridad Alimentaria en los Primeros Mil Días (SEGAMIL; Food Security in the First 1,000 Days).

⁸ An additional municipality, San Sebastian, was added in San Marcos to accommodate meeting with an association of Anacafé. However, the full range of interview methods was not applied in this third municipality.

⁹ As cited in Herman L. Delgado, Status and Trends in Chronic Malnutrition in Guatemala, USAID Health Care Improvement Project Technical Report (Bethesda, MD: University Research Co., 2010).

3. At least one of the municipalities selected from each targeted department included an artisan value chain.
4. The municipalities could be visited within the limited time frame of the survey.

Participants in the focus group discussions and individual interviews were either members of an association involved in RVCP or beneficiaries of the FFP activities who had perceived an increase in income. This separation of FFP and RVCP beneficiaries was deliberate, to enable the study to look at decision-making among different socioeconomic levels within the population. The assumptions were that the poorest are targeted for participation in FFP activities, while those engaged in RVCP have more household assets and livelihood resources. RVCP and FFP implementing partners took responsibility for convening the individuals and groups who participated in this study. A total of 244 different individuals participated in the study. In this study, the highest representation was from women who participate in FFP activities, as 154 were interviewed. The lowest representation was from individuals engaged in handicraft value chain activities under RVCP, as only 5 were interviewed. Annex C provides additional details regarding the number of study participants by municipality and type of activity they participate in, whether RVCP horticulture, RVCP handicrafts, or FFP. The number of people who participated in this study's focus group discussions and in-depth key informant interviews, by municipality and activity type, is documented in annex D.

METHODS

The mixed methods design included individual interviews with agriculture producers and artisans in RVCP, an observational study of food availability and access from community-level to regional markets, and group activities with RVCP and FFP beneficiaries using participatory focus group discussions. The instruments for these methods are found in annex B, along with a more detailed explanation of the methodology employed with the focus groups and a summary of which methods were used with which groups in each of the target municipalities. A summary explanation of the methods follows.

1. The **individual in-depth interviews** with producers were designed to collect information on perceived increase in income due to agricultural (or handicraft) production and marketing through RVCP. The interviews probed the ways the increased income is used, how decisions are made about spending the income, whether the increased income is improving diet quality, and what the relationships are between growing cash crops for income and making decisions about planting food crops or purchasing food. Key informants were members of the few RVCP cooperatives that participated in the formative research from horticulture and handicraft value chains in Tonicapán, San Marcos, and Quetzaltenango, respectively. These same individuals also participated in the focus group discussions regarding spending and cropping decisions, described below.
2. The **participatory focus group discussions regarding household spending and cropping decisions** involved all-male or mixed-gender groups of people participating in RVCP, or groups of men participating in FFP.¹⁰ One group in Tonicapán was all women involved in the FFP activity through SEGAMIL. The methodology



Conducting an in-depth interview with an RVCP client.

¹⁰ The only all-female value chain in the projects is for artisans. They were not included in this type of focus group as they are not making cropping decisions. The women who participated in this study are included in mixed-gender cooperatives and thus mixed-gender focus groups.

used three stages of questioning. The first stage included forced-choice exercises in which participants were given a hypothetical amount of money that represented net income from agriculture after paying loans and inputs, as discussed with the group. They were asked to choose 1 of 20 pictured items on which to spend the money. The facilitated discussion elicited justification of the choice, how spending decisions are made in the household, and whether the source of the income would influence spending. The second line of questioning with this group also used play money and photos of food, but participants were asked to identify how they would spend extra income for food. Subsequent discussion focused on how food purchases might or might not change and probed the rationale for these choices to better understand household decision-making dynamics. The third part of the group discussion revolved around cropping choices and food supply for the family, thus linking food production choices to product availability and affordability in markets.



Focus group exercise demonstrating prioritization of spending.

3. The **participatory focus group discussions regarding food acquisition**¹¹ were carried out with mothers of young children who participated in FFP activities and were focused on food availability and access.¹² The intention of these exercises and discussions was to validate the availability, prices, and access to the range of foods observed in local and regional markets and shops, as well as to foods being grown in the community. Photos—which had been taken in a large regional market of all foods available, including processed and packaged food—were used to actively engage participants and to minimize the possibility of hearing expected answers. Women were asked to categorize the photos of foods as “never eaten,” “rarely consumed,” and “occasionally consumed” while discussing the rationale for their answers, including prices, seasonality, food beliefs, and food preferences. They further sorted the photos to show frequently consumed foods in the basic daily diet of their households, which represented a majority of the poorest households in the community. Additional discussion elicited beliefs about unacceptable foods for children under two and preferences for various FLNV.



FFP beneficiaries categorizing their daily diet.

4. **Individual interviews for validation** were conducted during the final days of the study with a limited number of women FFP beneficiaries in Quetzaltenango. These interviews were designed

11 Shortly after this study was completed, one of the data collectors repeated the food acquisition exercise in the community of Uspantán, El Quiché. The exercise was conducted with a group of women whose families do not participate in either FFP or RVCP activities, but who were otherwise similar to this study’s participants in age, marital status, and livelihood. The findings from the later exercise were the same as in the study communities.

12 Only women were included in these groups because they are responsible for most food acquisition and because men were working in the field during the interviews. One group of FFP fathers was convened to participate in this food acquisition focus group; however they told interviewers that they could not answer the questions because these decisions were made by their wives. Therefore, this all male focus group was asked the spending and cropping decisions focus group questions described in item 2 above.

to validate the findings on food access and gender in decision-making that were emerging from the earlier group discussions and to fill gaps in information. These interviews were conducted with women prior to their participation in the food acquisition exercise.

5. The **market survey and consumer access assessments** were conducted in community shops, local markets in targeted municipalities, and regional markets in San Juan Ostuncalco and Jacaltenango. This assessment evaluated the availability of foods needed for dietary diversity, including fresh, processed, and packaged foods. Data collectors discussed seasonality and price ranges with vendors and community members and interviewed community members about their use of local foods, including their understanding of whether these foods were produced or gathered from the wild.



Evaluating markets on the availability of a diversity of foods.

DATA COLLECTION

Data collection instruments for the study were developed prior to the international consultant's arrival in Guatemala. The instruments were translated into Mayan languages by a national consulting firm¹³ that also provided primary data collectors/enumerators. It should be noted that for indigenous languages in the Western Highlands, verbal testing is required prior to finalizing the instruments. Therefore, all survey instruments (guides) were tested in communities outside of the municipalities selected for the study. Adjustments to wording were made, as needed, to finalize the instruments before the study began.

Data were collected by staff from a local firm, all Guatemalans from the region. All team members spoke relevant Mayan languages and were familiar with the social context. All data collectors received two days of training on the methodology and instruments. An additional half day of field practice was used to validate all instruments. The six data collectors worked in pairs in each assigned community, with supervision from the international consultant and the director of the local consulting firm. They were introduced to the communities by staff of the implementing partners.

A consent document was read to each individual or group to obtain permission for their participation. All interviews and group activities were recorded for later transcription (usually completed the same day), and detailed notes were taken to include not only discussion but also body language of participants. Photographs also captured participants' body language and engagement. The interviews and group activities were conducted in the language of preference of the individual or group.

The data collection pairs were also responsible for conducting the observations for the food availability and consumer access assessments. Staff from implementing partners were sometimes engaged to help with data collection in markets as well; because this data collection did not require interacting with or questioning community members, there was no risk of bias, which might occur if staff had to interact with their own activities' participants.

¹³ The Guatemalan firm Consultoria & C.RTC carried out the work with the SPRING project consultant.

ANALYSIS

Analysis was conducted during a three-day workshop, with all data collectors actively participating. The study team used AQUAD software to code findings related to the key questions and three different themes (gender, factors affecting access, and income source). As a final stage, team members reviewed transcripts and notes to triangulate findings in direct relation to the four research questions. The information from the food availability and consumer access assessments was collated across the target area and charts were created to capture key related information.

LIMITATIONS

A number of limitations in this study may have affected the findings and recommendations. The study's sample size was small, especially once broken down to the municipal level or by activity. This makes it impossible to generalize findings or claim significance. The participants were also not selected randomly, but were recruited based on their own and implementing partners' availability and interest. The field-level data collection took place over a short time frame (eight days), which left little time for following up with participants. As already noted, there was a high level of survey fatigue in the Western Highlands municipalities where USAID-funded activities are in progress due to numerous activity baselines, field trips by USAID and partner visitors, and other evaluations. The SPRING team used innovative and engaging methods in an attempt to mitigate this challenge. Additionally there were no data available to indicate changes in participants' income during their involvement with the FFP or RVCP activities. Instead, participants shared their perceptions as to whether their incomes had increased since joining the USAID-funded activities; it was not possible to verify these impressions. Finally, while the SPRING project team and international consultant tried to provide the implementing partners with as much advance notice as possible, this study came at a particularly busy time of year for the RVCP activities, which made it challenging to reach RVCP beneficiaries. As a result, there were fewer RVCP beneficiaries than FFP beneficiaries participating in this study.



