

Knowledge, Attitudes, and Practices Surrounding Nutrition among Extension Institutions and Their Beneficiaries in Honduras

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Final report for Activity 2.1.1



A resident of Santa Rosa de Copán shows off her kitchen garden filled with carrots, onions, beans, radishes, and lettuces.



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Background to INGENAES

The Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) project is funded by the United States Agency for International Development (USAID) to support the Presidential Feed the Future Initiative. USAID granted the award to the University of Illinois at Urbana-Champaign to act as the primary implementer and lead organization of the consortium. The University of California-Davis, the University of Florida, and Cultural Practice, LLC. also participate in the project as consortium members. INGENAES is currently working in select FTF countries¹.

The purpose of INGENAES is to improve extension and advisory services (EAS) by narrowing gender gaps, increasing empowerment of women farmers, and improving gender and nutrition integration within EAS services. This is accomplished by working with a broad base of in-country stakeholders including farmers, producer organizations, policy makers, non-governmental organizations (NGOs), and donors. INGENAES focuses on capacity-building at the institutional level, targeting those institutions involved in delivery of EAS services including: agricultural and nutrition information, training, and technologies.

INGENAES has identified four action areas that reflect the major gaps in extension services concerning gender and nutrition integration. These areas include 1) gender and nutrition integration into EAS, 2) improved delivery of EAS to women farmers, 3) dissemination of technologies to enhance women's agricultural productivity, and 4) application of effective, nutrition-sensitive tools and approaches for engaging both men and women. By improving the capacity of institutions to integrate gender-responsive and nutrition-sensitive information and activities into EAS, institutions will be able to more effectively promote gender equality, improve household nutrition, increase women incomes, and ultimately reduce food insecurity.

Gender and Nutrition in Honduras

In Honduras, women face high rates of discrimination and lack equal access to resources and services as compared to men. Gender inequality is intimately linked to nutrition, poverty, and agriculture, and all four issues often reinforce one another. For example, greater gaps in gender equality are associated with higher rates of malnutrition. When individuals have poor nutrition, their health and ability to work are affected, leading to lower incomes and reinforcement of poverty. These associations have serious implications on the local and national economy and human rights.

Approximately 60% of Hondurans fall below the poverty line, the majority of whom live in rural areas and are dependent on agriculture for their livelihoods (USAID, 2014). The combination of isolation and poverty in rural Honduras has allowed for the conservation of traditional gender norms within a patriarchal or *machismo* system. Furthermore, agriculture itself is extremely gendered in Honduras (Lomot, 2013). Men and women follow very distinct roles in which men work in the fields during the day while women tend to their children, prepare food, and maintain home gardens. Women are minimally involved in income-generating activities, essentially reducing the income-generating potential of the

¹ Feed the Future countries participating in the INGENAES project include Bangladesh, Cambodia, Honduras, Nepal, Rwanda, and Tajikistan.

household by half (Bradshaw, 1995). The impact of excluding women from the workforce is felt on the national level and is attributed as one of the key challenges facing economic development in Honduras (Lomot, 2013). By targeting women in agricultural trainings and activities, a pathway to increased household income is created through increased skill, self-confidence, decision-making power, and reduced gender stereotypes from both men's and women's perspectives (Humphries *et al.*, 2012).

In 2012, approximately 15% of Hondurans experienced slight to moderate food insecurity. Slight food security is characterized by a low possibility of becoming food insecure and access to most necessary resources. Moderate food insecurity relates to an increased possibility of becoming food insecure and a lack of some basic resources like health or education services. The majority of Hondurans (51% in 2010) experienced severe food insecurity to some degree. Severe food insecurity may involve lack of adequate food, high malnutrition rates, and above average to critical loss of livelihood (UTSAN, 2010). Women play a key role in food security due to their role in food provision, food choice decision-making, and tending to home gardens. Mothers decide on diet diversity, an important component of food security that can protect against micronutrient deficiencies. Furthermore, food preparation methods (e.g. steaming, boiling, and frying) also contribute to family health, especially with respect to obesity and overweight. Therefore, targeting women in nutrition-sensitive trainings and activities can greatly enhance the effectiveness of programs seeking to improve nutrition status in Honduras.

