

## Homestead Food Production: The potential and opportunity to improve the food security and rural livelihood in Barisal division

Homestead  
Food  
Production  
Program  
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Helen Keller International (HKI) in collaboration with Save the Children –USA (SC) implements the homestead food production program (HFPP) under the Jibon-O-Jibika (JOJ) project to achieve the food security component viz. strategic objective 1 (SO1) of this project, i.e. increasing household's food availability and purchasing power. HKI conducted a pre-assessment survey in the project areas, to help set targets and track progress in future. The findings of pre-assessment data confirmed that the proportion of households with improved/developed gardens and consumption of micronutrient-rich animal food sources was very low, indicating the need and potential for this project to increase food availability, access and utilization in the project area.

### Background

Malnutrition is a serious public health problem in Bangladesh. The Barisal Division is an especially vulnerable part of the country as illustrated by the annual report of the Nutritional Surveillance Project (NSP) of Helen Keller International (HKI) in collaboration with the Institute of Public Health Nutrition of the Government of Bangladesh<sup>1</sup>. In 2003, the Barisal Division had the highest prevalence of underweight and stunting in children (56% and 53%) and 42% of non-pregnant women were chronically energy deficient. In Bangladesh, including the Barisal Division, consumption of micronutrient-rich foods is very low. This includes plant and especially animal foods, such as egg, chicken or other meat, liver or milk. A loan for food was taken by 14% of the Barisal Division households while the national average was 9%. While the NSP reports that 64% of the households in the Barisal Division practice traditional home gardening, the pre-assessment survey found that only 1.4% of households practiced improved or developed gardening-types (intensive use of land, bed system, quality seed, use of organic fertilizer, use of organic pesticide), which have proved to benefit households<sup>2</sup>.

HKI/Bangladesh has been working through its home gardening and nutrition education programs to increase year-round availability and consumption of micronutrient-rich foods since 1990. HKI has provided training, technical assistance and resources to 51 partner organizations, both governmental and non-governmental, in 210 sub-districts throughout the country in most difficult agro-ecological zones, benefiting approximately 4.8 million people. This has led to the establishment of approximately 10,000 village nurseries, which have subsequently provided resources and training to nearly one million women to start home gardens.

In 2002, a pilot project on Homestead Food Production (HFP) was conducted integrating animal husbandry into on-going home gardening to further increase the production and consumption of animal food products, at household level. HFP is focused on upgrading skills of women which in turn has proved to increase women's income, resulting in better use of household resources, improved caring practices and empowerment<sup>3</sup>. Through utilization of local resources and low cost technologies, household food security and livelihoods can be improved.

Based on HKI’s sound experience and expertise in homestead food production, SO1 under Jibon-O-Jibika, is being implemented in 11 sub-districts of the Barisal Division through partnerships with nine local NGOs. During the implementation of this project (2005-2009) it is envisaged that the participating households will have improved knowledge and practices regarding homestead food production and improved access to key marketing services and information.

**Objective of pre-assessment**

HKI conducted the pre-assessment survey to establish the pre-project status of households regarding their involvement in homestead food production activities and set targets for program implementation and help monitor project activities to track progress towards the project goal. The survey findings will also be used to evaluate the impact of the project as a comparison to post-project findings.

**Method**

The survey was conducted during December 2005 - January 2006 amongst target beneficiary households of JOJ (SO1). Data collection of 924 households selected through multistage cluster sampling from 11 sub-districts in 3 districts of Barisal division was completed. Socio-demographic data, data on homestead food production practice including animal and plant food production, food consumption and nutritional status of mothers and their children were collected.

**Key results**

Pre-assessment survey found that although a major portion of households were practicing traditional gardening (57-73%) that produce only gourd and traditional types of vegetables, seasonally and in scattered plots, the proportion of households with an

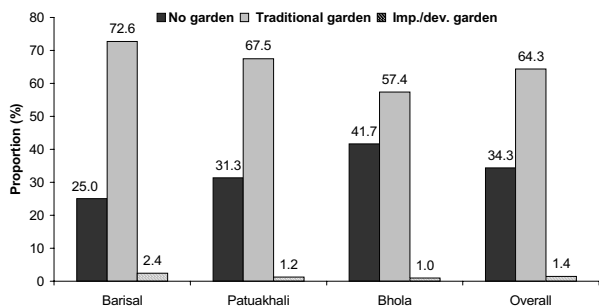


Figure 1. Gardening practices among target households in three districts of Barisal division (n=924)

improved/developed garden (produce a wider range of vegetables in fixed plots seasonally/throughout the year) was very low (<5%) among in all three districts (Figure 1). Data also showed that overall 34% of households did not have any home garden. The main reason, households reported for not having garden was lack of agricultural inputs (58.7%).

