

# Ethiopia Urban Gardens Program—2011 Baseline Data: Summary and Analysis of Responses to Nutrition Questions

Addis Ababa, Ethiopia  
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## Infant & Young Child Nutrition Project



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455 Massachusetts Avenue, NW, Suite 1000  
Washington, DC 20001 USA  
Tel: (202) 822-0033  
Fax: (202) 457-1466  
Email: [info@iycn.org](mailto:info@iycn.org)  
[www.iycn.org](http://www.iycn.org)

## Introduction

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The US Agency for International Development (USAID)–funded Ethiopia Urban Gardens Program (UGP) managed by Development Alternatives, Inc. (DAI) supports the creation of household, school, and community gardens by providing agriculture-related training, tools, and inputs. The overall objective of the garden activity is to increase the income and improve the nutrition of program beneficiaries—the majority of whom are HIV-affected. The UGP collaborates with local nongovernmental organizations, the Ethiopian government, and other partners to implement the project in poor urban settings. Orphans and vulnerable children between the ages of 10 and 18 years and their caregivers are brought together in groups on donated land in communities and schools to develop gardening skills and to provide a platform for building health and nutrition knowledge and skills. The-funded USAID Infant & Young Child Nutrition (IYCN) Project is providing technical assistance to the UGP to strengthen the nutrition aspects of the project. The UGP is being implemented in phases. The support of the project shifts from gardens/gardeners once they are well established, to additional, new gardens (and gardeners) throughout the course of the project. As new gardens were being initiated in 2011, a baseline survey was redesigned and implemented in May 2011. A full report of the methodology and results of this baseline survey are available through DAI.<sup>1</sup>

## Nutrition section of the baseline survey

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This report focuses on the results from the nutrition section of the May 2011 baseline survey. This section of the survey included 17 questions directly or indirectly related to nutrition. These questions were designed to provide an indirect/proxy way to evaluate the impact of the UGP on nutrition. Direct, anthropometric measures of nutrition status are not included in the survey. Briefly summarized, the questions focused on: dietary diversity, garden consumption practices, hygiene and food handling, sources of information on nutrition, and attitudes about the garden and its affect on household nutrition practices.<sup>2</sup>

This report summarizes and analyzes the data on nutrition separately to contribute to the information base available to strengthen the nutrition activities under the project. In addition to the nutrition information from the baseline survey, the IYCN Project also implemented two separate qualitative research studies: recipe trials and focus group discussions with established gardens/gardeners and household trials of improved practices in the UGP areas/communities.<sup>3</sup> The findings and conclusions from these three sources of information on nutrition behaviors/practices among the UGP participants are summarized in a separate report and will serve as the foundation for developing a nutrition curriculum/training document and

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<sup>1</sup> The baseline survey was conducted exclusively with new gardeners. None of the established gardeners were included in the sample selected for this baseline survey; although, if they had been included, it might have been possible to compare nutrition and hygiene behaviors between those already in the program for more than a year with those who have more recently entered.

<sup>2</sup> A copy of the baseline survey instrument is available through DAI.

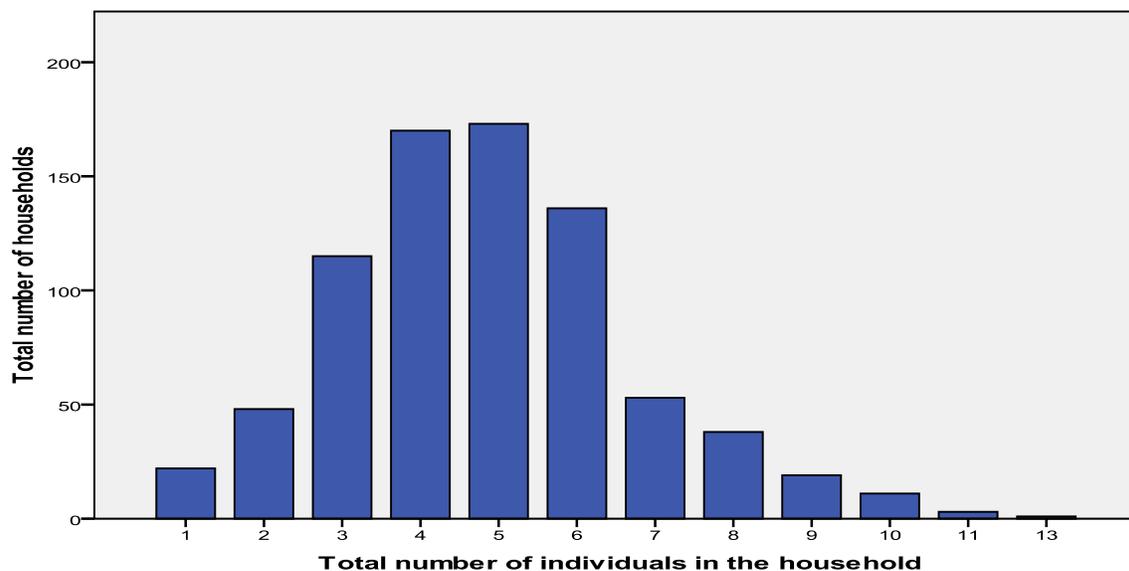
<sup>3</sup> See Infant & Young Child Nutrition (IYCN) Project. *Integration of Nutrition Education into the Ethiopia Urban Gardens Program: A Collaboration with the Infant and Young Child Nutrition Project—Recipe Trials and Focus Group Discussions Results*. Washington, DC: IYCN; July 2011; and Infant & Young Child Nutrition (IYCN) Project. *Trials of Improved Practices in UGP Communities—Final Report*. Washington, DC: IYCN; August 2011 (forthcoming).