The primary drivers of food insecurity and poverty in rural Honduras include prolonged drought, environmental degradation, economic dependence on agriculture, poor agricultural productivity, and limitations within the current privatized extension system (USAID, 2014; Rivera and Alex, 2004). The strength of building the nutrition sensitivity and gender-responsiveness of extension institutions lies in the ability of such programs to address several of those barriers at once. Alternatively, programs that address one barrier, instead of taking into consideration the multifactorial limitations facing food security, may fall short of success. For example, programs that solely address improved gender equity in Honduras may have limited success if the program does not take into consideration contributing factors like food insecurity and poverty. Gender equity can be influenced by poor family health and socioeconomic status because these conditions place additional stress on the family and relationships within the home. Additionally, programs addressing agriculture could reach a production ceiling due to limitations of focusing solely on male producers. Male-targeted agricultural programs ignore approximately half of the available labor force: women. By including women farmers in agricultural teachings and trainings, production may be increased through an expanded labor force with more equitable access to skill-building. Similarly, interventions involving women in agriculture may have limited influence if the context of Honduras' extension system is not taken into account (Bradshaw, 1995).

There are no state-run extension institutions within Honduras. Instead, several private companies and NGOs provide technology and education services to farmers (UN-HLTF, 2010). Differing objectives between these institutions have led to disconnections within EAS stakeholders, contributing to gaps in services and lack of knowledge surrounding who receives services, what types, when, and by whom. Furthermore, most agriculture extension programs are directed by men, targeting men. Lack of targeted training for women farmers is a key barrier of EAS in Honduras, as well as lack of involvement of women in EAS. Programs that bypass women farmers are often limited in the scale of change they can effect and may lead to negative effects for agricultural families headed by women, of which there is a relatively large

percentage in Honduras (FAO, 1998; Bradshaw, 1995). Training men and women extension workers together has been shown to break down social barriers in EAS, which translate into greater gender responsiveness in the field. Men who have been trained with women may be more effective at communicating with women farmers (Humphries, 2012). It is important to note that extension services to women farmers cannot be limited only to services provided by women extension workers. High gender-based violence and crime prevent women from traveling alone in many parts of Honduras, including some areas visited by the INGENAES team. The risk of gender based violence may limit where female extension workers can travel to deliver services while unaccompanied.

In Honduras, where gender-based discrimination is strong, it is critical to integrate gender responsiveness into agriculture and nutrition interventions to enhance the effectiveness of those programs. Without this integration, it is possible that women’s low decision making power, self-confidence, and limited time availability will prevent them from benefiting from such activities. The economic benefit of increased gender equity and participation of women in agriculture extend beyond the household level and have significant impacts at local and national levels.

Project Objectives

Activity 2.1.1 fits within the scope of Action Area 2 of the INGENAES Honduras workplan, which focuses on improving the delivery methods for gender-responsive and nutrition-sensitive services. More specifically, Activity 2.1.1 seeks to identify and evaluate communication strategies, technologies, and materials for integrating and delivering nutrition information into EAS services for low-income farmers, especially men, living in the Dry Corridor (See Figure 1 for specific zones of influence). Extension services typically target women in nutrition-sensitive activities; However, these methods neglect the constraints on women’s time, mobility, and social norms. Women, as primary caregivers, spend the majority of their day working in the home or caring for children, significantly limiting time and mobility necessary to take part in the trainings. Furthermore, traditional roles often require women to seek permission to participate in such trainings. Current training does little to engage men in family health and nutrition. This action area seeks to fill this gap, targeting men in nutrition as a means of increasing their involvement and understanding of family health. Long-term, as men’s attitudes towards nutrition change, women may experience increased time and flexibility for participating in EAS trainings among other community activities.