Study team conducting analysis of the data.

Finally, this study was conducted during the time of year (rainy season) when some foods, including staples like corn and beans, have higher-than-average market prices. This situation was exacerbated this year by drought. Participants were cognizant that there would likely be crop failure in the coming season that would result in higher prices. Therefore, they may have been more concerned about whether they would be able to procure and store sufficient grains next year than they would have been in a year when a good harvest is anticipated. As a result, it is possible that responses were skewed to be more concerned about total quantity of food than toward any understanding or openness toward a greater diversity of more nutrient-rich foods.

FINDINGS

DESCRIPTION OF STUDY PARTICIPANTS

Among the 18 key informant agriculture producers (RVCP beneficiaries) interviewed, half had never attended school, most of the others had only limited primary schooling, and two had attended secondary school (*diversificado*). One of the women included in the five artisan's interviews had postsecondary training, and two others had completed secondary school; the remaining two had not attended primary school. All of the RVCP beneficiaries who were interviewed had their own land, and half reported doing agricultural day labor for others. Five out of the 18 producer households had a small business such as a *tienda*, (small general goods shop). None of these households had

an adult with salaried income, and only one received remittances. Seven reported increased earnings last year due to RVCP participation, and while the others reported earning the same or less than two years ago, all anticipated increased earnings this year despite the delayed rains. Most of the RVCP households had a child or grandchild under five.

In general, the FFP beneficiaries who participated in this study appeared to be in younger households with more children under five.¹⁴ Some of the FFP households did not own land and were dependent on

day labor. Many of the young couples lived with in-laws and were dependent on them for expenses. A few women participating in FFP had spouses working abroad, but the study team also encountered two FFP target communities that reported no one having migrated because they had neither funds nor access to loans (land is too poor to qualify) to pay the *coyote*.¹⁵

It's important to involve our wives in decision-making. They help us think more clearly.

—Man from Tajumulco, San Marcos

INTRAHOUSEHOLD DYNAMICS

A cross-cutting theme for all four study questions concerns the role of intrahousehold dynamics, including gender issues. The study used a variety of ways to learn about this, including dividing focus groups by gender, conducting a focus group of couples, and asking about roles in decision-making in both group and individual interviews.

One key finding is related to household composition. While neither the WHIP baseline nor the DHS give data on this, study participants estimated that 75 percent of households are multigenerational, with young couples living with the young man's parents until they can afford a house of their own. Young women are generally left with the spouse's parents when he migrates abroad to work. In these households, it is the mother-in-law who makes all decisions about what food is purchased and prepared for the extended family. The young woman may accompany her mother-in-law to the market, but rarely has money to spend there. If the young man has his own income or the young woman earns money, the young couple will most often consult with each other on how this money is spent (savings for a house, medical care, clothes for children), but they often also receive advice from the older parents.

The in-laws and my parents give us advice about where to invest our money when we sell some product.

—Woman from San Lorenzo, San Marcos

A key finding about gender roles in decision-making is that couples almost always discuss together before making spending and production decisions. When men were asked about this in front of other men in the all-male focus group, they said that men are the decision makers, the ones who "give orders." However, when asked individually, men

¹⁴ It should be noted that the FFP activities, by definition, target households with children under the age of two years and pregnant and lactating mothers, a key distinction from the targeting approaches used by RVCP.

¹⁵ A *coyote* is a person who is paid to smuggle people across borders.

said they always consult their wives and stated that women better perceive family needs and help them think carefully about decisions. Women, either individually or in groups, said they discuss spending decisions with their spouses whether the income is from agriculture, other earnings of the man, or their own earnings. They also said that their spouses, and sometimes fathers-in-law, consult with them about what to plant. This finding of women's involvement in decision-making is important in light of the usual generalization that there is a singular "Guatemalan" culture in which men make all decisions without consulting their wives.

There was general agreement that men make final decisions about what and how much to plant, except in the case of home gardens, where it is up to women. Women also make decisions about purchase or sale of livestock they raise and are responsible for, particularly small animals such as chickens or goats.

Men unanimously agreed that women have full decision-making authority in the kitchen and for purchase of food, and for seeking health care. Women agreed that this is their "responsibility" and said that men prefer not to be involved in these decisions, seeing this as women's role.

Both men and women interviewed acknowledged that access to cash is most often the limiting factor in what the woman decides to do, because she may have to ask her husband for money. Families keep money either at home or in the bank. Women feel it is appropriate for men to hold their family money because the money is from the men's earnings. Therefore, if the husband is not home, she may not have access to money. When women have their own income, they are responsible for it and, hence, have immediate access.

MARKET EFFECTS ON FOOD PURCHASING DECISIONS

The study looked at the diversity of food available, cost, and seasonality in markets ranging from large regional markets to municipal markets and small canton-level¹⁶ markets. Findings have been organized according to the range of market characteristics considered by the study, namely size, distance, seasonality, and prices. The interplay of purchasing, production, and consumption behaviors is also discussed, particularly regarding animal source foods and FLNV.

Market Size

The diversity of food available diminished with size of market, with the smallest markets offering little or no meat or milk products. Even though the vendors in the small markets purchased their products in the regional markets, there were no discernible price differences between small and regional markets. This implies that traders/retailers likely obtain their goods from regional markets at a discount, possibly by purchasing lower-quality goods for rural consumers.

When there is some extra income, I say to my wife, 'Look, woman, what should we do with this money?' It has to be a decision from both of us.

—Man from Concepción Huista, Huehuetenango

The woman decides what food to prepare every day and we men eat whatever she prepares with pleasure.

—Man participating in the FFP program, Huehuetenango



A small market.

16 A canton is grouping or collection of villages.

Small markets have limited quantities of animal source foods other than eggs, as well as of fortified blended foods (e.g., oats, *Incaparina*) both of which are among the food-based recommendations of the Optifood study.¹⁷ The latter products were observed to be available in shops in all but the smallest communities. It should be noted, however, that the study participants considered oatmeal and *Incaparina* to be too expensive to consume more often than two or three times a month.

Distance and Travel

Among the participants in all the focus groups, only a few ever traveled to regional markets, and then maybe only once a year. The cost of transportation is a factor in going to these markets, which may be more than 80 kilometers away. Nearly all women said they could find what they need in the nearest market, unless a vendor who sells a certain vegetable doesn't show up one day. Men and women interviewees reported that someone in the family goes to the market once a week, unless it is far, and then they go only every two weeks, or in rare cases, less often. In these situations, canton-level markets have arisen to provide the most basic supplies or community women with commercial savvy travel to the larger market and bring back produce to sell to their neighbors.

Almost no one walks to markets. Even residents of the smallest communities can avail themselves of pickup trucks to travel to the market. One community has a bus that runs only on market day to the municipal market. Going to the market is the woman's responsibility, but where distances are very far, such as in the remote villages of San Marcos and Huehuetenango, men sometimes go instead. The men said they go with a list from the women of the house, but will make some decisions to purchase additional foods of their own liking (e.g., sausage, red beans), if money allows. Even the remote communities visited by the study were within two hours of a municipal market, but where the roads are rough or winding, such as in Tajumulco and Concepción Huista, this is considered far. Distance to market does appear to be a factor in what families purchase, as they will go less often and must have the resources to purchase adequate quantities to get them to the next trip. Of course, paying for transportation also adds to the cost of purchases.



A market vendor.

Seasonality and Prices

Certain fruits and vegetables are available only in their season, but others, like tomatoes, are available year-round; they cost more at all markets when they are not in season and/or being grown locally. Study results indicate that Vitamin A- and C-source foods of one kind or another are available in most locations throughout the year. According to older women participants and study team members, the year-round availability of diverse fruits and vegetables has improved considerably over the past two decades as roads have improved and more transportation is available to bring produce from other regions of the country or from Mexico.

¹⁷ FANTA, *Summary Report: Development of Evidence-Based Dietary Recommendations*, <http://www.fantaproject.org/sites/default/files/resources/Guatemala-Optifood-Summary-Oct2013.pdf>.

Participants identified the top price they were willing to pay for foods they purchase. They said they either stop purchasing the particular food item until the price goes down, purchase a lesser amount and dilute it (e.g., use tomato as a flavoring rather than a key ingredient), or purchase the food item infrequently until the price goes down. Onions are an example of a food they never cease buying, but rather adjust quantity and frequency of purchase. Black beans were cited as something they would discontinue buying until the price dropped. Most study participants said that in spite of seasonal price increases, they will always purchase corn, tomatoes, and onions.

