

Trickle Up: Promoting Food Security

What is Food Security?

The **United Nations** defines food secure communities as those where “people [have], at all times, physical, social and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preferences for an active and healthy life.”

The United States Government’s Anti-Hunger organization, **Feed the Future**, concludes that “A family is considered food secure when its members do not live in hunger or fear of hunger.” It goes on to argue that Food Security has four main components: Availability, Access, Utilization, and Stability.

USAID complicates these definitions by arguing that “Food Security goes beyond solving short-term needs; it is also about addressing long term issues of poverty alleviation and economic growth.” In particular, food insecure households are often forced to liquidate assets and forgo future prosperity in order to stave off immediate hunger. This process is cyclical, chronic, and degenerative.

Another approach tends to break down food insecurity into four main areas of examination and intervention:

- ❖ Insufficient **quantity** of food
- ❖ Inadequate **quality** of food
- ❖ **Uncertainty** of access to or availability of food
- ❖ **Social unacceptability** of mechanisms to attain sufficient food (i.e. prostitution, begging, etc.)

In general, extreme poverty is accompanied by food insecurity, and most people in extreme poverty must spend the majority of their income on food.

Why does Trickle Up promote Food Security?

Food security is both a consequence of and contributor to poverty.

Promoting Food Security is connected to all six of Trickle Up’s “**Definitions of Success**”

Decreasing Vulnerability	Promoting the use of available government resources
Diversifying Livelihood Activities	Increasing Quality of Life
Increasing Access to Savings and Credit	Progress toward economic and social empowerment

Two of our definitions of success directly relate to food security:

Decreasing Vulnerability, includes the ability to cope with external shocks such as food price fluctuations and natural disasters, as well as recurrent trends like the “hungry season”.

--and--

Increasing Quality of Life, includes access to regular and nutritious meals and instilling confidence that participants can feed themselves and their families without liquidating productive assets or engaging in shameful activities.

How does Trickle Up promote Food Security?

Trickle Up’s programs seek to sustainably build the livelihoods of participants, which includes increasing their household income (in cash and/or in kind) and facilitating access to savings and low-cost credit. In particular, much of Trickle Up’s strategy targets the causes and effects of the **hungry season**—the 2 to 6 month period each year when participant households have largely exhausted their stores of food and are yet to be able to draw on the next season’s harvest nor find or access employment.

Trickle Up’s strategies to promote food security	
Asset/Cash Transfer (W. Africa, India, Guatemala)	Cash or assets, such as livestock, are given to participants to invest in their livelihood activities. This is intended to increase income (in cash or kind) which can improve the quantity and quality of food afforded by the household.
Diversification of income sources (W. Africa, India, Guatemala)	Having several sources of income decreases participant vulnerability to unexpected negative externalities, while increasing household income.
Livelihood/business training (W. Africa, India, Guatemala)	Education around market linkages, accounting, and enterprise and household planning results in increased efficiency and profitability.
Savings Groups (W. Africa, India, Guatemala)	Pooling of group capital creates insurance in case of disaster and to get through the hungry season without depleting productive assets. This fund also promotes savings and allows investment in community-wide resources.
Nutrition Education (W. Africa, India, Guatemala)	Participants learn how to best utilize the resources available to them to feed themselves and their families, including the appropriate balance of food groups and how to access low cost nutritious food.
Accessing govt. programs (India)	Oftentimes participants are entitled to benefits, such as subsidized food, education, and healthcare, but are unaware or unable to access them. TU works with participants and governments to improve access to these resources.
Growing food for consumption (India)	Participants use grants to buy agricultural inputs or lease land, for growing staples and/or others foods (such as vegetables or fish) that can be used for household consumption or sale. In India, participants are trained in System of Rice Intensification to increase yields and reduce input costs.
Consumption stipend (India)	Participants are provided with a stipend during times of particular need (eg hungry season and pregnancy) to help them meet their households’ basic needs until they start receiving a regular income from new livelihood activities.
Cereal Banks (W. Africa)	Grain is purchased in bulk during the plentiful season to be consumed, or sold at a profit, during the hungry season—when prices are significantly higher. Though not a direct TU program input, around 1 in 6 groups in West Africa have developed said banks.

How does Trickle Up measure Food Security?