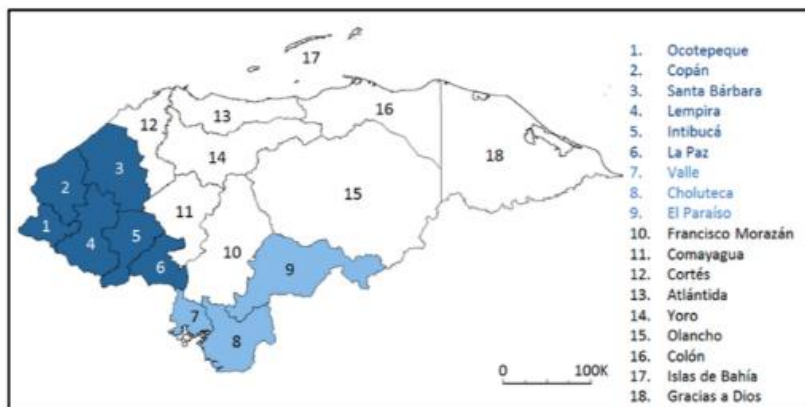


Figure 1: Feed the Future Zones of Influence in Honduras. INGENAES focuses on departments 4-6.

The ultimate goal of Activity 2.1 is to better understand the value of nutrition among agriculture extension partners, their institutions, and beneficiaries to inform the adaptation of simple, actionable training materials for EAS workers. Through improved materials and technologies, EAS workers would be able to better target male farmers on issues of nutrient requirements and malnutrition, dietary diversity, proper portioning, and maternal and child health. Family health and nutrition are highly gendered in Honduras, and are traditionally regarded as women's roles. Improving the knowledge of nutrition among men can help reduce social barriers surrounding men's involvement in these areas. Furthermore, when men and women are both involved, there is the potential for more sustainable and greater impact.

By understanding the current knowledge base of men and women farmers surrounding nutrition, EAS institutions will be able to build their capacity to fill the gaps between men and women's knowledge. EAS institutions will then be able to effectively integrate information surrounding malnutrition-preventing practices like dietary diversity or improve family nutrition through improved food safety (safe water use, food storage) within trainings on crop production and storage. This reduces the time burden associated with separating nutrition and agricultural practices. Particularly in the Dry Corridor, Honduras suffers from high rates of stunting in children under five due to malnutrition. This is the initial step towards a sustainable change in the social barriers facing men's involvement in nutrition and some of the country's largest rural health challenges.

Methods

To carry out this activity, a team of researchers from the University of Illinois at Champaign-Urbana and the University of Florida conducted a knowledge, attitudes, and practices questionnaire (KAP) with directors and extension agents of EAS institutions in regions of the Dry-Corridor, Honduras. Data was collected among four groups of participants: project coordinators of extension institutions, extension agents, directors of extension institutions, and low-income men and women living in the Dry Corridor.

Small groups (5-10 individuals) of project coordinators in the extension institutions and, in some cases, the extension institution director, participated in focus groups led by the primary investigator (PI) in either Tegucigalpa or Santa Rosa de Copan². In these focus groups, the PI asked questions concerning the cross cutting themes, primary objectives, communication and program implementation techniques, and the institutions emphasis on gender and nutrition. The goal of the focus groups was to determine whether gender and nutrition was integrated into the institution and to what degree. In situations where little integration was noted, the interviewer asked follow-up questions regarding interest surrounding integration of gender and nutrition into the institutions' programs. The results of the focus groups will be analyzed alongside the results of the KAP survey for extension workers and men and women farmers in the field to qualitatively assess how KAPs at the highest institutional level correspond to KAPs in the field.

Information surrounding the KAPs of extension workers was collected on two platforms; electronic KAP surveys that were made available to extension agents from all participating institutions and focus groups

² Stakeholders that participated in focus groups in Tegucigalpa include: Heifer International, World Vision, CARE, and Save the Children. Stake holders that participated in focus groups in Santa Rosa de Copan include: PILARH, MANSURCOPAN, and FINTRAC-MERCADOS.

which were held in Santa Rosa de Copan. Electronic KAP surveys were created and distributed using Qualtrics, an online survey platform, and covered themes of nutrition knowledge (meal portions, micronutrient deficiencies, diet diversity, undernutrition, and obesity). Within focus groups led by researchers, extension agents discussed more general topics of nutrition and gender. Similar to focus groups with project coordinators, the purpose of conducting focus groups with extension agents was to assess the degree of gender-responsiveness and nutrition sensitivity within the institutions' framework and in practice. Finally, the researchers posed questions to identify any opportunities and barriers to integrating gender and nutrition within the institutions' programs.