Overall only 1.4% of households had adopted improved production practices (intensive use of land, bed system, quality seed, use of organic fertilizer, use of organic pesticide). Among households with a garden, average fruit production in the last 2 months weighed 6 kilograms, while overall vegetable produce in the same period weighed half (3.0 kg) (Figure 2).

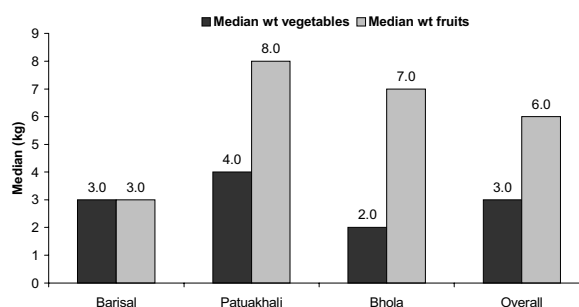


Figure 2. Median weight of vegetables and fruits among household who produced those in last two months among target households (n=611 for vegetables, n=358 for fruits)

In addition, among the participating households who have a garden, a very low percentage (10%) were practicing the Integrated Pest Management (IPM) method (Figure 3).

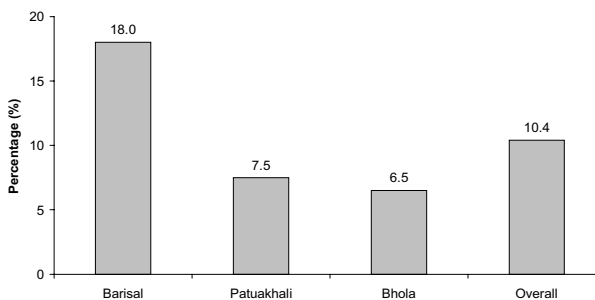


Figure 3. Proportion of households practicing Integrated Pest Management (n=607)

It was also noted that among the households only 25.4% in Barisal, 32.9% in Patuakhali and 26.2 % in Bhola used organic fertilizer, further supporting the fact that most of the participating households are not practicing IPM method.

As shown in Figure 4, the pre-assessment study found that poultry rearing which includes both chicken and ducks was quite common amongst households

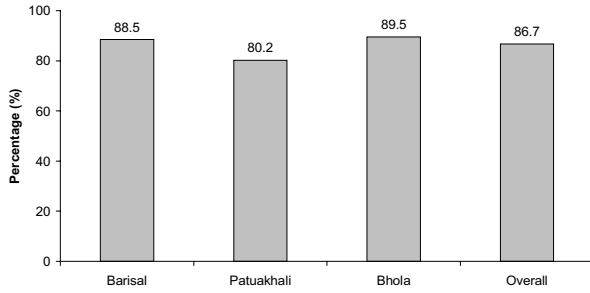


Figure 4. Proportion of poultry raising households in three districts of Barisal division (n=801)

with 88.5% in Barisal, 80.2% in Patuakhali and 89.5% in Bhola district. However, most households practiced only traditional poultry rearing and rearing of improved breed was almost non-existent in all three districts of Barisal division (0.5% in Patuakhali only). On average, the reported number of eggs produced in the last two months by poultry raising households was less than 20 (overall median 16 eggs), this ranged from 15-20 in all three districts (Figure 5).

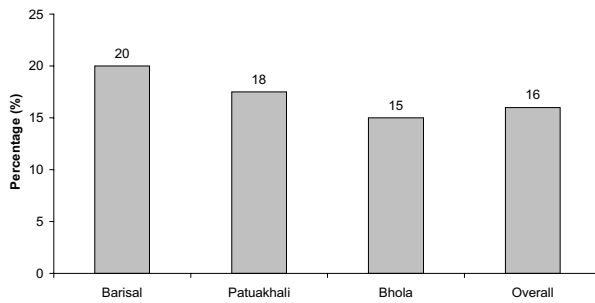


Figure 5. Median number of eggs produced in the last two months by poultry raising households in three districts of Barisal division (n=801)

Figure 6 shows the proportion of households that earned money by selling homestead food production produce in last two months. A major portion of households (68%) did not obtain any income from the HFP produces in the two months prior to the interview. Among the earning households, overall only 9.6%, earned more than 500.00 taka in last two months (Figure 7). These figures show that a low

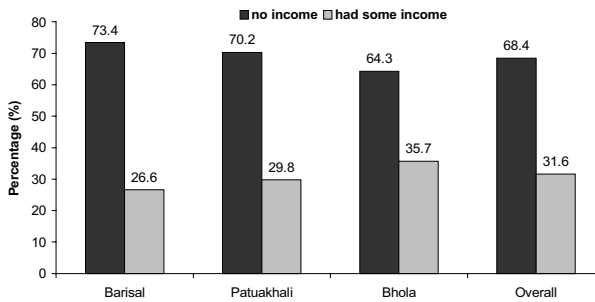


Figure 6. Proportion of households earned money by selling HFP produce in last two months (n=924)