materials/job aides for UGP agricultural extension officers and other staff and partners that will be integrated with the urban gardening activity.<sup>4</sup>

### Sample size and composition—focus on children

Good nutrition is important at all stages of life, but it is widely known and acknowledged that the impact of poor nutrition is most serious (and irreversible) if experienced in the first 1,000 days—i.e., the period from pregnancy to the age of two. Therefore, any project that aims to improve nutrition among populations suffering from stunting and poor growth and development must focus—in some way—on this critical period. This does not imply that pregnant and lactating women and children under age two are the only target group for nutrition education. However, the specific behaviors (and how they can be improved) that directly impact on the nutrition status of these groups should be understood by all.

The UGP focuses on a special population—the HIV-affected population in urban areas of Ethiopia, including orphans and vulnerable children and their caregivers. The survey respondents and households reflect that special group. Overall household size among survey respondents varied from 1 to 13 members; the majority of households had 4 to 6 members (see Figure 1).



**Figure 1: Household Size**

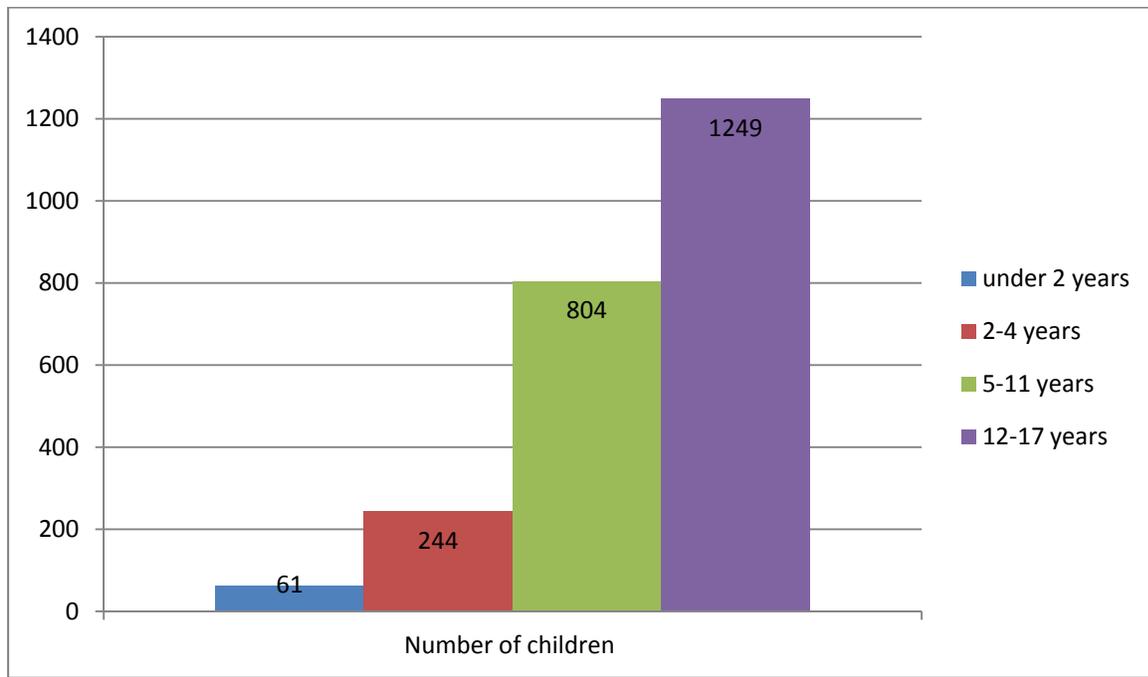
Very few of the 790 households interviewed had children under age two. Out of 2,358 children living in the households visited, only 61 were children under age two. More than half of the children in sample households were between the ages of 12 and 17, and another third of children were of school-age (5–11 years). This is in line with the targeted population for the UGP (see Table 1 and Figure 2). Similarly, most of the respondents to the survey questionnaire were adolescents—between the ages of 15 and 18 years (Figure 3).