Researchers collected KAP survey data in the field in communities receiving extension services from PILARH and MANSURCOPAN. Extension agents from PILARH and

MANSURCOPAN acted as guides within their respective communities. Approximately 1315 households were visited in each community, with a total of 50 KAP surveys taken in the field. Within each household, the male and female heads of household participated in the KAP survey separately. The KAP survey for men and women farmers was focused on the information that could be delivered through EAS services. In this way, the KAP and focus group results from extension agents can be compared to the knowledge, attitudes, and practices of men and women farmers in the field to identify gaps in services or communication with respect to specific themes.

To analyze data from the focus groups, researchers will utilize both theoretical coding and structural coding of words and phrases used during the interviews. Major patterns in the data will be identified by categorizing commonly used words and phrases into themes. This phase will be completed by INGENAES researcher Jennifer Lotton as part of her master's thesis for UIUC. This thesis is to be presented at UIUC in the coming year.

Results

The data analysis stage for this activity is ongoing. For this reason, only initial findings from the focus group meetings and KAP surveys will be discussed.

At the institutional level, there is sufficient limitations with respect to funding for EAS, knowledge surrounding the mechanisms of integrating gender and nutrition within existing programs, and cohesion between stakeholders. Funding was the major limitation identified by project coordinators and directors in all focus group meetings and interviews, respectively. Extension institutions have little guaranteed long-term funding, and must compete yearly for grants and donations. Additionally, some directors discussed the need for EAS institutions to follow trends in funding, oftentimes rather than public need, in order to continue to provide services at all.

The barriers to integrating gender and nutrition identified by extension agents during focus groups was very different as compared to project coordinators. While project coordinators focused on funding limitations, extension agents consistently discussed the need for increased opportunities for capacity building and education for agents, more specifically, they identified gaps in knowledge of how to integrate gender and nutrition into their current projects. There was, however, significant differences between the foci of PILARH and MANSURCOPAN in terms of gender and nutrition. This may be due to the

differences between the communities served by the respective institutions. In general, the PILARH communities were of lower socio-economic status, had fewer food resources, were more likely to farm on steep hills, have less land, and have poor access to safe water or improved water filtration methods. Extension agents servicing areas in better overall socioeconomic status appeared to have a greater focus on gender, though gender programs were not integrated into agriculture. Aside from food safety, there was little integration of nutrition into agricultural extension.

Interestingly, between farming communities, areas of higher socioeconomic status and higher productivity reported less knowledge and less importance was placed on nutrition by farming families. Men in these areas were particularly focused on improving crop yields and increasing access to technologies and trainings on productivity. Both men and women showed significant gaps in knowledge with respect to dietary diversity. Among communities of lower socioeconomic status, reciprocity was a common theme discussed during KAP surveys. In these areas, families were more likely to have limited food access and tended to ration their food more sparingly. As a result, these same families often had much higher rates of borrowing and lending between community members (family and neighbors were most commonly mentioned).

The gaps that exist between the three levels of action (at the level of the institution, extension agent, and farmer) will not be fully understood or available for analysis until KAP survey results are collected. At this point, researchers will be able to identify common gaps and areas where there is a barrier to knowledge within one or more groups. In this way, researchers will identify at what level knowledge is not being effectively delivered. For example, if the project coordinators and extension agents both perform well on the KAP survey but their communities do not, this suggests that communication techniques should be improved at the level of the extension agent. This may be done through improved access to trainings surrounding methods of gender and nutrition integration. Furthermore, these findings can inform material and technology development by INGENAES Action Area 4 for communicating nutrition and gender information to farming communities. Alternatively, if project coordinators and directors perform well on the KAP but their extension agents and communities do not, there is a gap in access to information between the extension agents and their directors. This would suggest the need for changes at the programmatic level to better communicate and inform extension agents. Lastly, we would not expect to see situations in which farming communities have a high degree of knowledge surrounding nutrition but the EAS institutions and agents do not. Due to the rural, often isolated nature of the communities in the Dry Corridor, there is no opportunity for community members to gain access to this information other than through EAS.

Recommendations

The following results are based on initial findings and observations and should be reevaluated pending data analysis.