Over time and across program regions, Trickle up has measured Food Security in a variety of ways:

Prior to 2008	2008-2009
❖ Retrospective question at end of project: Has food intake improved over the last 12 months?	❖ Number of meals per day ❖ Expenditure on food

Note: Extra information was collected from 2007-2010 for the India HDC pilot project

Quantitative survey topics from 2010:

Guatemala	Mali and Burkina Faso	India
Frequency of insufficient food Meat consumption/month Dairy consumption/month Miss meals bc. lack money Coping strategies when food scarcity	Frequency of insufficient food Food expenditure Crops grown for food Meat consumption in last 7 days Miss meals due to financial hardship Coping strategies when food scarcity	Frequency of insufficient food Months without enough food Size of food stores Miss food for 1 day Miss meal(s) due to lack of food

Food security survey questions have been modified from Freedom From Hunger's Food Security Index, Care's food security coping strategy index, and created based on staff and partner knowledge. The questions are administered at baseline, at the end of the project, and following project completion. Information on harvest yields and other contextual data are also gathered to aid in the interpretation of results.

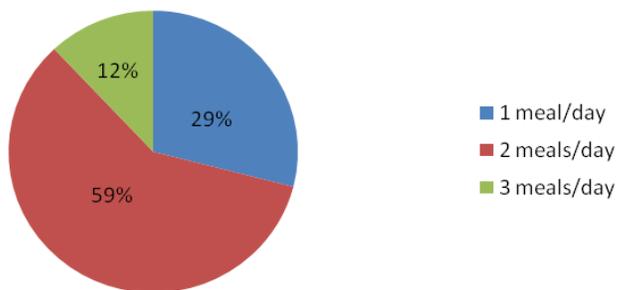
Trickle Up also conducts **qualitative assessment**, which includes interviews and focus group discussions. Such qualitative assessment not only is helpful in confirming or challenging conclusions drawn from quantitative data, but also provides contextual information regarding the struggles participants face and the coping strategies they use. In addition, these interviews and focus groups illuminate how and why changes in participant's food security occur, what kinds of changes are most valued by participants, as well as the changes brought about in household and community relations with regard to food consumption and production.

What is the baseline Food Security situation of Trickle Up participants?

Quantity

At the India HDC pilot program's inception, 72% of participants stated that there was at least one day in the previous week that they did not have sufficient food for at least two meals, and 34% of participants stated that someone in their household went a whole day hungry because they did not have money for food.

Quantity
Figure 1: Meals per Day, Mali 2010

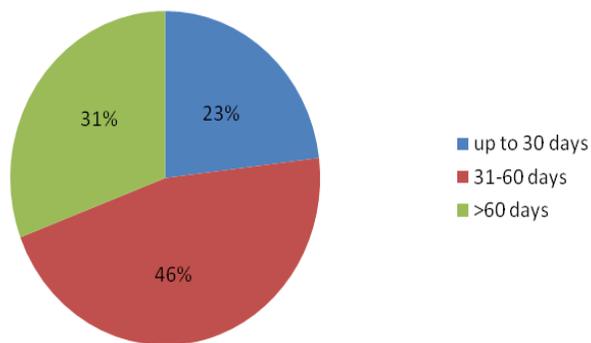


Source: January 2010 Mali Baseline Survey

Figure 1: At Baseline, Close to 30% of program participants in Mali report eating one meal per day, while 60% eat 2 meals per day and just 12% eat 3 per day. This measurement—**number of meals consumed per day**—was the most common metric used by TU to measure **quantity**. It is, however, subject to several measurement problems, including ambiguity about what a “meal” consists of as well as response bias depending on what time of year the survey is completed.