<sup>4</sup> See Infant & Young Child Nutrition (IYCN) Project. *Integrated Summary Report on Quantitative and Qualitative Information on Nutrition: A Collaboration between the UGP and IYCN Projects*. Washington, DC: IYCN; August 2011.

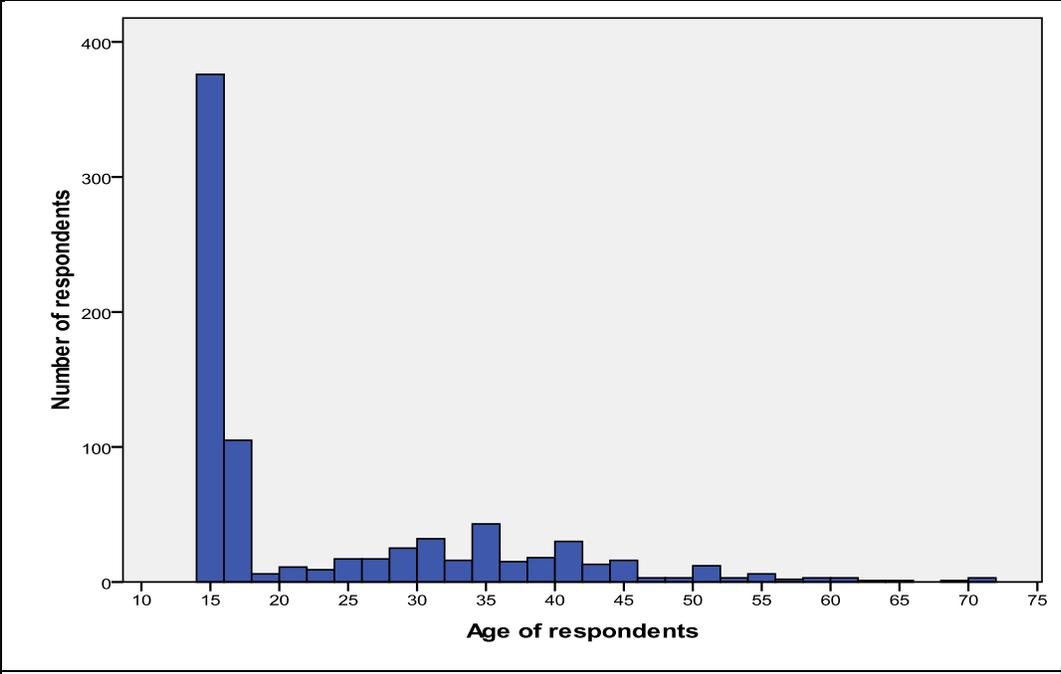
**Table 1: Proportion of households with none, one, two, or more children by age group**

# of children	Under 2 years	2–4 years	5–11 years	12–17 years
<b>None</b>	92.4%	74.2%	35%	13.7%
<b>1</b>	7.4%	20.5%	36.5%	35.2%
<b>2</b>	0.2%	4.9%	20.3%	31.7%
<b>3 or more</b>		0.4%	8.2%	19.4%

Data available for 772 (97.7 percent) of 790 households interviewed—percentages in table based on available data