The women who were asked said they always make a mental list of what they need to buy, taking into account what is available each season and what they already have on hand. If there is money left, they may look for something additional like fruit or a soup mix. Most said they almost always spend some money to buy a treat for the child or children who accompany them. They said the treat is often a fruit, but considering the amount of FLNV available at all sizes of markets, there is obviously demand for that as well.

In response to two different focus group discussion guides, women reported an average weekly market expenditure ranging from 50 Guatemalan quetzals (Q50) for poorer families (i.e., families targeted under the FFP activities) to around Q150 for RVCP families with more means (see table 2). This figure includes nonfood items like lime, pitch bark, charcoal, and laundry soap, but most of the money goes to food.

TABLE 2. ESTIMATED WEEKLY MARKET EXPENSE FOR A FAMILY OF SIX IN TOTONICAPÁN

| DIET | AMOUNT | COST (IN QUETZALS) |
|--------|--------------|--------------------|
| Corn | 50 lbs. | 90.00 |
| Oil | 1 bottle | 5.00 |
| Salt | 1 lb. | 1.00 |
| Sugar | 5 lbs. | 16.00 |
| Onion | 1 lb. | 3.00 |
| Tomato | 2 lbs. | 6.00 |
| Beans | 5 lbs. | 25.00 |
| | Total | Q146.00 |

The Optifood report released by FANTA in 2014¹⁸ presented a series of food-based recommendations based on a study in the Western Highlands. These recommendations were based on the lowest-cost combinations of local foods that will meet or come as close as possible to meeting the nutrient needs of specific groups. The study estimated the costs of these recommendations and found that implementing the full set of recommendations would cost between Q14 and Q36.4 a week for each child and between 71.4Q and 84.7Q for a woman. Based on the weekly market expenditure estimates provided by participants in SPRING's formative research study, it seems that families will have difficulty in obtaining the mix of foods recommended in the Optifood report. This finding underlines the challenge that families in the Western Highlands face in meeting nutrient needs by purchasing food in markets.

As part of the food access exercise, women were asked to identify which foods the family consumes on a daily basis. There was some variation across the four departments, but the daily diet consists of corn as tortillas, *tamalitos*, and/or *atol*;¹⁹ green leafy vegetables; tomato; onion; chilies; oil; salt; sugar; and either black beans or potatoes (diet shown in the photo). Some families had access to eggs from their own chickens to eat; some reported daily

18 FANTA, *Development of Evidence-Based Dietary Recommendations for Children, Pregnant Women, and Lactating Women Living in the Western Highlands in Guatemala* (Washington, DC: FHI 360/ FANTA, 2014).

19 *Tamalitos* are made of the same ground corn used for tortillas, but the dough is steamed in corn husks. *Atol* is a thick beverage made from ground corn and sometimes sweetened with cinnamon and sugar.



Example of foods included in daily diet.

consumption of FLNV, especially packaged chips and cookies; and some drank coffee instead of *atol*.²⁰

Using this basic diet and the prices from the markets, the study team calculated the cost for a family of five to six persons (per mean family size in the WHIP baseline) for a week. Using conservative estimates for consumption of corn and black beans, and assuming all food except the leafy greens is purchased, the cost is many times more than what the poorest families say they are spending at the market (Q50). This implies how reliant the poorest families are on accessing food from nonmarket sources, such as producing some of their own food (particularly staples like corn, beans, and potatoes) and, of course, receiving food aid through FFP activities. It may also explain why they try to stockpile staples when

they have extra income, as will be described in a later section of the report. The importance of remittances, loans, and other nonagricultural sources of income was not fully explored as a part of this formative research. However, these additional income sources as well as the use of other coping mechanisms are key to a full understanding of household food security and the ability to afford a more diverse and nutritious diet throughout the year. From the discussions, it seems that the initial coping mechanism of families is to cut back on the amount of food they eat. At times they reported eating only tortillas with salt. Occasionally, the households will sell something to buy

essentials. There is limited sharing and borrowing between neighbors, though there are some programs from churches to help the truly indigent. Farming cooperatives give credit, however it was unclear whether this credit can be used for daily living expenses.

When I don't have money, I sell a hen to get money to spend in the market to buy salt, sugar, chili, coffee, and other essential things.

—Woman from San Lorenzo, San Marcos

Animal Source Foods

Families report eating animal source foods infrequently. Eggs are the most common of these foods consumed and families who have their own chickens may eat eggs two or three times

a week, although this study did not look into who in the household consumes them. Participants said they prefer to eat their eggs rather than sell them.²¹ However, they also reported that if they have no available funds, they will sell some eggs to purchase other food or pay a school expense. Families without chickens reported that they rarely eat eggs as they are perceived as very expensive for the poor and very poor. Purchased chicken is consumed twice a month and beef or pork about once a month. Poor families may eat a small amount of dried fish once a month. Dried meats were not seen for sale in the markets though some families may do this at home at a very small scale (though this is difficult to do in the highlands as it is quite humid). Families who raised chickens said they might kill one to eat two or three times a year.

20 Families participating in the FFP program have reported that they currently eat rice and CSB+ (Corn-Soy Blend Plus) in addition to this basic diet. They would not otherwise purchase rice or a substitute for CSB on a regular basis.

21 The Optifood study (<http://www.fantaproject.org/sites/default/files/resources/Guatemala-Optifood-Summary-Oct2013.pdf>) also found that families eat far more eggs than they sell.

During the discussions, it became apparent that cost is not the only factor limiting consumption of animal source foods. Many participants said they try to buy some meat, for example, every time they go to the weekly market, but they have to eat it the same day because they have no way to store it for another day. The same thing was said about fresh milk and cheese. **Lack of storage/refrigeration is a limiting factor in the consumption of animal source foods. The storage limitation seems to affect consumption of fresh fruits and vegetables, as well, although these foods can be kept a little longer without refrigeration.**

Foods of Low Nutritional Value (Junk Food)

The study noted not only what kinds of fresh produce but also what kinds of packaged foods were available, in both the markets and the shops in each community that the study team visited. The team made observations in shops of different sizes. Most shops contained staples like sugar, salt, pasta, rice, and oil, as well as oatmeal and *Incaparina*.

Some shops offered canned fish or sausages and powdered milk, but study participants from FFP target households said they could not afford these foods. There were also high-sodium soup mixes, which have become increasingly popular, along with the traditional bouillon packets. Participants said they used these items once a week or less often. They reported using pasta as often as twice a week.

The predominant items in all shops across the target area were FLNV, or junk foods. These included salty snacks, hard candies, cookies, carbonated beverages, and juice. The study team also found energy drinks, which are a new (expensive, sugary) trend. One young man said he learned about one of these drinks from TV. There is obviously great demand for the FLNV, especially in shops located near schools.

Many mothers admitted that they gave their school-aged children from 50 centavos to 1 quetzal per day to spend on snack foods, when money was available in the house. Consumption of FLNV is not limited to schoolchildren, however, as study participants indicated that all ages consumed the FLNV.

FFP activity staff indicated that some efforts were being made to discourage purchase and consumption of FLNV, as a part of FFP's broader SBC strategies. In fact, this formative research study found that mothers were aware that "junk foods" were bad for their children.²² It seems doubtful that this message has been fully internalized, however. One of the study team members observed:

During the focus group, the mothers all said they no longer give their children junk foods because they have learned it is bad for the child's health and the child will fill up on the junk food, then not eat healthy food at meals. Immediately after the focus group dismissed, the mothers and their children were all observed at the shop buying the snack foods.

Everything that is fruit and vegetables we don't eat every day, rather only every 8 or 15 days when we bring them from the market and eat them soon thereafter.

—Man from Concepción Huista, Huehuetenango;
husband of a FFP beneficiary



Example of the variety of FLNV found in a local shop.

22 The FFP activities actively dissuade the consumption of junk food, as does the government's Healthy Schools program, which is supported by the Peace Corps in the WHIP ZOI. Women in the focus group discussions clearly knew these messages against junk food, which affected their initial responses to discussion of junk food consumption in the household.

Snacks are consumed daily by children, young people, and adults.

When my baby cries a lot, I buy him a candy, then he quits crying.

Children eat lots of the chips because they only cost a quetzal and there is a good amount in the package.

—*Mothers from Concepción Huista, Huehuetenango*

Few of the women who participated in the focus group discussions had fully calculated the amount of money they were spending, or giving children to spend, on junk foods. When they were asked to estimate monthly expenditure, they were surprised at the total figure they came up with, which ranged up to Q200 per month for a large family. The focus group discussions revealed that poor families spend far less, but even these women say they feel pressured by their school-age children to provide money to purchase snacks.