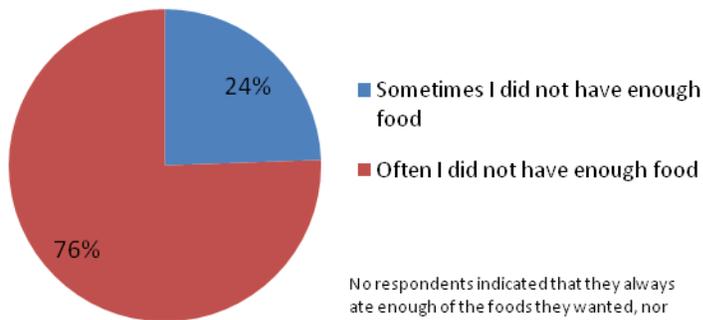
Figure 2: When interviewed, roughly 70% of participants in JS India in 2009 have less than two months worth of cereal stored, while the hungry season is likely to last much longer than that. Additionally, respondents report having little or no reserves of other food stuffs such as pulses, onions, and potatoes. Monitoring food stocks are critical to understanding food security, both because of their implications for the hungry season and their indication of chronic hunger or scarcity.

Quantity
Figure 2: Stored Cereal Reserves, India JS



Source: JS Baseline Food Intake Survey, 2010

Figure 3: Quantity/Quality, India-JS 2009



Source: JS Baseline Food Intake Survey, 2010

Figure 3: Over three quarters of respondents from TU's India partner JS, indicate that they often did not have enough food other the year prior to program commencement. Approx. one quarter of participants say they do not have enough food “sometimes.” None of the participants selected the other two possible responses—both of which indicate always having enough food. According to **Freedom from Hunger**, who designed this survey question, the observed pattern of responses indicate a highly food insecure population.

Quality

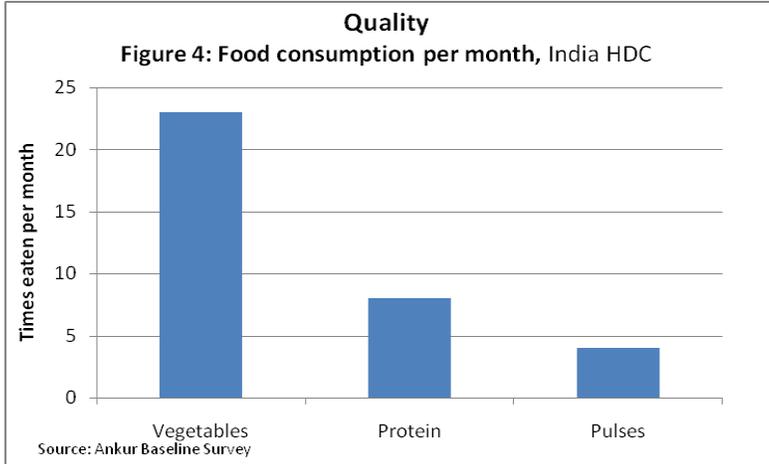
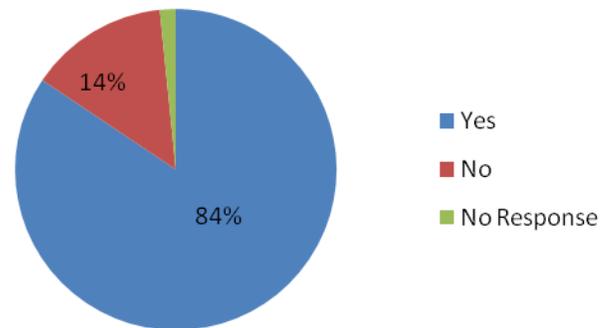


Figure 4: On average, participants in India eat meat-based proteins 8 times per month and legume-based proteins 4 times per month. Vegetables are eaten 23 times per month, leading to the assumption that carbohydrates—grains like cereals or rice—are the only food eaten every day. This indicates a highly unbalanced diet, susceptible to fluctuations in price and availability, and high vulnerability to poor harvests.

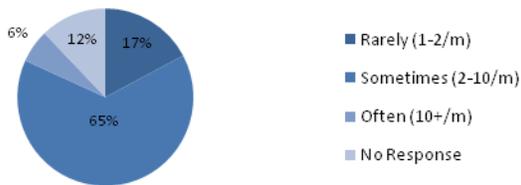
Figure 5: Food preference is a crucial part of food security in that it highlights the **quality** of consumption. Close to 85% of HDC pilot respondents had not been able to eat the foods they would have liked because they did not have the money to do so. Their financial situation has been detrimental to the quality of the food consumed.

Quality - India HDC pilot
Figure 5: In the past 30 days, Were you not able to eat foods you would have liked because you did not have money?