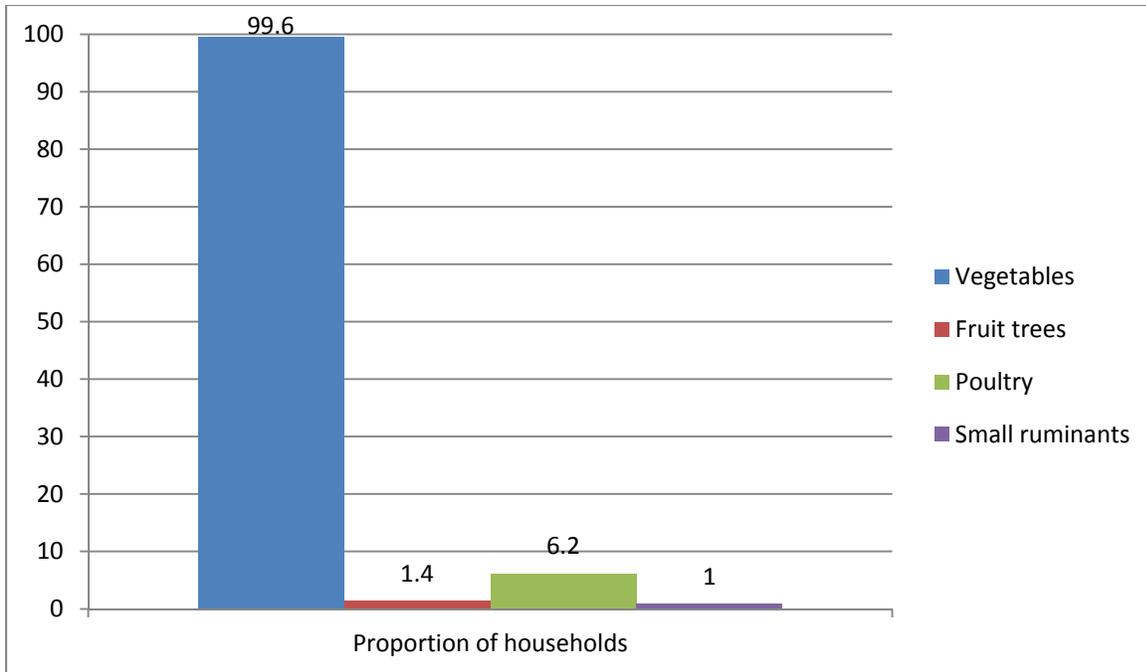
**Figure 2: Children in sample households**



**Figure 3: Survey respondents by age**

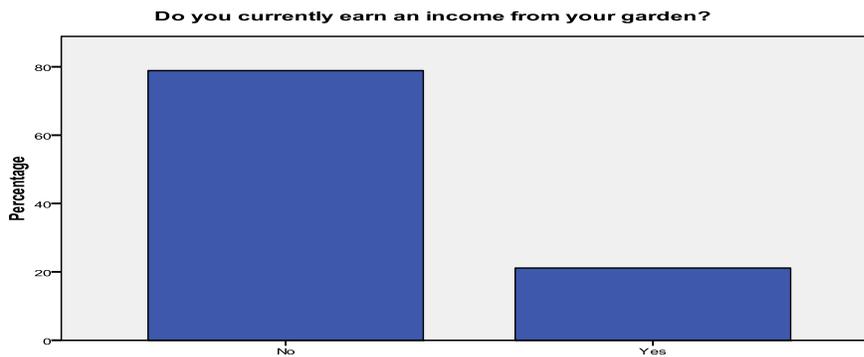
**Status of Garden activities at time of survey**

This survey was designed to collect baseline information from beneficiaries who were just about to enter, or who had recently begun participating in the UGP. In addition to supporting vegetable gardening, the UGP has also initiated (on a much smaller scale) other income-generating and nutrition-enhancing projects within some of the same households. These activities include distributing fruit trees, poultry (chickens), and small ruminants. Among the survey participants almost all (99.6 percent) had a vegetable garden; very few had been provided with any of the other inputs (Figure 4).



**Figure 4: Gardens and other productive activities among sample households**

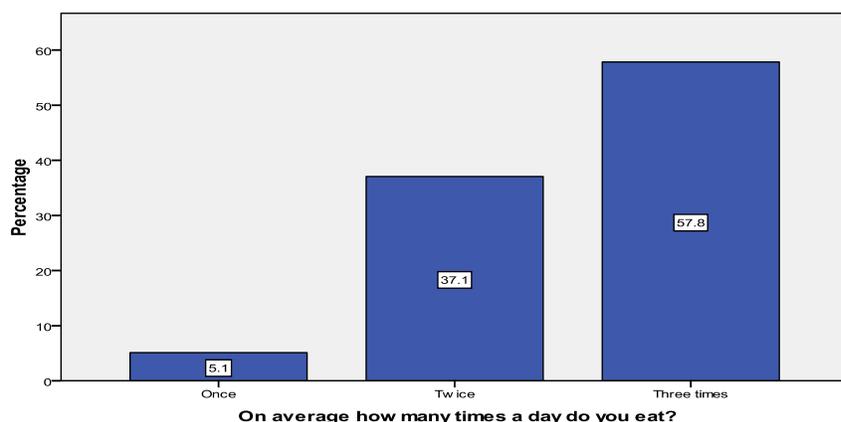
Although most survey respondents who reported having a garden, only a small minority (about one-fifth) reported receiving income from their garden (Figure 5). This is not surprising given that these are newly enrolled UGP participants.



