COMMENTARY

A CASE FOR PROMOTING URBAN AGRICULTURE AND ENVIRONMENTAL PROTECTION IN SRI LANKA

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Abstract

The growth of urban areas around the world represents a special problem for the environment in terms of exploitation of natural resources beyond the assimilative capacity of the environment. Many cities in Sri Lanka are in a similar situation. One solution to this problem is urban agriculture. It provides a more diversified and fresh food basket for the urban population while managing the urban waste in an efficient and environmentally sound way. Empirical evidence from a recent study in Southern Sri Lanka reinforces this view. The role of agricultural extension in promoting urban agriculture is described.

Introduction

The natural environment can be thought of as that special asset of naturally occurring stock of resources, such as air, water, land, forests, and fisheries which is available to human beings for use. As we utilize these resources to produce and consume goods and services, waste is generated into the environment (World Commission on Environment and Development, 1987). Although the environment has a natural assimilative capacity to absorb waste, and reconvert it into harmless or useful products, environmental pollution and/or damage can occur if more waste is generated than the environment's assimilative capacity.

The growth of urban areas around the world represents a special problem for the environment. By the year 2000, the United Nations Development Program (UNDP) estimates that 50% of the world's population of 6 billion people will live and work in urban areas (UNDP, 1996).

Heavy concentrations of people on limited land in cities and towns result in high rates of exploitation of resources. Urban areas reportedly occupy 2% of the world's land surface, but use 75% of the world's resources, discharging excessive amounts of waste into local and global environments (UNDP, 1996).

One solution to this problem is urban agriculture. Urban agriculture is a significant economic activity, central to the lives of many millions of people around the world. It involves farmers and agribusinesses, both small and large, and provides a diversified and fresh food basket for urban populations living in towns, cities, and metropolises. In addition to its potential to utilize and manage urban waste in an efficient and environmentally sound way (IFPRI, 1989; UNDP, 1996), urban agriculture is having an impact on the nutrition of urban people, particularly the poor (Maxwell, 1993).

In 1995, 21% of Sri Lanka’s population of 18.1 million lived in urban areas (Central Bank, 1996). Many of these areas are faced with problems of high population density, improper land use, increased traffic congestion and pollution, lack of green space, and increased vulnerability to
disease (Baldwin, 1991). As a result, ecological sustainability of urban areas is threatened (Karunadasa, 1995).

One way of alleviating this situation in Sri Lanka is for urban people to use domestic waste in growing home gardens of fruits, vegetables, trees, leafy vegetables, and ornamental plants, and raising poultry and pigs (Department of Agriculture, 1987). This can not only improve nutrition, but also provide a source of income for lower-income people (Karunadasa, 1995). Large quantities of garbage are generated from homes which need to be used in a suitable manner for lasting benefits to people and the environment.

There is limited information regarding the extent of incidence of urban home waste disposal, and/or factors that might influence promotion of urban agriculture in Sri Lanka. A study was undertaken to fill this void, and provide background for this commentary article.

Methodology

The Matara Urban Council (MUC), a major town in Southern Sri Lanka, with a population of 47,883 people was selected as the study site. Six locations with high population density in the MUC were included. A sample of 30 urban dwellers was randomly chosen from each location using lists provided by the MUC. The total study sample was limited to 180 respondents due to resource constraints.

Data were collected by personal interview using a prepared survey containing questions on size and use of land, personal characteristics, leisure time, knowledge-information on urban agriculture, disposal of domestic waste, and mass media preferences. The questionnaire was pretested with 15 urban dwellers not in the sample. Questions were modified accordingly.

Survey Results

Size and Use of Land

A majority (54%) of the respondents had more than 20 perches (0.05 hectare) of land, and 92% owned their land. While a majority (71%) of the respondents were involved in agricultural activities, only 25% or less of the land in gardens was used to cultivate fruits, vegetables, ornamental plants, and mushrooms, and to raise animals. Home gardening was the major agricultural activity for 88% of the respondents.