Source: Ankur Baseline Data

Figure 5.1: Frequency, not able to eat foods of choice - India HDC pilot



Source: Ankur Baseline Data

Uncertainty

“Our harvest enables us to live from it for 8 months, followed by 4 months of hunger gap. It has been like this for 2 y ears now, because we have had so little rain.” (Malado Sabbabou Sow, Wampiri, Mali)

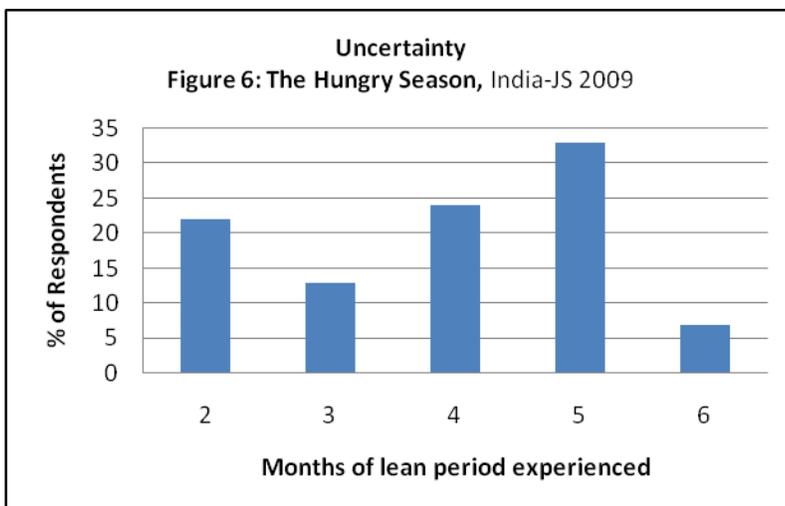
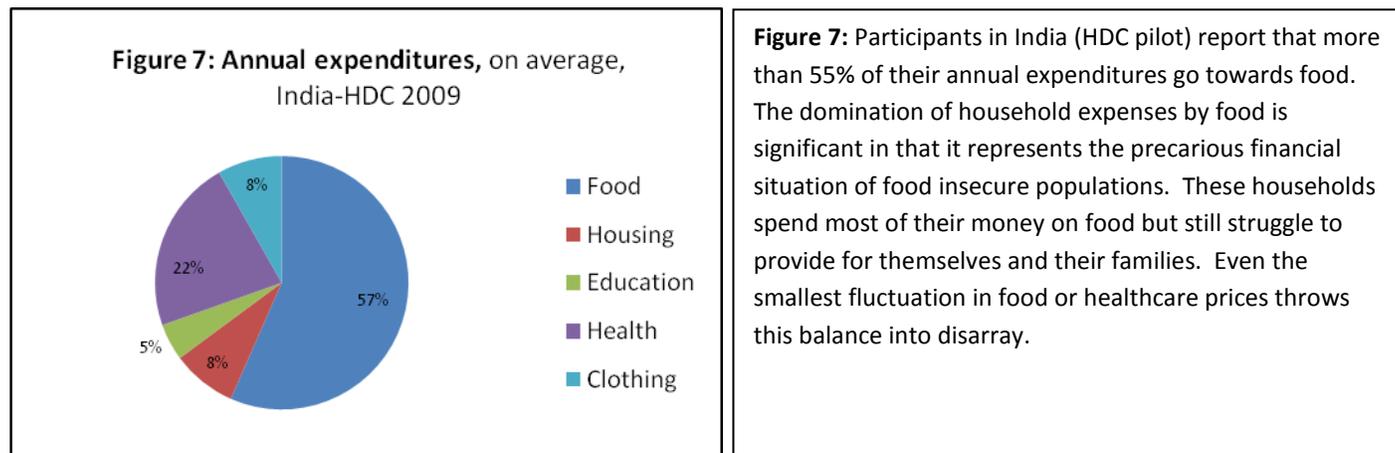


Figure 6: For the majority of the global ultra-poor, food harvested or purchased during plentiful months runs out before the next harvest begins. This leaves families with an annual 2 to 6 month period with which they must cope. Scarcity drives the price of staples foods up, as well as interest rates on loans taken from local lenders. While this “season” varies in length, its hardships are well-documented and universally felt across local partners.