**Figure 5: Proportion of participants earning an income from garden activity**

### Food and diet-related survey questions

Information on household dietary practices showed that only a little more than half (57 percent) of households consumed three meals per day; 5 percent of respondents reporting eating only once per day.



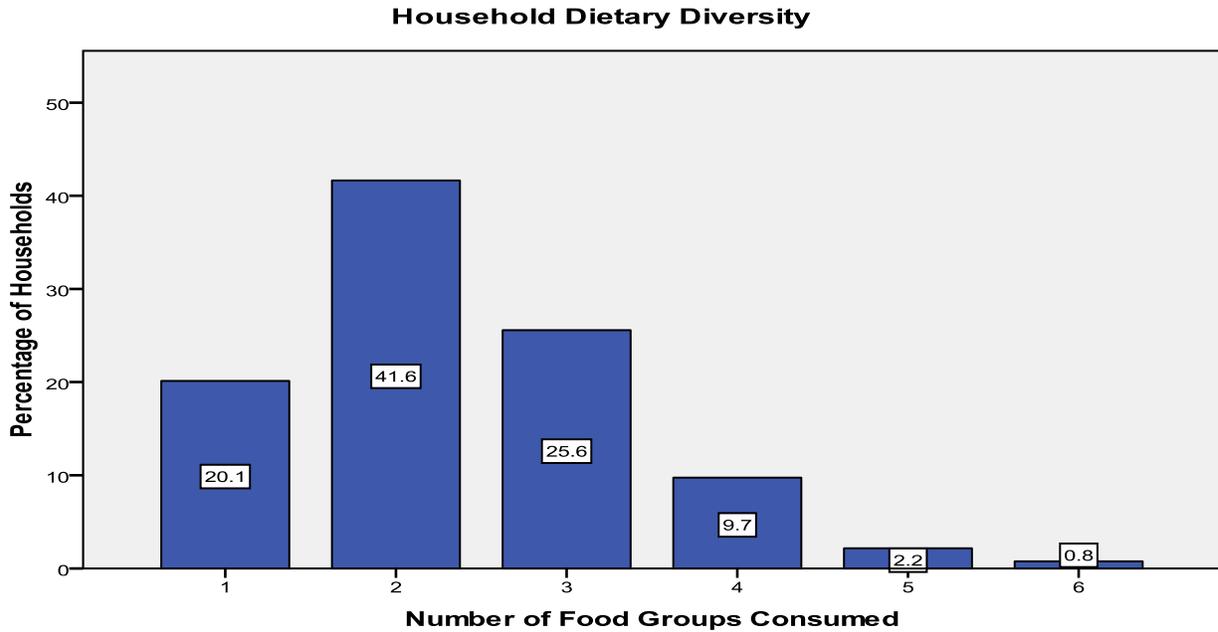
**Figure 6: Number of meals consumed per day**

From a nutrition perspective, the level of diversity (consumption of different food groups) in the diet is even more important than the number of meals consumed per day. A more diversified diet is associated with better child health and nutrition outcomes. Household dietary diversity is assessed by looking at the number of different food groups consumed over a given period—for this survey, the previous day/24 hours. This is different and more meaningful than counting the number of foods, as the latter could be all cereals or low nutrient-dense foods. Information on the consumption of 12 food groups was used to calculate household dietary diversity for this sample.<sup>5</sup> In general, the cut-off for a diet that offers some diversity consuming at least four food groups on a daily basis.

