

## MODERN TRENDS AND DISTRIBUTION PATTERNS OF KITCHEN GARDENS IN SRI LANKA: CASE STUDY IN BIYAGAMA AREA

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### Introduction

Kitchen garden and its benefits are the one of the most important topics on present for household food security. Kitchen garden is one of the Agro-forestry practices that can be an approach of sustainable development process as a solution for the deforestation and food crisis in future. Agro-forestry is a concept of combination of forestry and agriculture. There are sub divisions in agro forestry system including Home gardens, Ally Cropping systems, Forest Farming, Salvo-pastoral systems, Wind brakes, Riparian buffers etc... The kitchen garden is a sub agroforestry system of home garden. This research has focused on kitchen gardens in a semi urban area of Biyagama South of Gampaha in the Western province in Sri Lanka. Home gardens have been evolved with the human development. Land fragmentation and increasing demand for land has been changing over time resulting deferent types of kitchen garden patterns that use deferent types of tree and crop species with new technologies. A kitchen garden can be created by planting different types of herbs in an open space, pots, rakes, umbrella type or containers with the added benefit of mobility. Although not all herbs in pots or containers, but some herbs do better than others do. The main objectives of this research are to identify the kitchen gardens pattern in Biyagama south and understanding the variation of kitchen garden patterns with new trends in rural and urban area.

### Methodology

The methodology of this comprises four levels. They are sampling, data collecting, data management, analyzing and data presenting. Data were collected in the form of primary and secondary data. Primary data were collected from observations, discussions, and questioner survey. Mainly observations were based on field survey. In this study kitchen garden patterns, their distribution and variation have observed according to the area. Field based discussions were also carried out and questioner survey was conducted in a selected village in order to collect data and information. Secondary data were collected from *Grama Niladari reports, Sampath Pethikada reports* and other books and publication related to the field of research. Softwares such as GIS and MS Excel have been used in analyzing the data. Charts and data tabular sheets were produced through MS Excel and GIS was a tool for spatial analyzing such as selecting sample points and natural neighbor analyzing in spatial distribution of kitchen garden. Analyzed data were presented by, maps, charts, and diagrams.

### Discussion and Conclusion

In Sri Lanka, there is regional variation of home gardens. These are dry zone home gardens, wet zone home gardens, udarata (Up country) home gardens and Plantation area based home gardens. However, in the kitchen gardening methods and practices depend with the householder's needs, spatial development, and socioeconomic components. There are four

types of kitchen garden patterns. They are rural kitchen gardens, semi urban kitchen gardens, urban kitchen gardens, domestic type kitchen gardens.

Rural kitchen garden pattern can be identified in rural area of Sri Lanka. Particularly there is a high distribution of rural kitchen gardens in the dry zone while comparatively less in wet and intermediate zone. In those areas, a significant amount of lands are owned by private landholders. The available free spaces are used for kitchen garden practices in these areas. They cultivate crops and other plants for their cooking needs.

Rural model has a larger area to cultivate with the purpose of daily needs for kitchen purposes. In this model, generally a house is located either on the one corner of the land or center of the land. Except frontal area, the rest particularly the backyard is used for kitchen garden practices with the purpose of growing vegetables, spices, leaves, herbals, fruits, Yams. It is difficult to find a borderline between a kitchen garden and home garden since kitchen garden is a component of a home garden. They are growing crops and plants and used for the day today kitchen needs. The surplus of crops and plants are sold. In rural kitchen gardens, chemical fertilizer is not used but waste products such as animal waste (cow-dung) and compost is commonly used. There is no proper management as it is a part of day-to-day life. Women take a big role in maintaining this type of kitchen garden.

Semi urban kitchen garden pattern can be seen in both rural and urban area of Sri Lanka. Particularly it has been distributed in all over the country. These are commonly identified in local towns and rural areas. Not like in rural areas, the significant characteristic of semi urban areas is the high demand for land. There is no larger land area to cultivate but householders use the available small free space for kitchen garden practices. They also cultivate crops and other plants for their cooking needs.