Challenges

“In the abundance period we are able to save, in order to cope during the hunger gap. During the hunger gap, we divide the day’s meal into two, because the price for a bag of rice is high.” (Maimouina Guindo, Taikiri, Mali)



“The family rice production lasts us for 9 months. During the hunger gap I have ‘food problems’ because activities are slowing down and the family members are in the field. During that period I sell the animals to meet certain needs of the family.” (Koumba Bocoum Sow, Wampiri, Mali)

Coping Mechanisms

“Our strategy to face the food crisis is to look for wood to make charcoal out of it, to pick tamarind leaves and to take loans from the FDE savings group. The loans are reimbursed after the hunger season...During this period business is not flourishing as much as we’d like it to, because clients buy more on credit to reimburse after the hunger gap (Malado Sabbabou Sow, Wampiri, Mali)

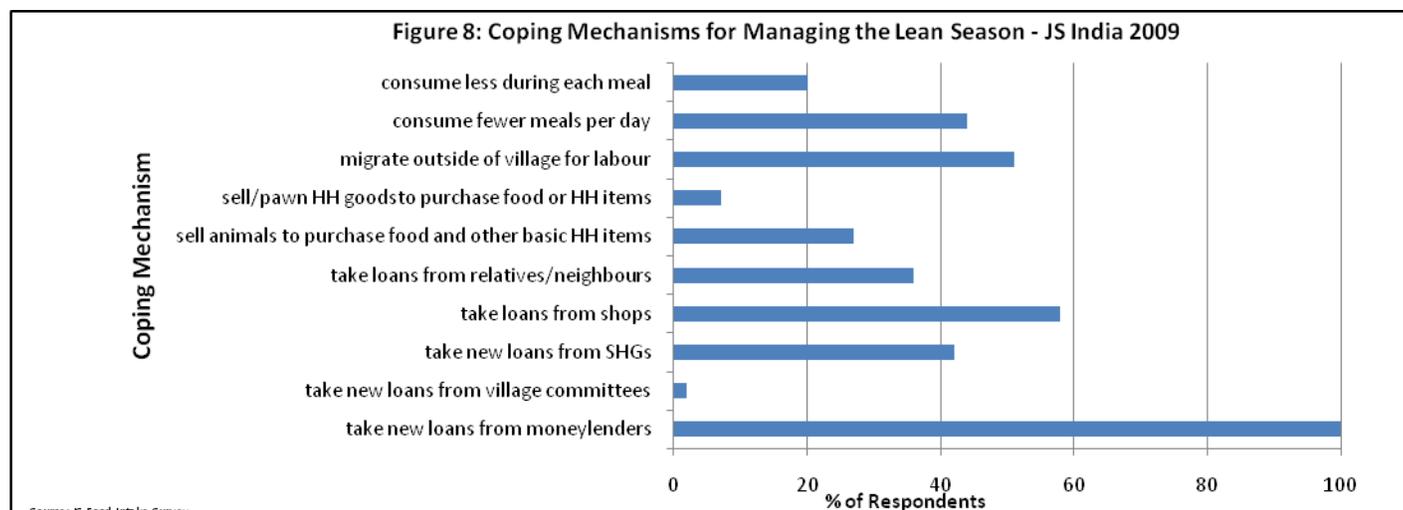


Figure 8: Respondents from JS India in 2009 list, at baseline, what techniques they use to deal with periods of food scarcity. The most ubiquitous behaviors are taking new loans, migrating in search of work or food, and consuming less. Each of these strategies involve **increased risk** and vulnerability and represent the **sacrificing of long-term goals**—health, financial stability, a home—in order to satisfy short-term necessities. This pattern of behavior is cyclical amongst populations who are chronically food insecure.

What changes have we seen following program involvement?

74% of participants reported improving their food intake over the year they were involved in the program (average result from one year updates collected across regions for 10 years from 1999 to 2009).

Quantity

“Before, I used to prepare 2 bowls of millet; now we can have 3 bowls. We eat to our fill.”