Based on initial observations, communities with lower socioeconomic status continually reported community support as an important source of economic and nutritional stability when resources are scarce. Reciprocity between family members and neighbors reflects strong bonds between community members that may contribute to better cohesion within the community, willingness to work together, set goals, and reach outcomes that benefit the entire group. Therefore, strengthening community

relations may be an important means of improving project outcomes for nutrition- and gender-sensitive agriculture extension interventions. Women in Honduras are typically responsible for kin keeping and building new relationships. This may involve invitations to visit one's home, regularly visiting with neighbors in their home, sharing meals, lending and borrowing resources, and sharing responsibility of children, among other practices. Targeting women in reciprocity and community-building programs may lead to a faster adoption of these practices that may have an insulating effect against food insecurity. To target this area, a community-based analysis could be performed to identify the opportunities and barriers facing some communities with respect to cooperation and reciprocity. From here, community strengthening activities and trainings could be implemented within current extension projects, targeted at the specific strengths and weaknesses identified in the community's analysis.

Conclusions

Activity 2.1 is an ongoing research project within INGENAES. As such, the researchers expect additional information to be released once the results from analysis of the KAP surveys is obtained. Based on the initial findings, however, it is expected that the community KAP will reflect the results gained by the KAP at the level of the extension agent. Furthermore, performance on the KAP may not reflect socioeconomic status. Communities with low socioeconomic status, limited food, and small farms may have better knowledge and implementation of good family feeding practices as compared to communities with high socioeconomic status. The reason behind this differentiation would lie in the focus of the extension institutions and the extension agent on crop production with little integration of gender or nutrition. This project has generated a seminar presentation at the University of Florida Environmental and Global Health Seminar, which will become a resource sharable to stakeholders. Additionally, there is an opportunity for additional publications concerning the adaptive management strategy or community based analysis discussed in the recommendations section.

References

- Abraham-Hardee, S. (2009). Nutrition knowledge of Honduran caretakers and dietary change of their children. Retrieved from <https://theses.lib.vt.edu/theses/available/etd-02262009-201230/unrestricted/Sofiadisseration.pdf>
- Bradshaw, S. (1995). Women's access to employment and the formation of female-headed households in rural and urban Honduras. *Bulletin of Latin American Research*, 14(2), 143–158. Retrieved from <http://www.jstor.org/stable/pdf/3339050.pdf>
- Humphries, S., Classen, L., Jiménez, J., Sierra, F., Gallardo, O., & Gómez, M. (2012). Opening Cracks for the Transgression of Social Boundaries: An Evaluation of the Gender Impacts of Farmer Research Teams in Honduras. *World Development*, 40(10), 2078–2095. <https://doi.org/10.1016/j.worlddev.2012.05.008>
- Lomot, R. (2013). Gender discrimination: A problem stunting Honduras' entire economy. *Global Majority E-Journal*, 4(1), 15–26.

Rivera, W., & Alex, G. (2004). *Privitazation of Extension Systems: Case Studies of International Initiatives* (Discussion Paper No. 9). Washington D.C., USA: The World Bank.

Truitt, G. (1998). Female agricultural extension agents in El Salvador and Hondruas: Do they have an impact? *FAO [Food and Agriculture Organization]*. Retrieved from <http://www.fao.org/docrep/w9699e/w9699e00.htm>

UNHCR (Immigration and Refugee Board of Canada). (2012). Honduras: Whether women who head a household may, without receiving assistance from a man, obtain a home and employment in Tegucigalpa or San Pedro Sula; the support services provided by the state to households run by women in these cities; violence against women in these cities (No.

HND103833.FE). Retrieved from <http://www.refworld.org/docid/4f30cfea2.html>

UN-HLTF (United Nations- High Level Task Force on the Global Food Security Crisis). (2010). *Honduras Full Country Visit Report: 15-19 March 2010*. Retrieved from http://un-foodsecurity.org/sites/default/files/2010_HONDURAS_Full_Report_Final.pdf

USAID [United States Agency for International Development]. (2014). *Honduras: Nutrition Profile*. Tegucigalpa. Retrieved from <https://www.usaid.gov/sites/default/files/documents/1864/USAID-Honduras-Profile.pdf>

UTSAN [Unidad Técnica de Seguridad Alimentaria y Nutricional]. (2010). *Estrategia nacional de seguridad alimentaria y nutricional* (Secretaría de estado en el despacho presidencial).