Personal Characteristics

Females outnumbered males in the sample by a ratio of 6 to 4. Two-thirds of the respondents were between 20 and 60 years of age, and could be classified as the working population. One-fifth of the respondents were below 20 years of age, and 12% over 60 years old.

Employment data revealed that 75% were working in the government or private sectors, 5% were farmers or unskilled labor, and 20% were not working. Employed respondents were asked how many hours of leisure time they had per week. One fifth of the respondents (20%) reported having more than 30 hours of leisure per week, 26% had 21-30 hours, and 54% had 11-20 hours (27%) and 0-10 hours (27%).

Knowledge-Information on Urban Agriculture

Nearly 60% of the respondents had some knowledge about urban agriculture, but just over one-half of them were using this knowledge in urban agricultural activities. Furthermore, only 15% of the respondents had received information/advice from the agricultural extension service concerning agriculture, and only one respondent who received the information said it was sufficient.
Disposal of Domestic Waste

Respondents were asked how they disposed off their household garbage. Most (43%) reported placing the garbage on the roadside, 31% put it into a pit, 23% burnt the waste, and 3% dropped it into a stream of water. Given that there is no satisfactory method of pickup, disposal or recycling of domestic waste one can foresee dangerous health and environmental hazards.

When respondents were asked if they used household garbage for agricultural purposes, a majority of them did not, including those who were involved in home gardening or animal husbandry. None of them knew that garbage could be put to use in agriculture, hence they threw it away.

Waste water in urban areas can be used in agriculture. However, only 24% of the respondents used waste water in this manner. The rest removed waste water to roads, canals or streams.

Mass Media Preferences

In Sri Lanka, as in many countries, mass media are commonly used by extension services to disseminate information about agriculture. A majority (70%) of the respondents preferred to receive information about urban agriculture through television. Radio (18%) was the second most preferred source, with leaflets (7%) and newspapers (5%) having a low preference. Reasons why respondents chose television as the most preferred medium were easy access (62%), easy to understand (16%), and no special effort needed (15%). Forty-six percent of the respondents indicated that the most suitable time to watch television programs on urban agriculture was evenings or weekends. Women are free during these periods and can devote time to watch such programs.

Implications

Although this is a limited study of one urban area in Southern Sri Lanka, what was found is probably true of other urban areas in the country. It would appear that the implications of the study can have wider application.

Hilhorst (1984) studied three villages in Matara district of Sri Lanka, and reported that home gardening, animal husbandry, and agro-based industries found in the urban areas had not received much attention from the agricultural extension service of Sri Lanka. However, the results of this study support the notion that urban agriculture in the context of environmental protection needs to be promoted and supported as a public strategy by public institutions in Sri Lanka. This suggestion is based on the following specific findings:

1. People typically had enough land, but only 20% of them were raising gardens or animals.

2. The young and elderly, totaling 32% of the sample, have the potential to actively participate and/or assist with agricultural activities.

3. Nearly one-half of the employed people had more than 20 hours of leisure time per week, some of which could probably be devoted to urban agriculture.

4. While people may know something about urban agriculture most of them were not using this knowledge or being reached with adequate information.

5. Appropriate disposal of household garbage and waste water is non-existent, both on an individual and collective basis, thus providing motivation and potential for an optimal system.

Given the situation found in the study, it is important that the agricultural extension service develops an urban agriculture program to educate the general public about the benefits of urban agriculture in the diet, health, and income of urban residents, and provides information on appropriate disposal and use of domestic waste as
a means of increasing home garden and animal production, while protecting the environment. As shown in the study, television and radio programs were preferred sources of information and could be important in making the public aware of urban agriculture. However, other contact methods and supporting education materials will also have to be used.

It is significant that 80% of the respondents in the study believed that environmental problems can be reduced by doing urban agriculture activities in a systematic manner. It is important that public institutions in Sri Lanka such as the agricultural extension service and agencies responsible for the needed resource infrastructure support this conviction by appropriate development and education strategies.

References