(Fatoumata Traore, Taikiri, Mali)

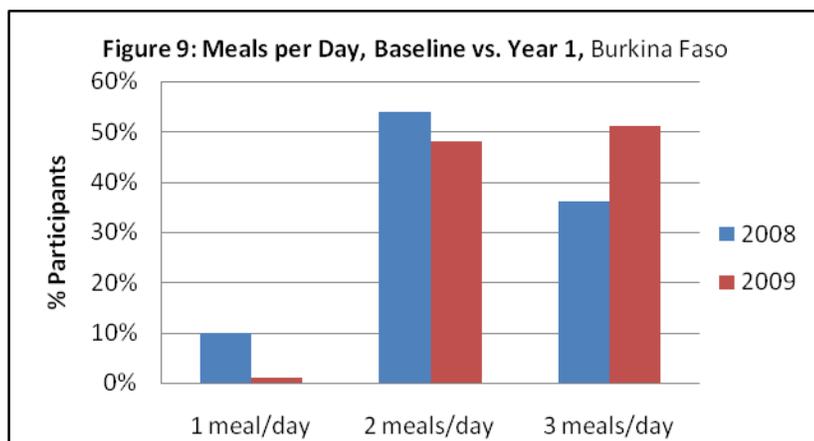
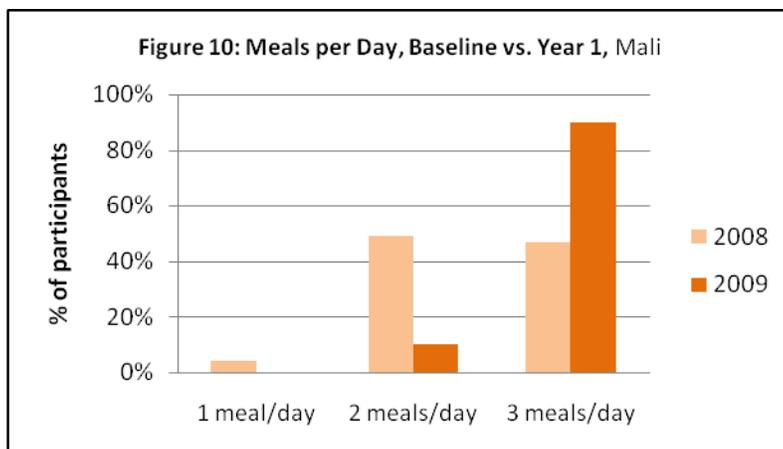


Figure 9: 42% more participants in Burkina Faso ate 3 meals a day between in 2008 than in 2009, while 90% fewer ate 1 meal a day between baseline and year one. This increase in consumption, including an average 11% increase in food expenditures, was accompanied by an average 220% increase in savings, 100% increase in access to transportation and telephones, and a 28% increasing in access to electricity.

Figure 10: 43% more participants in Mali at three meals a day in 2009 than in 2008. These participants also spent, on average, twice as much on food in year one than at baseline. Additionally, 44% fewer participants live on less than \$1/day after 1 year than at baseline. Weekly savings also increased by over 500%. Of the Trickle Up members remaining in the program at year one (over 98% of original participants), 1 in 6 started and/or now invest in cereal banks of their own creation.



Quality

The overwhelming majority of participants interviewed during the 2009 **Mali** Outcomes Assessment claimed that the quality of their diets, and those of their households, had improved. This included having more variety, and increased use of *condiments* the French word for the sources, spices, vegetables, and meats consumed with staple grains:

“The quality of the sauce has improved” (Gouro Beydi Sow, Wampiri)

“Before, I used small amounts of *condiments* to prepare the sauce. Now I store the *condiments* at home and use the quantity I need.” (Koumba Bocoum Sow, Wampiri)

In **India**, HDC pilot participants claimed to be eating a greater variety of foods thanks to the program:

Focus group discussants in the village of Khagra claim to be eating more low cost nutritional foods – they are eating spinach and vegetables, and growing them on their homestead land. Almost all are doing so. Many did before, but they have increased their intake and they have more knowledge about the benefits.

Rashida Bibi says she has planted leafy vegetables on the advice of partner staff, to improve her family’s nutrition.

Srimati Sardar has planted a mango tree (provided by the program as a sapling) and gourds and pumpkins.

Rankani Sardar took out a loan of Rs 500 from the SHG for fish cultivation. She had raised fish before, but on a smaller scale. This investment enabled her to diversify the family’s nutrition, as she and her family ate some of the fish they caught.