Tegucigalpa. Retrieved from http://www.gafspfund.org/sites/gafspfund.org/files/Documents/5.%20Honduras_strategy.pdf

Annex B: KAP Survey

Below is the KAP survey used among extension workers through the online platform. For full details of the materials used for this research (in focus groups, field KAP, etc.) with English and Spanish translations, please see the supplemental materials.

Knowledge of Dietary Guidelines

- I. Write 3 words in the lines below that describes what nutrition means to you:
- a. _____
 - b. _____
 - c. _____



2. Are you familiar with the above image?
- a. If yes, please go to question 2
 - b. If no, please go to question 3
3. What is the name for the above image?
- a. Guías Alimentos Para Honduras
 - b. Mi Plato de Honduras
 - c. Not sure
4. What is the above image good for? (check all appropriate answers)
- a. To help people remain healthy
 - b. To encourage people to eat foods from different food groups
 - c. Not sure
5. How many food groups are included in the above image?
- a. 5
 - b. 4
 - c. Not sure
6. Which food groups should you eat every day?
- a. Meats and Dairy
 - b. Fruits and Staples

- c. Not sure
- 7. Which food groups should you eat two times per week?
 - a. Meats
 - b. Dairy
 - c. Not sure
- 8. Which food groups should you eat three times per week?
 - a. Meats
 - b. Dairy
 - c. Not sure
- 9. Which food group should you limit your intake of?
 - a. Meats
 - b. Fats
 - c. Not sure
- 10. Which picture shows a serving size for beans?

a.



b.



c. Not sure

- 11. Which picture shows a serving size for tortilla?

a.



b.



c. Not sure

- 12. Which picture shows a serving size for juice?

a.

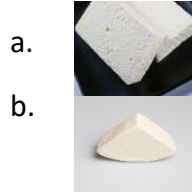


b.



c. Not sure

13. Which picture shows a serving size for cheese?



c. Not sure

14. Which recommendation is found within the guidelines? (check all appropriate answers)

- a. Drink water every day
- b. Remain physically active
- c. Not sure

Attitudes toward Dietary Guidelines

- 1. How important is it to follow the dietary guidelines?
 - a. Not important
 - b. Not sure the importance
 - c. Important
- 2. How confident are you in following the dietary guidelines?
 - a. Not confident
 - b. Somewhat confident
 - c. Confident

Practices towards dietary guidelines

In the space below, type in the foods you consumed yesterday, during the day and night.

Knowledge of Iron-deficiency anemia

- 1. Have you heard about iron-deficiency anemia?
 - a. If yes, please go to question 2
 - b. If no, please go to question 3
 - c. Not sure
- 2. How would you know if someone had iron-deficiency anemia? (check all appropriate answers)
 - a. Less energy/weakness
 - b. Paleness/pallor

- c. Spoon nails/bent nails
 - d. Gets sick more often
 - e. Not sure
3. What causes iron-deficiency anemia? (check all appropriate answers)
- a. Lack of iron in the diet/ eat too little
 - b. Sickness/infection
 - c. Heavy bleeding during menstruation
 - d. Not sure
4. How can iron-deficiency anemia be prevented? (check all appropriate answers)
- a. Eat/have a diet rich in iron foods
 - b. Eat/give Vitamin-C rich foods during or right after meals
 - c. Take/give iron supplements, if prescribed
 - d. Treat other causes of anemia – seek health care assistance
 - e. Not sure
5. Which foods are high in iron? (check all appropriate answers)
- a. Beans
 - b. Beef
 - c. Rice
 - d. Corn
 - e. Tortilla
 - f. Not sure
6. Which foods will help with the absorption of iron? (check all appropriate answers)
- a. Lime
 - b. Papaya
 - c. Pineapple
 - d. Onion
 - e. Beef
 - f. Not sure
7. Which foods will reduce the absorption of iron? (check all appropriate answers)
- a. Water
 - b. Orange juice
 - c. Coffee
 - d. Tea
 - e. Coke
 - f. Not sure

