



Home gardening activities are centred on women

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Improving Food and homestead gardening in Bangladesh Nutrition Security

Malnutrition is a serious public health problem in Bangladesh. It can have serious impacts on the population as it retards child growth, increases the risk and duration of illness, reduces work output, and slows social and mental development. Improving nutritional status, including micronutrient status, can lead to increased productivity, increased child survival and growth, and reduced maternal morbidity and mortality.

Interventions for improving nutrition can address deficiencies of specific nutrients, such as vitamin A and/or iron, in which case a pharmaceutical approach can be used to immediately reach one or two particular target groups. However, when the goal is to address deficiencies of more nutrients simultaneously and to target the population throughout the life cycle (Bloem et al. 1998), interventions such as dietary diversification are more appropriate. In practice, a combination of the above-mentioned strategies is usually used because they address different goals and/or target groups.

Helen Keller International (HKI) national vitamin A survey in rural Bangladesh in 1997-98 found that

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among children who had not received a vitamin A capsule, those in households without a home garden were 2.2 times more likely to be night blind (the first clinical sign of vitamin A deficiency) than children of households with a home garden (Kiess et al. 1998). Findings among women, who are only eligible to receive a vitamin A capsule within 8 weeks of giving birth, were similar. Therefore, home food production is also an important approach for preventing vitamin A deficiency among women.

Home gardening activities are centred on women because they are usually the ones who take care of the home garden. Empowerment and increased income can result in the better use of household resources and improved caring practices.

This article describes the important characteristics of HKI's Homestead Gardening Programme in Bangladesh (1990-2001) focusing on how it is being monitored and evaluated.

HOME GARDENING

Home gardening is commonly practiced throughout the world (Landauer and Brazil 1990), and can be grouped into two basic categories: *traditional gardens* – those cultivated independent of any intervention, and *promoted gardens* – those receiving support from an outside organisation (Marsh 1996). Home gardens benefit family nutrition, increase household income, and provide a buffer to food insecurity during agriculture off-season.

In Bangladesh, both rooftop-gardening as well as the cultivation of “scattered” vegetable plants is commonly practised. The type and mix of species grown depends on household food preferences, soil and climatic conditions, and the availability of local materials and seeds. Despite the common practice of home gardening in Bangladesh, average vegetable consumption is estimated at 32 grams/capita/day (Ramphal and Gill 1990), which is well below the minimum intake recommended by the FAO of 200 grams/capita/day. In Bangladesh, the consumption of fruit is very low and highly seasonal. Oil consumption, a requirement for adequate absorption of provitamin A carotenoids, is also much lower than recommended.

PROJECT DESCRIPTION

In order to make a substantial contribution towards reducing (micronutrient) malnutrition, food-based programmes need to be conducted on a large scale. However, there is limited experience with successful scaling-up of pilot programmes and there are only a few opportunities to share experiences across countries and across development sectors. The Bangladesh Homestead Gardening Programme started as a small programme in the early 1990s and has since then successfully been expanded to a national level that, in collaboration with 51 non-governmental organisations (NGOs), presently reaches

more than 800,000 households in rural, peri-urban and urban areas. The expansion is an iterative process of implementation, evaluation, and planning (see Talukder et al. 2000 and the publication by HKI/Asia Pacific for more details).

KEY ELEMENTS FOR DEVELOPING SUCCESSFUL HOME GARDENING

One of the lessons learned from HKI's very first experience in gardening in 1988 was that the involvement and participation of the community in project design, implementation and evaluation are essential for achieving sustainable, improved gardening practices.

Access to the necessary inputs for gardening, like seeds, seedlings and saplings, a regular water supply, environment-friendly soil improvement techniques and pest control, live fencing, and credit or capital, and from a local, sustainable source is an important element for successful gardening.

Technical assistance, demonstration and training are especially important when new gardening techniques are being promoted. HKI has provided the NGOs with assistance for technical aspects of the programme, for programme management and for planning of the programme inputs such as seeds, water sources and staffing.

Nutrition education and social marketing within the gardening activity: While the aim of most home food production programmes is to increase the production and thus consumption of food, nutrition education is

required to ensure that consumption practices change in such a way that maximum nutritional benefit is obtained. Similar to understanding the indigenous approach to gardening, an understanding of the cultural context and feeding practices and constraints is necessary to develop appropriate nutrition education. The garden and/or nursery appears to be a good focal point for nutrition education and social marketing to promote increased consumption of micronutrient-rich foods. Through these focal points, other issues related to food, nutrition and health could also be discussed.

MONITORING PROGRESS AND IMPACT

Monitoring serves as a tool for ensuring that activities are being carried out as planned and improving performance as required. When indicators can be monitored locally and the partner organisations' staff is involved in the monitoring, the identification of problems and development of solutions can be done immediately in the field and at the appropriate levels. The questionnaires currently used collect information on indicators such as seed production, vegetable and fruit production, income generated by nursery owner and household gardeners, and vegetable and fruit consumption. Below are some examples of results obtained from the monitoring activities and assessment of impact.

Changes in gardening practices

Regular monitoring data collected between 1997-1998 among new programme participants show that their involvement increased the production and consumption of fruits and vegetables. Household gardens were classified as 'traditional', 'improved' or 'developed' (1). At the start of the programme, approximately 75% of households were practicing home gardening but nearly 60% had a traditional garden. After one year of participation in the HKI Homestead Gardening Program, the proportion of households that practised year-round gardening ('developed gardening') had increased from 3% to 33%, those that had an improved garden from 13% to 33%, and the proportion without a garden had decreased from 25% to 2%.

Changes in production and consumption

Figure 1 shows, for each garden type, the frequency of vegetable consumption of

children aged 2-5 years, the number of vegetable varieties being produced, and the amount of vegetables produced in the last two months. The amount and number of varieties produced was highest amongst households with a developed garden. Children in households with a developed garden consumed vitamin A-rich foods, such as green leafy vegetables and yellow fruits, the most frequently.

Income from garden and utilisation

Routine monitoring data showed that 30%-40% of the households sold some of the produce from their garden, earning an average of 100 Taka bi-monthly (approximately equivalent to US\$ 2). For most households, the main use of this income was for food (56.3%), while some mainly used it to invest in seeds, seedlings, saplings, poultry or other income-generating activities (15.3%). Nearly 10% of households saved the income generated from the garden (n=10,107). The majority of the gardens (73%) were managed by women, and women were found to be the main decision-makers regarding gardening practices and use of the income earned by selling garden produce.

CONCLUSIONS

The development of home gardening projects that build on traditional practices, local conditions and cultural context, and that are conducted by organisations that are well-established in the community, can be a sustainable means of improving micronutrient intake among high-risk groups and improving household food security. In addition, home gardening programmes can be implemented successfully and cost-effectively on a national scale using a collaborative model that fits local conditions. As women are usually the main caretakers of the home garden, such programmes empower them, thus ensuring better utilisation of the income from the garden for food and increasing family welfare. These benefits are important contributions towards poverty alleviation.

Notes

(1) Traditional gardens are scattered, seasonal and only have gourd types of vegetables, common in rural Bangladeshi households. Improved gardens are those that have more types of vegetables but are not productive throughout the year. Developed gardens produce vegetables throughout the year.

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