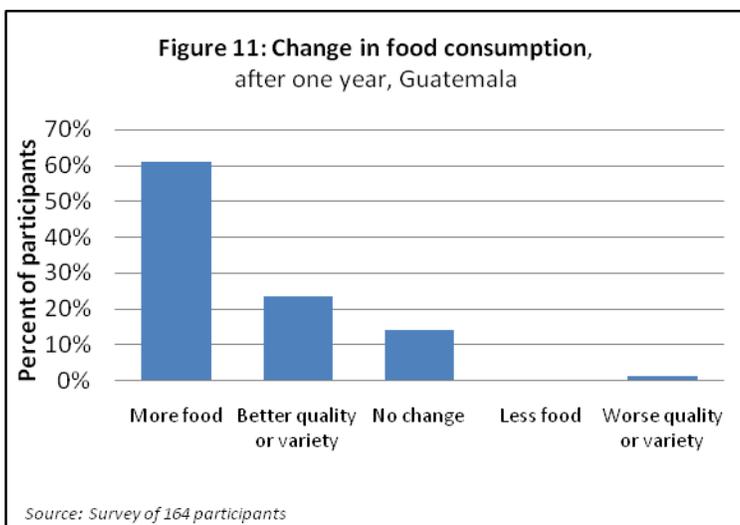


Figure 11: Over 60% of respondents in Guatemala reported eating more food one year after program initiation, while over 20% ate food of better quality or variety. 13% reported that there had been no change in food consumption, while almost no respondents ate less food or food of decreasing quality after one year of program participation.

Other changes in food security

“...I can spend more if my wife asks me for some more money for cooking.”

(Gouro Beydi Sow, male, Wampiri, Mali)

“Since I received the grant, I give a part of my paddy stock to my husband for family needs. He returns it at harvest time.” (Dicko Koubi Traore, Wampiri, Mali)

“The children don’t go hungry and they are well dressed” (Gouro Beydi Sow, male, Wampiri, Mali)

“There have been changes in my life... I am able to cover my family’s personal and nutritional needs.” “I can offer food to my guests. Before, when I had a guest it was always a headache to find something to feed him, from where to get credit or cereals.” (Gouro Beydi Sow, male, Wampiri, Mali)

Mechanisms of Change

While increased income from livelihood activities is spent on food, participants also improve their food security by increasing their production of food for their households' consumption, and by drawing on their savings in times of need.

Increasing own production of food

"I own goats which I milk; the milk is given to the children...Thanks to the TU grant, I also go fishing. I bought three nets to start this activity. My fishing production is divided in two, one part is for my family, and I sell the other—larger—part." (Gouro Beydi Sow, male, Wampiri, Mali)

"When my husband needs rice seed for the fields I can now contribute, and I could also help him buy a hoe which he needs to cultivate the fields. My husband also has more money for such things, as he does not have to spend so much on household needs." (Focus Group, Wampiri, Mali)

Achirun Bibi in India (HDC) initially received six goats through the program. These multiplied to nine goats after which she sold three and told her husband "you do the summer paddy." He cultivated the paddy and wanted to sell it, but she wouldn't let him. She now has 6 months of food security in house from the paddy. She sold 11 goats and started a bangle business. She also used the profits to repair the house.

Srivati Doloi in India (HDC) sold one of her goats for Rs. 600 and invested it in agriculture. The resulting food was used for household consumption. She sold another goat for Rs. 600 and used it to put a child in school. Fights between husband and wife have decreased due to the agricultural investment and the food that is now in the house.

Drawing on savings

"Each person in the village can draw from the savings group for health or food needs if he or she asks for it. They don't go elsewhere anymore to obtain loans for immediate expenses. Field work is done in time because everyone can draw from the savings of the group to buy food and thus everybody is still able to continue taking care of the fields." (Dicko Koubi Traore, President of Wampiri savings group)

Durba Paik (HDC India) says she needs 4kg of rice per day (Rs. 70/day) to feed her family adequately (3 meals per day). For food (including rice), clothes, and other household needs, their costs are nearly 150 rupees a day. Because she has Rs. 2000 in the SHG (savings group), she now feels that she has this source. Plus the shops know she has assets, so they lend to her as necessary.