Attitudes toward iron-deficiency anemia

1. How likely do you think you will be iron-deficient/anemic?
 - a. Not likely
 - b. Maybe
 - c. Likely
2. How serious do you think iron-deficiency anemia is?
 - a. Not serious
 - b. Maybe serious
 - c. Serious
3. How good do you think it is to prepare meals with iron-rich foods such as beef, chicken, or liver?
 - a. Not good
 - b. Maybe good
 - c. Good
4. How difficult is it for you to prepare meals with iron-rich foods?
 - a. Not difficult
 - b. Maybe difficult
 - c. Difficult
5. How confident do you feel in preparing meals with iron-rich foods?
 - a. Not confident
 - b. Little confidence
 - c. Confident
6. How much do you like the taste of iron-rich foods?
 - a. Dislike
 - b. Not sure
 - c. Like

Practices towards consuming iron-rich foods

1. Please check the foods you consumed yesterday, during the day and night:
 - a. Beef
 - b. Pork
 - c. Goat
 - d. Chicken
 - e. Fresh fish
 - f. Dried fish
 - g. Seafood
2. Do you eat fresh citrus fruits such as oranges, mangoes, pineapple, or drink juice made from them on a daily basis?
 - a. Yes
 - b. No
 - c. Not sure

3. When do you usually eat fresh citrus fruits? (check all answers that apply)
 - a. Before a meal
 - b. During a meal
 - c. After a meal
 - d. Not sure
4. Do you drink tea or coffee on a daily basis?
 - a. Yes
 - b. No
 - c. Not sure
5. When do you usually drink coffee or tea?
 - a. 2 hours or more before a meal
 - b. Right before a meal
 - c. During a meal
 - d. After a meal
 - e. 2 hours or more after a meal

Knowledge of Vitamin A deficiency

1. Have you heard about Vitamin A deficiency?
 - a. If yes, please go to question 2
 - b. If no, please go to question 3
 - c. Not sure
2. How would you know if someone had iron-deficiency anemia? (check all appropriate answers)
 - a. Less energy/weakness
 - b. Gets sick more often
 - c. Eye problems: night blindness (not able to see at dusk and in dim light), dry eyes, corneal damage, blindness
 - d. Not sure
3. What causes Vitamin A deficiency? (check all appropriate answers)
 - a. Lack of vitamin A in the diet/ eat too little
 - b. Lack of consuming a variety of foods
 - c. Not sure
4. How can Vitamin A deficiency be prevented? (check all appropriate answers)
 - a. Eat/have a diet rich in Vitamin A foods
 - b. Eat foods fortified with Vitamin A
 - c. Take Vitamin A supplements
 - d. Not sure
5. Which foods are high in Vitamin A? (check all appropriate answers)
 - a. Carrot
 - b. Fish
 - c. Milk
 - d. Corn
 - e. Mango
 - f. Not sure

Attitudes toward Vitamin A deficiency

6. How likely do you think you will be Vitamin A deficient?
 - a. Not likely
 - b. Maybe
 - c. Likely
7. How serious do you think Vitamin A deficiency is?
 - a. Not serious
 - b. Maybe serious
 - c. Serious

8. How good do you think it is to prepare meals with Vitamin A-rich foods such as liver, carrots, bell peppers, mango?
 - a. Not good
 - b. Maybe good
 - c. Good
9. How difficult is it for you to prepare meals with Vitamin A-rich foods?
 - a. Not difficult
 - b. Maybe difficult
 - c. Difficult
10. How confident do you feel in preparing meals with Vitamin A-rich foods?
 - a. Not confident
 - b. Little confidence
 - c. Confident
11. How much do you like the taste of Vitamin A-rich foods?
 - a. Dislike
 - b. Not sure
 - c. Like

Practices towards consuming Vitamin A-rich foods

1. Please check the foods you consumed yesterday, during the day and night:
 - a. Liver
 - b. Eggs
 - c. Milk
 - d. Cheese
 - e. Yogurt
 - f. Carrot
 - g. Ripe mango
 - h. Ripe melon
 - i. Foods fortified with vitamin A

Knowledge about Overweight/Obesity

- I. What are the health problems that can occur when a person is overweight or obese? (check all that apply)
 - a. Increased risk of chronic conditions (such as heart/cardiovascular disease, high blood pressure and diabetes, stroke, certain types of cancer, respiratory difficulties, chronic musculoskeletal problems, skin problems and infertility)