ROLES OF MEN AND WOMEN WITH REGARD TO FOOD PURCHASES

As previously noted, women have autonomy to decide what food to purchase. In extended families, the mother-in-law most often decides. She may be accompanied to the market by her daughter-in-law, and the younger woman will be involved in the preparation of the food.

Women get the money to spend in the market from their husbands. Most said they don't have to ask, that their husbands simply hand them more or less the same amount of money every market day. If there is a cash flow problem in the family, it has most likely been discussed ahead of time and she understands the situation.

If he hasn't had work, I understand and I'm not going to ask for more. I accept what he gives me and adjust my plans of what to buy.

—*Woman from Momostenango, Totonicapán*

Likewise, if there is extra income available to spend, the couple will have discussed this ahead of time and decided how much more can be spent at the market. In the case of purchasing a large amount of staple food to store, the couple

will discuss this purchase, implications for storage, and the optimum price to pay. Men are often the ones to go to the market for these large purchases in order to carry them home.

Women said spouses influenced their decisions about food purchases only through stated food preferences or an occasional request for something specific. Several FFP beneficiaries from Concepción Chiquirichapa explained:

He told me that I should never again bring home broccoli because he doesn't like it.

Sometimes, he asks me to prepare some food he likes, and I go to the shop to buy what I need to for it.”

I know which vegetables he likes and which ones he doesn't like so I buy what he likes.

EFFECT OF PURCHASING POWER OR PERCEIVED INCREASED INCOME ON SPENDING DECISIONS, INCLUDING PURCHASE VERSUS PRODUCTION OF FOOD

Participants were asked, through a forced-choice exercise, how they would spend a certain amount of increased net income²³ from agricultural production. Men and women, when asked separately, had different priorities, as shown in table 3. Then, when asked whether their priorities would be different if their spouse was involved in the decision, most men agreed that priorities might be different, but women said that the priorities would not change considerably. This was confirmed by a mixed-gender focus group comprised of couples. When asked to make the choice, the couples discussed options between themselves, and the ultimate choices were more similar to the women's priorities listed in table 3.

TABLE 3. DIFFERENCES BY GENDER IN PRIORITIES FOR SPENDING INCREASED AGRICULTURAL INCOME

| WOMEN | MEN |
|-----------------------|------------------------|
| Food | Agricultural inputs |
| Purchase of livestock | Education for children |
| Bank savings | Purchase of livestock |
| Start a business | Food |
| Education of children | Start a business |
| Clothing for women | Bank savings |
| Clothing for men | Health care |
| Clothing for children | Housing |
| Housing | Clothing for children |
| Health care | Electronics |

Facilitators asked the participants to further explain their choices. Livestock was seen as an investment, a way to grow or store the money. Putting money in a savings account in a bank is a relatively new concept in rural Guatemala, but participants said it was important to save money in a bank in case of a medical or other emergency. **When prioritizing food, both men and women said the extra income would be used to buy additional staples to store, rather than to increase diversity.** They mentioned stockpiling corn, beans, rice, and sugar—all foods that have a long shelf life. They said they prefer to buy corn and beans when the price is low and store it until their own supply runs out, which occurs during the season of higher prices.

According to participants, if income earned from agriculture increased or became stable, their priorities would change from meeting more immediate needs to longer-term goals such as building or improving their house, saving money, buying land, or buying a vehicle to transport their produce. Purchasing better-quality food (e.g., eggs, meat, fruit) did not emerge as a priority in this situation.

Alcohol was among the spending options presented to participants. Only one man, in an individual interview, indicated that he would spend income on alcohol. In group discussions, however, men mentioned having neighbors who spent their income on alcohol.

Few participants in WHIP activities are direct recipients of remittances, as evidenced by data from the WHIP baseline which shows that 12 percent of families in the ZOI are receiving remittances from abroad. Therefore, the

²³ Net income was explained to study participants as the income remaining after paying for agricultural inputs and labor, and after paying off agriculture loans.

questions used during the study asked about observed experiences of families in the community who do receive remittances, as well as about the direct experience of any study participant. There was consensus that the person working abroad decides how the remittance money is to be used. Across the study area, the priorities were: house construction, purchase of land, purchase of a vehicle, and finally, investment in starting a business. There was not consensus on whether any part of remittance money is often used for family living expenses, but when it is, the priorities are food and schooling for children. Participants say family members could call their migrant worker in cases of urgent medical need and the worker would send additional money or authorize use of money that had been sent for a different priority. It is important to note that most of those working in the “north” are working in low-wage jobs, and even though they may be working multiple jobs, they must also pay their own living expenses and do not send home large amounts of money. Focus group participants said that someone can expect to be gone at least 7 to 10 years in order to pay back their trip and build a modest house in the community for when they return.

For the most part, the remittance money is sent to the spouse to administer for the predetermined priority, but if she is very young, it may be sent to her in-laws instead. More investigation is needed to discern whether the recipient spouse uses some of the money for the family, even when the earner is sending it specifically to build a house or start a business. Study group participants were not forthcoming on this issue.

The women interviewed from the artisan’s association, who were primarily from female-headed households, spent the increased income from their work on family needs, including basic foods. Their income generation is so low that they do not have excess income to increase diet quality by purchasing additional foods such as fruits or animal source foods. **Although this income is under their control, those who are married said that they do consult with their spouses about how it will be spent.**

Production versus Purchase of Food

Participants regularly reiterated the importance of growing their own corn. Since corn is the basis of their diet, they feel it is essential to grow some to ensure that the family will have something to eat. Even among those who grow most of their own corn, purchase of corn is the single largest food expense. The more that a family can grow (and successfully store), the less it will need to purchase. **They do not feel that the income from raising crops like snow peas or beans in lieu of corn would be sufficient to make up for having to purchase more corn.** Women also mentioned needing corn to feed livestock, specifically pigs and chickens. Some families noted a trending decline in corn production as they divided land holdings among their children and some of that land was used to build houses.

We will always plant corn. It is fundamental to life.

—RVCP producer from San Sebastian, San Marcos

The other crops commonly grown for basic consumption include potatoes, fava beans, and black beans. Potatoes are more commonly grown in the areas where it is too cold to grow black beans. Several people mentioned, with nostalgia, former large-scale cultivation of wheat, but the market for that has disappeared due to the importation of higher-quality wheat for bread and manufacturing pasta.

Overall, study participants did not feel that their decisions about purchase versus production of food had changed over the past few years despite participation in USAID supported activities. This is a key finding given that these activities aim to increase income and allow households to invest in healthier foods.²⁴ Some have rented additional land on which to grow more of the value chain crop (e.g., seed potatoes) while maintaining the same amount of land planted in corn. Others are limited by their association in how much of the value chain crop they can raise, so they do not have an option to increase production of that crop.

²⁴ It should be noted that this study did not include any participants in coffee value chains, and their situation may be different in regard to planting staples versus coffee.

A notable finding is the increased production of vegetables in home gardens by families participating in the FFP activities. The women who were interviewed were proud of their increased production and consumption of vegetables, including beets, carrots, radishes, greens, onions, and more. They stated that producing these vegetables instead of buying them freed up market money to spend on other “nutritious” foods, a message they have received from FFP. Some FFP beneficiaries are also raising livestock as a result of their participation. Most of that is intended for home consumption, but it also gives women access to their own income from the sale of eggs or related products.

ADDITIONAL FINDINGS

In the discussions about food and food purchases, additional information emerged that may be of particular interest to the FFP activities and to NUTRISALUD for planning behavior change activities. The additional findings are related to nonfood expenditures, the role of sugar and reduced exercise in the modern diet, and access to health services.

NONFOOD-RELATED EXPENSES TO CONSIDER

While cost of food is an important consideration in determining what is affordable to low-income families, there are other expenses that also come out of the household food budget. Women participating in the study listed several nonfood items among the purchases they make each time they go to market. These include lime for processing corn, pitch bark and matches for starting cooking fires, and soap for washing hands and dishes. They also incur a daily expense of up to 5 quetzals for grinding corn at the local mill. Most families reported that they now purchase charcoal and much of their firewood. Women are taking all these expenses into account when deciding whether to accept recommendations to prepare a special food or extra meal for themselves or their children.

SUGAR CONSUMPTION AND REDUCED EXERCISE

The Optifood study found that nearly one-fourth of women were overweight.²⁵ Guatemala is one of the many countries suffering from the double burden of undernutrition among children and overweight and obesity among adults, leading to chronic disease. The women who participated in the food acquisition exercise said they used about one pound of sugar per week per family member. In the past, the energy from the sugar may have been counterbalanced by long walks to markets, mills, and health facilities. Now that access to transportation has greatly increased even in rural communities, women are getting much less exercise.