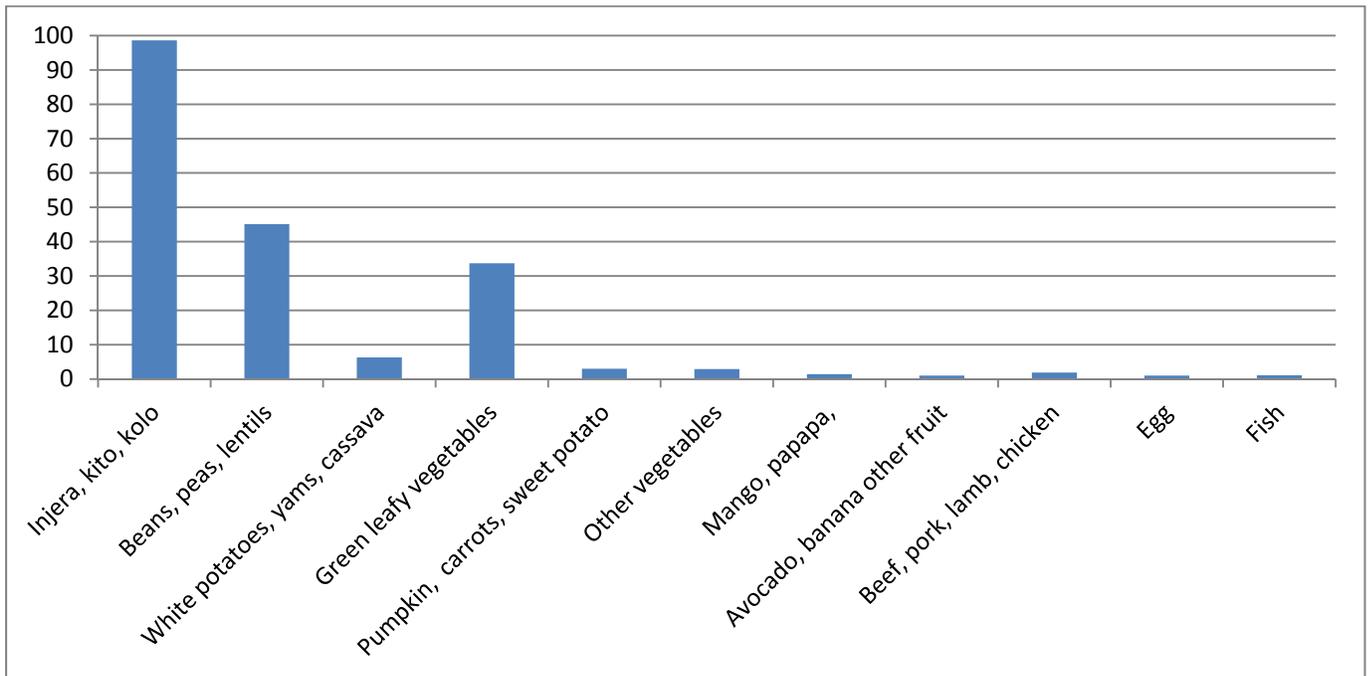
Overall, sample households showed remarkably little diversity in their diets. Only about 10 percent of households met either the minimum cut-off for diversity—i.e., consuming foods from four different food groups—or more than four food groups in the previous day. More startling is that one-fifth of the sample only consumed foods from one food group in the day before the survey. The majority of the sample households consumed foods from two (41.6 percent) or three (25.6 percent) food groups (Figure 7).

The types of foods consumed were primarily from the cereals; beans, peas, and lentils; and green leafy vegetable food groups. Almost 100 percent of the sample households consumed foods from the cereal group; almost half consumed beans, lentils or peas; and about one-third consumed green leafy vegetables (Figure 8).

<sup>5</sup> The food groups included: (i) cereals (injera, kita, kolo, etc.); (ii) vegetables; (iii) potatoes, yams, or other root crops; (iv) fruits; (v) beef, pork, lamb, chicken, etc.; (vi) eggs; (vii) fresh or dried fish; (viii) food made with beans, peas, or lentils; (ix) cheese, yogurt, milk; (x) food made with oil, fat, or butter; (xi) sugar or honey; (xii) condiments, tea, coffee.