- b. Reduced quality of life
 - c. Premature death
 - d. Not sure
2. Why are people overweight/obese? (check all that apply)
- a. Increased/excessive intake of energy-dense foods that are high in fat and/or sugar
 - b. Lack of or decreased physical activity
 - c. Not sure
3. How can people prevent overweight/obesity? (check all that apply)
- a. Reduce energy intake (less high-energy foods and drinks)/reduce the intake of fatty and sugary foods
 - b. Eat fruits and vegetables more often
 - c. Eat legumes/ whole-grain products more often
 - d. Increase physical activity/ engage in regular physical activity
 - e. Not sure

Attitudes toward Overweight/Obesity

1. How likely do you think you are to become overweight or obese?
- a. Not likely
 - b. Maybe likely
 - c. Likely
2. How serious do you think it is to be overweight or obese?
- a. Not serious
 - b. Maybe serious
 - c. Serious
3. How good do you think it is to eat less, for example by eating smaller portions of food?
- b. Not good
 - c. Maybe good
 - d. Good
4. How difficult is it for you to eat less?
- a. Not difficult
 - b. Maybe difficult
 - c. Difficult
5. How good do you think it is to do some physical activity, such as walking for 30 minutes a day, running or doing a sport?
- a. Not good
 - b. Maybe good
 - c. Good

6. How difficult is it for you to do some physical activity/exercise?
 - a. Not difficult
 - b. Maybe difficult
 - c. Difficult
7. How confident do you feel in doing some physical activity/exercise?
 - a. Not confident
 - b. Somewhat confident
 - c. Confident

Practices toward reducing Overweight/Obesity

I. In the FAO KAP, they ask the participants to indicate a 24-hour recall. They then do a FFQ in which they ask participants to indicate over the past day, week, month how many times did you eat that food. Similar to what we discussed for the diet guidelines, we can provide pictures for the participants to indicate if they eat more or less than that serving. Also, we can keep it to 1 week as not many people can remember over a month how much or little they ate. For example, over the past week, check the boxes to indicate what you ate and the amount you ate:

Did you eat rice this past week?

If yes, answer the question below

If no, move to question X

Did you eat more or less than this picture?

More

Less

How many times did you eat rice during this week?

1-2 times

3-4 times

5-6 times

7-8 times

9-10 times

>11 times

2. How do you normally prepare meat products for your family?

- a. Fry it in oil
- b. Fry it in lard
- c. Cook it in an oven
- d. Boil it
- e. Not sure

3. Do you do any physical activity, that is any activity where your body moves over long time periods? For example, walking, running, harvesting, etc.?

- a. If yes, answer question 4
- b. If no, thank you for participating

4. Which of the following activities do you do?

a. Walking

- i. If Yes: How many minutes each:
- ii. day? _____
- iii. week? _____
- iv. month? _____

b. Running

- i. If Yes: How many minutes each:
- ii. day? _____
- iii. week? _____
- iv. month? _____

c. Harvesting

- i. If Yes: How many minutes each:
- ii. day? _____
- iii. week? _____
- iv. month? _____

d. Any sport (specify) _____

- i. If Yes: How many minutes each:
- ii. day? _____
- iii. week? _____
- iv. month? _____

e. Other (specify) _____

- i. If Yes: How many minutes each:
- ii. day? _____
- iii. week? _____
- iv. month? _____

Annex B: Participating EAS Institutions

Stakeholder	Date visited	Location	Activities
Heiffer International	8/3/16; 8/5/16	Tegucigalpa	Focus group with project coordinators and director
World Vision	8/4/16	Tegucigalpa	Focus group with project coordinator and directors
Catholic Relief Services	8/4/16	Tegucigalpa	Focus group with project coordinator and director
CARE	8/5/16	Tegucigalpa	Focus group with project coordinator and director
Save the Children	8/5/16	Tegucigalpa	Focus group with project coordinator and director
PILARH	8/8/16	Santa Rosa de Copan	Focus group with extension agents and director
PLAN Honduras	8/8/16	Santa Rosa de Copan	Focus group with extension agents and director
MANSURCOPAN	8/9/16	Santa Rosa de Copan	Focus group with extension agents and director
FINTRAC-MERCADOS	8/9/16	Santa Rosa de Copan	Focus group with extension agents and director