ACCESS TO HEALTH SERVICES

Many study participants mentioned using income for medical expenses, not only for women and children, but also for elderly family members. Related costs included transportation and prescribed medications. Besides these costs, women take into account distance and waiting times when deciding whether to seek medical care. They mentioned that waiting times at health facilities have become much longer now that services are no longer provided at convergence centers in the communities and the health facilities are more frequented. Losing a large part of the day to waiting is of more concern than the cost of transportation; however, the cost of medicine is of utmost concern.

25 FANTA, *Summary Report: Development of Evidence-Based Dietary Recommendations*, <http://www.fantaproject.org/sites/default/files/resources/Guatemala-Optifood-Summary-Oct2013.pdf>.

CONCLUSIONS AND RECOMMENDATIONS

1. There is a good level of communication between spouses in decision-making. WHIP activities can build on this, empowering both men and women with information on which to base decisions about crops, investments, savings, and other household decisions.
2. Many young families live with the husband's parents. In these extended families, it is most often the mother-in-law who decides what foods to purchase and prepare for the family. Nutrition education, particularly to promote dietary diversity, nutrition during pregnancy, and complementary feeding, could include older women in the community who have or may soon have a daughter-in-law with children living in the household. Young mothers living with their in-laws do not have much voice in deciding what foods to purchase or feed to their family, and thus may not be able to improve their diet or that of their children without the support of the mother-in-law. Additional study related to the communication of young women with mothers-in-law and attitudes of mothers-in-law toward the health of the young mother and grandchildren may be useful.
3. RVCP beneficiaries have long-term goals for improving family well-being through investing in land and improved housing, starting small businesses, establishing saving accounts, and educating their children. Educational messages for those participating in RVCP may want to promote the concept that using some of their increased income to purchase a higher-quality diet (i.e., fruits, vegetables, and animal source foods) is an important investment in the future of their children. However, further research on priorities, motivations and ability to act is a critical step prior to designing educational messages encouraging specific behaviors.
4. This formative research assessment focused primarily on the pathway from income to food purchase. The need to obtain basic nonfood items as a part of regular market purchases was also noted as a key consideration by all households in determining whether higher-cost, and potentially higher-nutritional-value foods could be bought on a regular basis. It should be pointed out, however, that while the study did not pursue this line of questioning, encouraging families—men and women—to save for and spend on regular (preventive) and curative health care can also have a positive impact on nutrition.
5. As found in the WHIP baseline, families are spending almost half of their income on food; that is, on acquiring the most basic diet. Home food production, including gardens and livestock, will enable families to complement what they are currently able to purchase in the markets and shops with their limited incomes. This strategy is already showing results in the FFP activities, and FFP implementers could share experiences with other USAID partners on how they have found solutions to barriers such as lack of water for irrigation, lack of a sustainable seed supply, and lack of livestock feed.
6. WHIP activities are encouraged to link with Guatemala's Healthy Schools program, which is expanding rapidly in the target departments. For example, in Tonicapán, the department-level Healthy Schools commission has declared a ban on selling junk foods at or near schools. The WHIP activities could help families understand why, and promote compliance when visiting the communities.
7. Lack of adequate household cold storage is a restriction in increasing consumption of perishable animal source foods. Families in rural communities have no way to store fresh meat or milk products and are limited to consuming them the day they are purchased at the market. This limitation needs to be considered carefully when designing nutrition messages. With encouragement, FFP beneficiaries may be able to come up with creative solutions appropriate to their community.
8. Most families desire to purchase nonperishable foods in bulk to store for later use, when prices will be higher or the family will have less money to spend. These foods include corn, beans, sugar, rice, and pasta. More investigation is needed to learn about the adequacy of storage for bulk purchases and whether this is something the WHIP activities can help families improve, in addition to current efforts to improve post-harvest storage of crops.

9. Families feel compelled to plant corn as insurance that they will have this essential food to eat. In fact, they need considerable income from cash crops or other sources to offset the price of purchased corn. The study team calculated a weekly cost of Q100 for a conservatively estimated amount of corn for a family of six persons at the August 2014 price.
10. While study participants were not forthcoming on this, the diversion of family income to other purchases (which could include liquor, leisure activities, etc.) merits further study and intervention, especially as this may affect availability and control of income as well as gender relations.
11. While mothers seem to be hearing the messages about junk food, more work is needed to promote behavior change around that issue, not only from the nutrition standpoint, but also because of the diversion of limited family resources. Mothers who thought little of giving a schoolchild 1 quetzal per day for snack foods considered eggs, which also cost 1 quetzal each, to be expensive. The educational approach needs to go beyond simple messages to engage mothers (and grandmothers) in assessing value per expenditure and strategizing ways to negotiate with children who have developed a taste for junk food and make demands for it.
12. Messages on the role of sugar in overweight and diabetes as well as on the benefits of exercise may now be opportune, along with the messages on improving prenatal nutrition, child feeding practices, and dietary diversity. Further research related to merging obesity messaging with these other messages would improve message creation and delivery.

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ANNEX A FIELD WORK SCHEDULE

HUEHUETENANGO

| COMMUNITY | ACTIVITY/INSTITUTION | METHODOLOGY |
|----------------------------------|--------------------------|---------------------------|
| Thursday, August 14, 2014 | Chiantla | |
| Chanchol Chiantla | PAISANO FFP by PCI | Food acquisition exercise |
| Capilla Chiantla | PAISANO FFP by PCI | Focus group |
| Friday, August 15, 2014 | Concepción Huista | |
| Bacú | PAISANO FFP by PCI | Food acquisition exercise |
| Community Ap | PAISANO FFP by PCI | Focus group |
| Monday, August 18, 2014 | Chiantla | |
| Climentoro, Cooperativa | ANACAFE, FEDECOAG | Focus group |

TOTONICAPÁN

| COMMUNITY | ACTIVITY/INSTITUTION | METHODOLOGY |
|-----------------------------------|------------------------------|--|
| Tuesday, August 12, 2014 | Momostenango | |
| Paxparamác, Momostenango | ADINA by AGEXPORT | Key informant interviews with producers |
| Rochokel | SEGAMIL FFP by ADIPO | Focus group |
| Wednesday, August 13, 2014 | Momostenango | |
| Xequemeya | SEGAMIL FFP by ADIPO | Food acquisition exercise |
| Thursday, August 14, 2014 | Sta. Lucia La Reforma | |
| Gualtux | SEGAMIL FFP by ADIPO | Food acquisition exercise |
| Oxlajuj | SEGAMIL FFP by ADIPO | Focus group |
| Friday, August 15, 2014 | Sta. Lucia La Reforma | |
| Pamaría | CONEPA with Agexport | Focus group with men |
| San Luis | AGRUIF with Agexport | Focus group and key informant interviews |

QUETZALTENANGO

| COMMUNITY | ACTIVITY/INSTITUTION | METHODOLOGY |
|---------------------------------|---------------------------------|---|
| Monday, August 18, 2014 | Concepción Chiquirichapa | |
| Association of Women Artesans | AMTEDICH/AGEXPORT | Key informant interviews |
| Tuesday, August 19, 2014 | Concepción Chiquirichapa | |
| Tujipox | PAISANO FFP Save the Children | Food acquisition exercise |
| Telená | PAISANO FFP Save the Children | Food acquisition exercise and couples focus group discussions |

SAN MARCOS

| COMMUNITY | ACTIVITY/INSTITUTION | METHODOLOGY |
|----------------------------------|------------------------|--|
| Thursday, August 14, 2014 | San Lorenzo | |
| Aldea Santa Rosa | SEGAMIL FFP Caritas | Focus group |
| Aldea Río Hondo | SEGAMIL FFP Caritas | Food acquisition exercise |
| Monday, August 18, 2014 | San Marcos | |
| Aldea San Sebastian | ANACAFE/FEDECOAG | Focus group and key informant interviews |
| Tuesday, August 19, 2014 | Tajumulco | |
| Shexubel | SEGAMIL FFP by Caritas | Focus group |
| Caserío Piedra Redonda | SEGAMIL FFP by Caritas | Food acquisition exercise |

FOOD ACCESS AND AVAILABILITY OBSERVATIONS

| LOCATION | DATE |
|--|---------------------------|
| San Lorenzo, San Marcos—small market | Friday, August 15, 2014 |
| Chuanoj, Totonicapán—small market | Friday, August 15, 2014 |
| Canton, Santa Rosa, San Marcos—small market | Saturday, August 16, 2014 |
| Concepción Chiquirichapa, Quetzaltenango—small market | Tuesday, August 19, 2014 |
| San Juan Ostuncalco, Quetzaltenango—large market | Sunday, August, 17, 2014 |
| Jacaltenango, Huehuetenango—large market | Sunday, August, 17, 2014 |
| In all communities visited—a structured observation of locally available foods (for sale or grown) | August 12–19, 2014 |