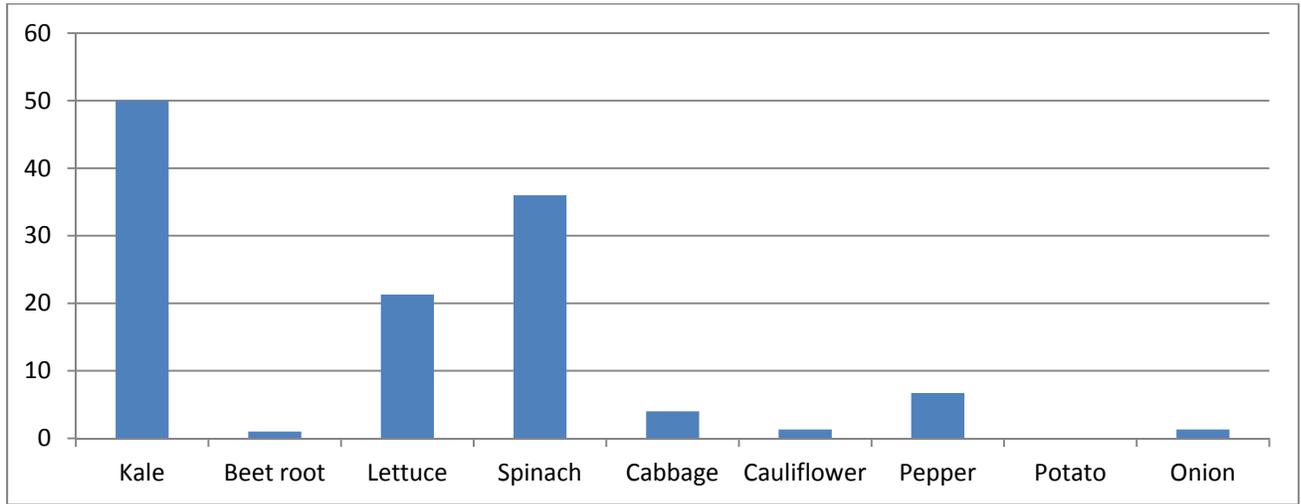
**Figure 7: Dietary diversity**



**Figure 8: Proportion of households consuming different foods**

The survey found that kale, lettuce, and spinach were the most common vegetables consumed by the households in the survey. Half of the respondents consumed kale (Figure 9). Given that this sample comprises of new gardeners and most reported that they did not yet earn an income from

their gardens, consumption of vegetables might be expected to improve/increase as the gardens begin to yield more produce.



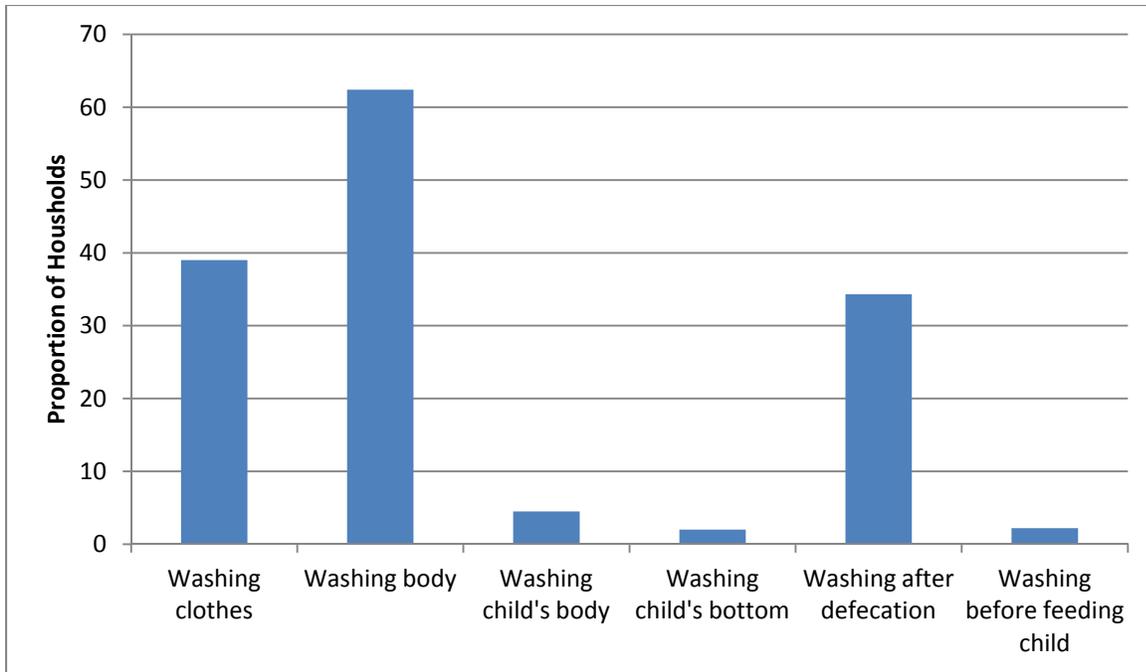
**Figure 8: Proportion of households consuming vegetables by type**

### Hygiene practices

Hygiene and food handling practices are closely related to nutrition status. A common indicator for hygiene is whether soap is available and used in the household. Only a little more than half of the households in the survey used soap (Figure 10) and it was never used for washing vegetables or fruits, or washing hands before preparing food. The primary uses of soap were for washing one’s body, washing clothes, and washing after defecating (Figure 11).



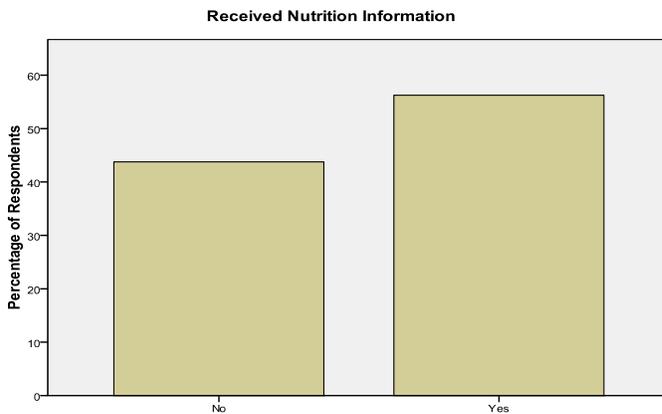
**Figure 10: Proportion of households using soap**