As there is no larger area to cultivate for own needs for kitchen purposes in semi urban areas, householders manage the limited space perfectly. In this model, generally the house is located on the one corner of the land or center of the house. For kitchen garden practices they use alongside of the house area and backyard of the house. Semi urban kitchen garden usually does not depend on basic home garden. It is easy to clarify the home garden and the kitchen garden. They are growing crops and plants and these are used for the day today kitchen needs. The surplus of crops and plants are sold like in rural kitchen garden. Householders in Semi urban kitchen gardens use both chemical fertilizer and waste products such as animal waste (cow-dung) and compost. There is a proper management system and it is a part of day-to-day life of householders. Usually this type of kitchen garden includes gardening like horticulture. They grow chilies and some vegetables as gardening plants and are also help to the aesthetic value of garden. Technical agricultural method like wall type agricultural events also use in semi urban model. Both women and men take part in maintaining the garden.

Urban kitchen garden pattern can be seen in urban areas of Sri Lanka. This garden is also a common type as it has been distributed all over the country especially identified in town areas. Like semi urban areas the demand for land is very high. There is no larger area to cultivate. However, householders use the very small free space for kitchen garden practices. Although they cultivate crops and other plants for their cooking needs, the limited space make a barrier to some types of tree and crop species. In this model, generally the entire land is devoted for housing. They use alongside, back yard and inside of the house area for kitchen garden practices. Urban kitchen garden has very little scale of area to cultivate.

Usually, an urban kitchen garden does not depend on the basic home garden as there are no home garden practices like in the rural and semi urban pattern. The compound and the besides of the house is devoted for kitchen gardening. There are no supernumerary crops and plants to be sold and production is only for consumption. The usage of chemical fertilizer in urban kitchen gardens is relatively high. There is a proper management and it is a part of day-to-day life of householders. This type also comprises a part of gardening like horticulture. They grow chilies and some vegetables as gardening plants that increase the aesthetic value of garden. Technical agricultural events such as wall type, container type and pots for cultivating are used in urban model. Both women and men take a part maintaining in this garden.

Domestic kitchen garden pattern can be identified in all over the country. These are distributed in rural, semi-urban and urban areas of the island. There is no larger land area to cultivate. This type of kitchen garden practices applies new agricultural techniques. They also cultivate crops and other plants for their cooking needs. In this model, generally we can identify indoor gardening methods. The frontal area and verandas of house are allocated for the kitchen gardening. Kitchen gardens provide most important benefits including, social, economic and environmental benefits.

Social benefits comprise providing new and fresh food that help to maintain a good health condition and managing food security helping to overcome the poverty in household levels. Kitchen gardens increase the aesthetic value of gardening that relax the human mind, attitude of agriculture activities that help regional agriculture development and food security in the country. It also provides social relations between villagers and household members with food crop interchange. Environmental benefits include providing good landscape, preserve biodiversity in the home garden, kitchen garden land management, preserve microclimate variation in the home garden, create habitat for small species and others from which ultimately create a sustainable ecosystem. Economic benefits such as reducing cost of living improve livelihoods and extra incomes are common.

### **Conclusion**

Agro forestry provides economic, social and environmental benefits. A kitchen garden is one of the sub fields in agro forestry that provides the above benefits in deferent stages. This study was based on kitchen gardens in Biyagama south where there are rural, semi urban and urban areas and these kitchen gardens vary in accordance with the urban hierarchy. Three types of kitchen garden patterns can be identified within the study area namely, Urban Kitchen Garden patterns, Semi urban kitchen garden patterns, and Domestic kitchen garden patterns. Agriculture patterns of kitchen gardens depend on spatial pattern of area, human needs, and their technology. Kitchen garden is the one of the concepts that must be developed in the future as one of the land management approach. This also provides us environmental friendly system and good conservation methods helping the country's food security. That also helps us to survive in a food crisis in the future. Therefore, motivations and supports to increase home base agriculture activities like Kitchen gardens will help for social, economic and environmental satiability of the households.

**References**

- Michael Gertley, Jan Gertley, (2007), Art of the Kitchen Garden, Taunton Press, United States.
- Richard Bird, (2005), Kitchen Gardens, Southwater Publishing, London.
- SampathPaticada, (2011), Biyagama Divisional SecretaryOffice, Biyagama.  
[http://en.wikipedia.org/wiki/Forest\\_gardening](http://en.wikipedia.org/wiki/Forest_gardening)