ANNEX B DATA COLLECTION INSTRUMENTS

GUIDE FOR GROUP ACTIVITY ON SPENDING AND CROPPING

I. Activity: Forced Choice for Spending Increased Income from Agriculture

MATERIALS:

- a. Play money in packets representing Q1,800
- b. Printed sheets with representations of:

| | | |
|--------------------------------------|--|-------|
| School supplies | Land | House |
| Large plastic toys | Furniture | |
| Women's clothing | Food | |
| Men's clothing | Health center and medicines | |
| Children's clothing | Electronics | |
| Agriculture inputs—seeds, fertilizer | Cell phone | |
| Small business | Alcohol | |
| Pick-up truck | Migrant's journey | |
| Bank (savings or to pay loan) | Livestock—cattle, pig, chickens separately | |

STEPS:

1. Have the participants form a circle standing.
2. Place the pictures face up in the middle of the circle. Review the pictures with the participants to make sure everyone understands what each picture represents.
3. Explain to the participants that we are going to suppose that each of their families has increased their income from agriculture. (This could be due to increased production, better prices, a new crop, etc.)
4. Give each of the participants the packet of bills representing Q1,800.
5. Ask the participants to place the packet of money in one of the pictures on the floor that represents how they would spend this net income. (If someone thinks of something not shown, he or she can explain what it is.)
6. Take notes of participants' selections.
7. Discussion:
 - a. Why did you choose this particular item?
 - b. Since this income is from agriculture, in your house, would you make this decision alone or would others be involved? Who?

- c. If your spouse would be involved, would the selection have changed? To what? Why?
 - d. Are there other people like in-laws, parents, neighbors who influence your decisions? Who? How do they influence your decisions?
- 8. Redistribute the money as Q3,600, again explaining that this is increased net income from agriculture.
- 9. Explain that this time the participants can spend the money on one or two items.
- 10. Repeat the discussion:
 - e. Why did you choose this particular item?
 - f. Since this income is from agriculture, in your house, would you make this decision alone or would others be involved? Who?
 - g. If your spouse would be involved, would the selection have changed? To what? Why?
 - h. Are there other people like in-laws, parents, neighbors who influence your decisions? Who? How do they influence your decisions?
 - i. Ask: If the family income from agriculture continues to increase every year, will your priorities in how to spend the increase change? How?

2. REMITTANCES

Invite the participants to sit and continue with the following:

In the game, we talked about income from agriculture production. Surely, there are people from this community who have migrated north to work, maybe even your relatives. Supposing some of them are sending remittances, on what do their families spend this money?

Is it different than the choices you made in the game? Why? What are the priorities?

Who decides how remittance money is spent?

Are there other people who influence that decision?

If the migrant worker sends money for a certain purpose (house), does the family here spend some on basic needs also? What kinds of needs?

If an urgent need arises, such as a shortage of corn to eat or a serious illness, does this need get communicated to the person working in the north? How? By whom? What is the usual response?

3. LAND USE

Speaking now of a different topic:

- Do all of you have land?
- For what does the land serve?
- What do you have planted this year on your land? Why did you decide to plant these crops?
- Is what you planted for your own consumption or to sell?
- Who decides what and how much to plant? Who all is involved in the decision?

For those planting corn or beans:

- For how many months does the amount you harvest last before the family has eaten it all?
- Do you purchase more at that time or beforehand?
- Where does the money come from that you use to purchase more corn or beans?

4. CASH CROPS

- In this area, what are the crops that are grown to sell?
- How many of you, at one time, have grown one of these crops?
- Are you continuing to plant this crop? If not, why not?
- If yes, are you increasing the amount of the cash crop you plant each year? Does this mean you are planting less corn? If no, what would motivate you to plant less corn?
- If you don't plant enough of your own corn, does this mean you would eat fewer tortillas?

Using the photos from Packet B, show each photo and ask the participants to raise their hand if they are growing this product/food for family consumption, what amount and whether production is up or down compared to five years ago.

| FOOD | CURRENTLY PRODUCING | ESTIMATE OF THE PERCENTAGE OF FAMILY CONSUMPTION PRODUCED | PRODUCE MORE OR LESS THAN FIVE YEARS AGO |
|------------------------|---------------------|---|--|
| Eggs | | | |
| Chicken | | | |
| Beef, pork, goat meat | | | |
| Green leafy vegetables | | | |
| Traditional greens | | | |
| Potatoes | | | |
| Other vegetables | | | |
| Beans | | | |
| Corn | | | |
| Avocados | | | |
| Güisquil, chilacayote | | | |
| Peaches, apples | | | |

- For the food products that very few participants produce, ask why?

INCOME AND FOOD

MATERIALS:

- a. Play money in Q200 bills
- b. Packet A photos

STEPS:

1. In the game, a few of you said you would spend the increased income on food.
2. Let's stand up again and, as our final activity, discuss which foods you would purchase.
3. Lay the photos from Packet A on the floor in the middle and give each participant Q200.
4. What would you buy with this extra money?
5. Discussion:
 - a. Is this just normal food purchase?
 - b. Is it something you always buy, but would buy more of?
 - c. Is it something that you rarely buy, that you would buy if you had this extra money?

INDIVIDUAL INTERVIEW WITH FFP WOMEN PARTICIPANTS IN QUETZALTENANGO FOR TRIANGULATION

1. Did you go to the market during the past eight days? Yes___ Where?_____ No___
- 2.
3. What did you buy there?
4. Was there some food that you wanted to buy but couldn't find? Yes___ No___
- 5.
6. If yes, what was it and why couldn't you find it?
7. How often do you go to the market?
8. Does anyone accompany you? Yes___ No___ If yes, who usually accompanies you?
9. Do you take a plan (in your mind or written) of what you are going to buy?
10. Who influences you in deciding what to buy?
11. Where do you get the money you spend on food in the market?
12. Does the amount you get vary each time?
13. What are the good things that will happen if you feed eggs to your child 12 to 24 months old?
14. What are the bad things that can happen if you feed eggs to your child 12 to 24 months old?
15. What makes/would make it easy for you go to give Incaparina 3 or 4 times a week to your child between 6 months and 24 months old?
16. What makes/would make it difficult for you go to give Incaparina 3 or 4 times a week to your child between 6 months and 24 months old?

SEMI-STRUCTURED INTERVIEW WITH KEY INFORMANTS—PRODUCERS IN RVCP

Municipality _____ Number of years in association _____ Number of years in RVCP _____

Male Female Age _____ Number of years attended school _____ Civil status _____

Head of family Yes _____ No _____ If not, age and gender of head of family _____

Number of adults over 18 living in the household _____

Number of children under two living in the household _____

Number of school aged children living in the household _____

Number of household members contributing income _____

How many *cuerdas* of land do you own? _____

How many *cuerdas* of land do you rent or borrow from another person? _____

| SOURCES OF INCOME FOR THE HOUSEHOLD | YES | NO |
|---|-----|----|
| 1. Agriculture (own crops or livestock) | | |
| 2. Agriculture labor for others | | |
| 3. Seasonal work on <i>fincas</i> | | |
| 4. Employment with the government | | |
| 5. Professional employment in nongovernment or business | | |
| 6. Own business | | |
| 7. Mason, carpenter, or construction | | |
| 8. Sale of handicrafts | | |
| 9. Domestic work | | |

In comparison with last year, the household had:

1 = more income

2 = same income

3 = less income

How does your income compare now to the time before you participated in RVCP?

1 = more income

2 = same income

3 = less income

What other changes do you perceive as a result of participation in RVCP?