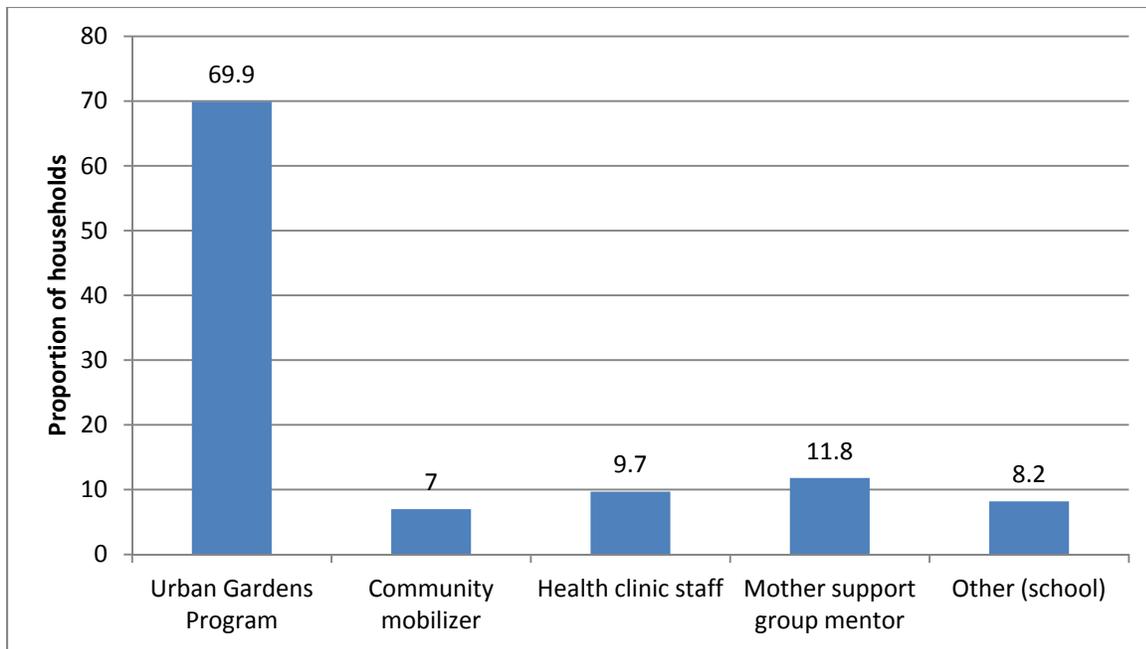
**Figure 11: Proportion of households using soap by purpose**

**Sources of information on nutrition**

Changes in practices in nutrition and related health and hygiene behaviors will necessarily involve increasing awareness and knowledge of nutrition among UGP participants and other household members. More than 40 percent of the respondents reported that they currently do not receive information on nutrition; 60 percent did receive nutrition information (Figure 12). Among those who received information, the overwhelming majority (69.9 percent) said that they received nutrition information through the UGP. The other sources of nutrition information included: mother support group mentors (11.8 percent), health clinic staff (9.7 percent), schools (8.2 percent) and community mobilizers (7 percent) [Figure 13].



**Figure 12: Proportion of households receiving information on nutrition**



**Figure 13: Where households receive nutrition information (for those who responded “yes” in Figure 12)**

## Conclusions

The results from this analysis of the nutrition questions on the baseline survey conducted with relatively new UGP participants suggests the following with regard to the integration of nutrition education with the UGP:

- Adolescents and young adults comprise a large portion of the UGP beneficiaries. The design and implementation of the nutrition education activities needs to take this into account. Although the first 1,000 days must continue to be the priority for having an impact on nutrition, this will likely entail different content and approaches for this group. For example, rather than focusing on specific infant and young child feeding practices, the emphasis might be on helping young people to understand how to prepare for (and prevent) pregnancy, in addition to promoting practices such as vegetable consumption that these young people could implement immediately.
- The lack of dietary diversity among the UGP participants is a universal issue—one of the primary impediments to improving nutrition. The UGP offers the opportunity to increase diversity in two ways: by encouraging the use of garden produce for home consumption on a daily basis; and by promoting the use of extra income gained through the garden (and other income-generating activities where they are available) on purchasing foods that will add variety to the diet. Nutrition education for all of the different UGP groups—adolescents, caregivers, and others—would include attention to dietary diversity.
- Good hygiene practices are also important for maintaining health and nutrition. The results of the baseline show much room for improvement for promoting the improvement of hygiene practices in food preparation and handling, as well as in individual and child care and feeding.