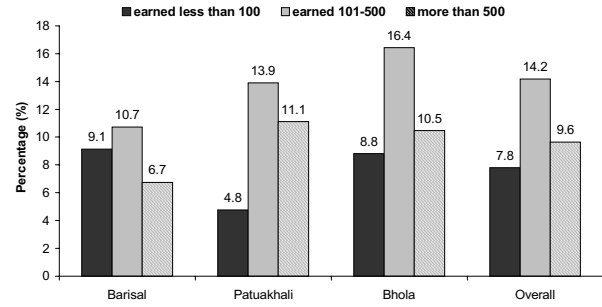


Figure 7. Proportion of household with income range (n=924)

proportion of the targeted households (31.6%) are earning from homestead food production activities and that the average income among these households was negligible.

Data on recall of food consumed in the previous seven days presented in Figure 8 showed that almost half

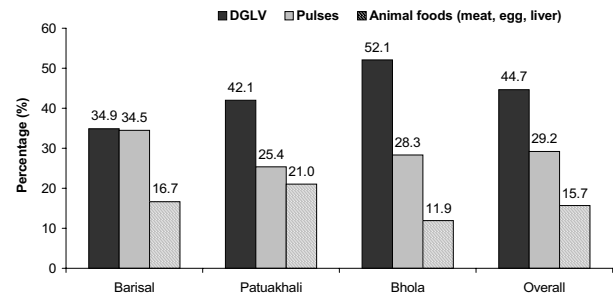


Figure 8. Proportion of mothers regularly consumed DGLV, pulses and animal source foods (n=924)

of the mothers (44.7%) consumed dark green leafy vegetables (DGLV)\* regularly i.e. three or more days, while just over a quarter of children consumed DGLV regularly in the same period (Figure 9). Less than one fifth of both mothers and children in the project area had consumed at least one of the animal food sources (meat/egg/liver) regularly in the previous seven days.

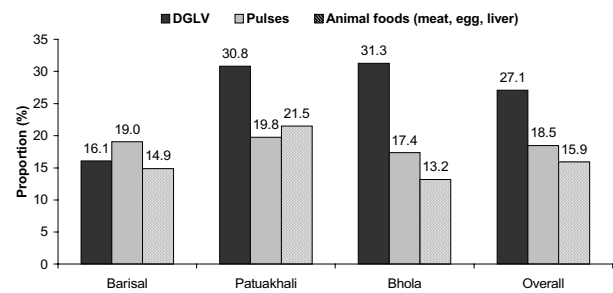


Figure 9. Proportion of children aged 6-23 months regularly consumed DGLV, pulses and animal source foods (n=628)

\* DGLV refers to all dark green leafy vegetables including red amaranth (lal shak)

Pre-assessment findings also show that overall only 20.7% households knew that oil should be consumed with vitamin A-rich foods for better absorption of vitamin A. Only 8.3% households were aware that citrus fruit helps the body to absorb iron from the diet, which contributes to blood production.

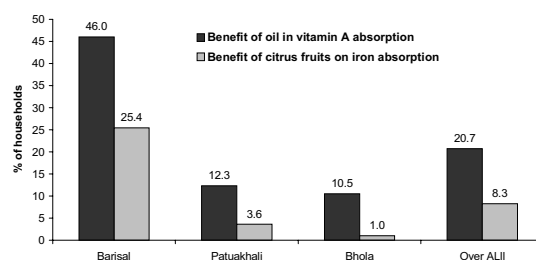


Figure 10. Proportion of households who had knowledge on benefits of various foods on nutrient absorption (n=924)

### Conclusion and recommendations

- The proportion of households with an improved or developed garden was very low (<5%). The HFP program has the potential to increase the proportion of households with year-round production of vegetables & fruits.
- Most of the HHs (59%) reported that they did not have a garden due to lack of input support. The HFP program could respond with available quality inputs through the Village Model Farm (VMF) and make linkages with good sources of inputs, such as seed, seedlings and saplings.
- Among the targeted HHs, overall only 32% were earning income from the HFP activities and the average income is very small. The homestead food production program will create an opportunity to increase the income from the surplus production.
- The practice of rearing improved birds and improved rearing management was almost non-existent among households, as also reflected in the poor consumption of micronutrient-rich animal source foods. The project activities will emphasize promotion of poultry with improved rearing practices to improve the available animal source foods of target households.
- It was also noted that the consumption of DGLV and animal foods especially by children was very low and that most of the mothers were not aware of their nutritional requirements, presenting an opportunity to increase the knowledge and practices through Nutrition Education of participating households in the HFP Program.

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