If your family has seen increased income, how have you spent or invested this income?

| | PRIORITY | WHO MADE THE DECISION? |
|--|-----------------|-------------------------------|
| Purchase of land | | |
| Purchase of agricultural inputs | | |
| Purchase of livestock | | |
| School expenses | | |
| Health care or medical expenses | | |
| Journey of a migrant laborer | | |
| Construction or improvement of a house | | |
| Toys for children | | |
| Adult entertainment (alcohol, fiestas, etc.) | | |
| Electronics | | |
| Purchase of a vehicle | | |
| Repair of a vehicle | | |
| Start-up of a business | | |
| Clothing (for whom) _____ | | |
| Food | | |
| Savings account | | |
| Other | | |

Are you spending any of the additional earnings for food? Yes ____ No ____

If yes:

What kinds of food? Using the photos in Packet B, ask which categories participants are buying more of now. Ask whether it is simply the same food they have always consumed, or more of what they have always purchased, or are they purchasing foods that they rarely bought before for lack of money? Fill in the table with three priority categories of food. Who in the family decides what food to buy to eat?

| FOOD GROUP | SPECIFIC FOODS | INCREASE IN QUANTITY | FOODS THEY ATE LESS OFTEN BEFORE |
|---------------------------------------|-----------------------|-----------------------------|---|
| Cereals, grain, corn, bread, potatoes | | | |
| Legumes | | | |
| Milk products | | | |
| Meat, fish, chicken, sausage | | | |
| Eggs | | | |
| Fruits and vegetables with vitamin A | | | |
| Other fruits and vegetables | | | |
| Sugar and/or oil | | | |
| Junk food or drinks | | | |

Now, let's go to another topic:

- a. What do you have planted this year on your land? Why did you decide to plant these crops?
- b. Is what you planted for your own consumption or to sell?
- c. Who decides what and how much to plant? Who is involved in the decisions?
- d. For those planting corn or beans, for how many months does the amount you harvest last before the family has eaten it all?
- e. Do you purchase more at that time or beforehand?

Where does the money come from that you use to purchase more corn or beans?

CASH CROPS

1. In this area, what are the crops that are grown to sell?
2. How many of you, at one time, have grown one of these crops?
3. Are you continuing to plant this crop? If not, why not?
4. If yes, are you increasing the amount of this crop you plant each year?
5. If yes, does this mean you plant less of something else or how do you manage to increase the amount of cash crop you plant?

SEMI-STRUCTURED INTERVIEW WITH KEY INFORMANTS—ARTISANS

Municipality_____ Number of years in association_____ Number of years in RVCP_____

Male Female Age____ Number of years attended school_____ Civil status_____

Head of family Yes____ No____ If not, age and gender of head of family_____

Number of adults over 18 living in the household_____

Number of children under two living in the household_____

Number of school children living in the household_____

Number of household members contributing income_____

What do you produce to sell through the artisans' association?

| SOURCES OF INCOME FOR THE HOUSEHOLD | YES | NO |
|---|------------|-----------|
| 1. Agriculture (own crops or livestock) | | |
| 2. Agriculture labor for others | | |
| 3. Seasonal work on <i>fincas</i> | | |
| 4. Employment with the government | | |
| 5. Professional employment in nongovernment or business | | |
| 6. Own business | | |
| 7. Mason, carpenter, or construction | | |
| 8. Sale of handicrafts | | |
| 9. Domestic work | | |

In comparison with last year, the household had:

1 = more income

2 = same income

3 = less income

How does your income compare now to the time before you participated in RVCP?

1 = more income

2 = same income

3 = less income

What other changes do you perceive as a results of participation in RVCP?

If your family has seen increased income, how have you spent or invested this income?

| | PRIORITY | WHO MADE THE DECISION? |
|--|-----------------|-------------------------------|
| Purchase of land | | |
| Purchase of agricultural inputs | | |
| Purchase of livestock | | |
| School expenses | | |
| Health care or medical expenses | | |
| Journey of a migrant laborer | | |
| Construction or improvement of a house | | |
| Toys for children | | |
| Adult entertainment (alcohol, fiestas, etc.) | | |
| Electronics | | |
| Purchase of a vehicle | | |
| Repair of a vehicle | | |
| Start-up of a business | | |
| Clothing (for whom)_____ | | |
| Food | | |
| Savings account | | |
| Other | | |

Are you spending any of the additional earnings for food? Yes__ No____

If yes,

What kinds of food? Using the photos in Packet B, ask which categories they are buying more of now. Ask whether it is simply the same food they have always consumed, or more of what they have always purchased, or are they purchasing foods that they rarely bought before for lack of money? Fill in the table with three priority categories of food.

| FOOD GROUP | SPECIFIC FOODS | INCREASE IN QUANTITY | FOODS THEY ATE LESS OFTEN BEFORE |
|---------------------------------------|-----------------------|-----------------------------|---|
| Cereals, grain, corn, bread, potatoes | | | |
| Legumes | | | |
| Milk products | | | |
| Meat, fish, chicken, sausage | | | |
| Eggs | | | |
| Fruits and vegetables with vitamin A | | | |
| Other fruits and vegetables | | | |
| Sugar and/or oil | | | |
| Junk food or drinks | | | |

Who in the family decides what food to buy to eat?

STRUCTURED OBSERVATION OF FOOD AVAILABILITY AND ACCESS

OBJECTIVES:

1. Determine the availability and diversity of food in the ZOI.
2. Identify the range of prices and which foods are within reach of families with limited resources.

OUTPUTS:

1. List of all the foods available in markets, their seasonality, and prices.
2. List of all foods available in the community either sold or produced there.
3. Consolidation of availability based on the two lists and a validation exercise with community members.

STEPS:

1. Visit two large, regional markets and four municipal markets in the municipalities to be visited.
2. List all the foods available on the attached format, along with seasonality, current price, and price range due to seasonality.
3. In each community visited, go to at least one small and one larger shop to document everything for sale and note this on the form for locally available foods.
4. While in each community, observe other foods produced there which are rarely sold because they simply grow wild or uncultivated. List on the form for locally available foods.
5. In and near each community visited, observe the food crops grown and note these on the form for locally available foods.
6. Use the information from the group exercise with FFP women participants to confirm prices and eliminate from the lists the foods that are never consumed, noting why they are not consumed.

MARKET FORM

| Food | Unit of sale | Months available | Price in time of abundance | Price in time of scarcity | Current price |
|------|--------------|------------------|----------------------------|---------------------------|---------------|
| | | | | | |
| | | | | | |

Foods are listed on the form by category (fruits, vegetables, meats, packaged food, etc.)

FORM FOR LOCALLY AVAILABLE FOODS

| Food | Where found | Season | Unit and price | Availability |
|--------------|--------------|------------|------------------------|---------------|
| Blackberries | growing wild | April, May | can be picked for free | small amounts |
| Tortrix | shops | none | Q1.00/package | everywhere |

GROUP EXERCISE TO VALIDATE FOOD AVAILABILITY AND ACCESS

PARTICIPANTS: Women beneficiaries of FFP programs, mothers of children under two.

OBJECTIVES:

1. Define which foods are most commonly consumed in the communities and by the poorest families.
2. Verify the prices paid for food in markets and shops, and how much price influences food choices.
3. Determine how food preferences and beliefs affect food purchase decisions.
4. Triangulate the information on food availability and access.

MATERIALS:

1. Packet A of photos of all foods available in local markets.
2. Lists of foods available in markets and available in the community.

STEPS:

1. Invite the participants to sit around a table or in a circle on a straw mat.
2. Explain that we need their help in learning what foods are normally consumed in the community.
3. Place all the photos from Packet A in the middle of the women and assure that they all understand what they are seeing in the pictures. Ask each woman to name all the foods in the photos nearest to her. If she can't identify something, ask other women to help. As a last resort, the facilitator can name to food in the photo.
4. Ask the women which foods they never or hardly ever consume. They choose these photos and set them to one side, explaining why they don't consume these foods.
5. Ask the women which foods they don't purchase because they produce them or can get them without cost in the community. They will set these photos in another pile, explaining where they get these foods.
6. Ask the women which foods they only eat on special occasions. They will make another pile of these foods and explain the occasion.
7. Now, ask the women to select the pictures of the foods they eat every day. It may be that some families eat less or more than others. Note the differences.
8. For the photos remaining in the center, ask them how often they might eat these foods.
9. Quickly organize the photos of the foods they said they eat every day or occasionally into the groups on the Food Availability and Access form. Show each of these photos and ask the women the price range they pay, whether they think this is low, medium, or high cost, and at what price they would quit buying the item because they consider it too expensive. Note this information on the form for validation.
10. For each one of the fruits, vegetables, eggs, and meat in the daily or occasional consumption piles, ask whether the poorest families in the community ever buy this product. How often? Is it readily available? How many families produce the product to eat themselves? How much do they produce?
11. Ask the participants if there are foods that are not appropriate for children under two? They will put these in another pile and explain why they are not appropriate. Fill in the table with this information.

SUMMARY OF FOODS NOT ACCEPTABLE FOR CHILDREN UNDER TWO

| FOOD | WHY IT IS NOT ACCEPTABLE? |
|------|---------------------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

12. Show the participants the photos of juices, sodas, candy, cookies, and chips. Which of these do different family members prefer? Which ones do they buy most often? How much do they estimate they spend per month on these foods? How often do they give these kinds of foods to children under two? Under five? Why? Do they give money to their school children to buy these foods during recess? How much money do they give the children?

Estimated amount spent by the family per month_____

Amount given to school children daily to purchase FLNV_____

SUMMARY OF CONSUMPTION OF FOODS OF LOW NUTRITIONAL VALUE

| FOOD OR DRINK (In order of preference) | HOW OFTEN CONSUMED? | AGE OF CONSUMER | SOURCE |
|--|---------------------|-----------------|--------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

13. Ask the participants if they remember the first time they tried a new food or beverage? What was it? What motivated them to try it?

Friends_____

Family_____

Advertisements on radio or television_____

Advertisements on billboards_____

Advertisement in the store_____

Promotion in the market_____

Other_____

14. How often do you go to the market? Which market do you go to?

15. Who decides what you will buy at the market? Where does the money come from?

ANNEX C. SURVEY PARTICIPANTS

NUMBER OF SURVEY PARTICIPANTS BY MUNICIPALITY AND ACTIVITY TYPE

| DEPARTMENT/ MUNICIPALITY | RVCP—AGRICULTURE (HORTICULTURE OR COFFEE) | | RVCP— HANDICRAFTS | | FOOD FOR PEACE | | TOTALS |
|-----------------------------|--|-----------|----------------------|----------|----------------|------------|------------|
| | MEN | WOMEN | MEN | WOMEN | MEN | WOMEN | |
| Totonicapan | | | | | | | |
| Momostenango | 7 | 3 | | | 6 | 21 | 37 |
| Santa Lucia la Reforma | 12 | 9 | | | 2 | 24 | 47 |
| Huehuetenango | | | | | | | |
| Concepción Huista | | | | | 7 | 15 | 22 |
| Chiantla | 9 | | | | 18 | 22 | 49 |
| Quetzaltenango | | | | | | | |
| Concepción Chiquirichapa | | | | 5 | 5 | 44 | 54 |
| San Marcos | | | | | | | |
| San Sebastian | 5 | | | | | | 5 |
| San Lorenzo | | | | | | 21 | 21 |
| Tajumulco | | | | | 2 | 7 | 9 |
| Totals | 33 | 12 | | 5 | 40 | 154 | 244 |

ANNEX D. STUDY METHODS BREAKDOWN

STUDY METHODS BY ACTIVITY, LOCATION, AND NUMBER & GENDER OF PARTICIPANTS

| DEPARTMENT | MUNICIPALITY | ACTIVITY | METHODS | NUMBER OF PARTICIPANTS | | | |
|--------------------------------|---------------------------------|---------------|--------------------------------------|------------------------|------------|----------|------------|
| | | | | MEN | WOMEN | COUPLES | TOTAL |
| Tonicapán | Momostenango | SEGAMIL- FFP | Spending and cropping decisions | 6 | 9 | | 15 |
| | | SEGAMIL- FFP | Food acquisition exercise | | 12 | | 12 |
| | | RVCP—AGEXPORT | Individual interviews with producers | 7 | 3 | | 10 |
| | Santa Lucía la Reforma | SEGAMIL—FFP | Food acquisition exercise | 2 | 14 | | 16 |
| | | SEGAMIL—FFP | Spending and cropping decisions | | 10 | | 10 |
| | | RVCP—AGEXPORT | Spending and cropping decisions | 6 | 4 | | 10 |
| | | RVCP—AGEXPORT | Spending and cropping decisions | 6 | 5 | | 11 |
| Quetzaltenango | Concepción Chiquirichapa | RVCP—AGEXPORT | Individual interviews with artisans | | 5 | | 5 |
| | | PAISANO—FFP | Spending and cropping decisions | | 9 | | 17 |
| | | | Individual validation exercise | | 3 | | |
| | | | Food acquisition exercise | | 8 | | |
| | | PAISANO—FFP | Spending and cropping decisions | | | 5 | 32 |
| | | | Food acquisition exercise | | 20 | | |
| Individual validation exercise | | | 7 | | | | |
| San Marcos | San Sebastián | RVCP—ANACAFE | Spending and cropping decisions | 5 | | | 5 |
| | | | Individual interviews with producers | 5 | | | |
| | Tajumulco | SEGAMIL—FFP | Spending and cropping decisions | 2 | 5 | 2 | 9 |
| | San Lorenzo | SEGAMIL—FFP | Spending and cropping decisions | | 7 | | 7 |
| | | SEGAMIL—FFP | Spending and cropping decisions | | 7 | | |
| | | | Food acquisition exercise | | 7 | | |
| SEGAMIL—FFP | Spending and cropping decisions | | 7 | | 7 | | |
| Huehuetenango | Concepción Huista | PAISANO—FFP | Food acquisition exercise | | 15 | | 15 |
| | | PAISANO—FFP | Food acquisition exercise | 7 | | | 7 |
| | Chiantla | PAISANO—FFP | Food acquisition exercise | | 19 | | 19 |
| | | PAISANO—FFP | Spending and cropping decisions | 18 | 3 | | 21 |
| | | RVCP—ANACAFE | Spending and cropping decisions | 9 | | | 9 |
| TOTAL | | | | 73 | 179 | 7 | 244 |

ANNEX E. FOOD CONSUMPTION CHARACTERISTICS

FOODS NEVER OR RARELY CONSUMED BY FFP PARTICIPATING FAMILIES

| FOODS NEVER EATEN | REASON |
|---|---|
| <i>Revolcado</i> (Tomato based sauce) | They do not like it |
| Ham | They do not like it |
| Sausage | They do not like it, and it can only be found at the butcher in Huehuetenango |
| Powdered milk | Cannot obtain it and are not accustomed to doing so |
| Annatto (a coloring and flavoring agent) | Not accustomed to consuming it |
| FOODS RARELY EATEN | REASON |
| Plantain | Only when necessary because it is for sick people |
| Blackberry | Cannot obtain it |
| <i>Bledo</i> (Green leafy vegetable) | Only when it is found in markets |
| <i>Incaparina</i> | It is expensive and they prefer <i>atol de masa</i> |
| Sweet potato | It is rare to find it in the market |
| Peanuts | From time to time like candy |
| <i>Malanga</i> (a starchy root from the taro plant) | It is rare in markets |
| Dried fish or shrimp or fresh fish | It is expensive |
| Beef | It is very expensive |
| Pork crackling | It is very expensive |
| Pork | It is very expensive |
| Chorizo | It is very expensive |
| Sausage in casing | It is very expensive |
| Yogurt | It is very expensive |
| Cheese | It is very expensive and we cannot get it for the whole family |
| Dried milk | It is very expensive |
| Liquid milk | It is very expensive, sometimes it is used for medical recipes. There are no cows |
| Coffee | Only when fresh beans are available, they are ground and roasted |
| Soup of intengin | Some say they do not like the flavor |
| Cookies | They are expensive |
| Wheat bread | We do not grow it and it is hard to find |
| Honey | Only during Easter week (Semana Santa) |
| Cake of chocolate for making hot chocolate | It is for celebrations or for sick people |

FOODS NOT GIVEN TO CHILDREN UNDER TWO AND RATIONALE

| FOOD | REASON FOR NOT GIVING TO CHILDREN UNDER TWO |
|---|--|
| Peanuts | Causes stomach ache and they cannot chew it without teeth |
| Fish | Because the bones are dangerous |
| Mango | Causes stomach ache |
| Chile | Because it is spicy |
| Soft drinks | It is dangerous for their health |
| Junk/fast food (tacos, sweets, instant soup, cookies, boxed juices) | It causes stomach aches, the juices make the stomach cold |
| Pork crackling | It is very hard and causes stomach and teeth problems |
| <i>Bledo</i> (a green leafy vegetable) | They do not like the taste |
| <i>Hierba mora</i> (a green leafy vegetable) | It is bitter |
| <i>Ayote</i> | It does not have a good taste |
| Avocado | Because it is very cold and causes weakness in the children, who fall continuously |
| Shrimp | They cannot chew it |
| Coffee | It does not have vitamins |
| Radish | They cannot chew it, they swallow it almost whole and it gives them stomach aches |
| Cauliflower | Causes stomach problems |
| Cabbage | Causes stomach problems |
| Honey | It agitates their worms |
| Chips | Because it is fried it cannot be digested easily and causes intestinal infections |
| Boiled black beans | They cannot chew them well |
| <i>Remolacha</i> (beets) | Causes diarrhea |



LINKING AGRICULTURE & NUTRITION PATHWAYS | PRINCIPLES | PRACTICE

SPRING is working with USAID Missions to understand and apply a set of agriculture–nutrition pathways and principles. Through targeted technical assistance and knowledge-sharing, this work aims to improve the design, implementation, and monitoring of Feed the Future activities.

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