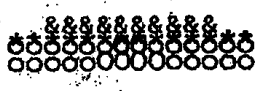
References:

Crop Production Manual for field workers (1980)
Department of Agriculture, Peradeniya.

Table I.

MEAN EFFECT ON TREATMENTS ON YIELD

	82/83 Maha		1983 Yala	
	Kg/per plot	tons/ha	Kg per plot	tons/ha.
Ridge	75.8	3.12	35.2	1.52
Flat	74.8	3.08	48.0	2.07
LSD(p=0.02)	NS	NS	NS	NS
C.V.(%)	37.9		34.9	



HOME-GARDENS AND HOME-GARDENING IN THE MATARA DISTRICT.

The article is a summary of the report on "Home-gardens and Home-gardening in the Matara District: The present situation and future prospects" by Bart Ensing, Georg Frerks and Sandrin Sangers. The research was conducted in the frame-work of a joint research project on "Popular participation in planned development at village level" by the Marga Institute, Colombo and the Agricultural University of Wageningen in the Netherlands.

The article describes the present situation of home-gardens and home-gardening in the Matara District. It argues that home-gardens are important, and also that improvements are possible and necessary. Some ideas are presented on how to promote home-garden development.

INTRODUCTION:

Home-gardens and home-gardening are probably as old as the history of human sedentarization. Also today most Sri Lankan peasant families will be familiar with the home-garden, and the vast majority of the rural population is engaged in home-gardening. It is striking however to see how little is actually known (at least in written form) about the present situation of home-gardens and home-gardening in Sri Lanka and about the potentials and constraints the present situation has for further development.

This article aims at contributing some knowledge about the subject and contains findings of a research done on home-gardens in the Matara District.

In this article home-gardens are defined as a mixed cropping system with several layers of annual and perennial crops around the house. This definition suits the traditional land use pattern in the Matara District which consists of three components: cultivation of lowlands - mainly paddy cultivation, highland and home-gardens, combined in different types of farming systems. Livestock farming can be present in addition. The home-garden is one of the components in such a farming system. In the Matara District 81% of all farms include a home-garden and 41% of the holdings have only the home-garden component. Home-gardens are therefore a very important component of the farming system. The estimated extent of home-gardens in the Matara District is 20-30% of the arable acreage depending on the area. The importance of the home-garden is likely to increase. Due to population pressure, holdings become smaller and more holdings will consist of a home-garden only.

The agricultural economy in the Matara District is characterized by a large number of small farms, most of which do not generate sufficient income to meet all household needs. An increase of agricultural production through clearing of uncultivated land is not possible. Therefore to improve agricultural production the available land will have to be used more intensively. The conditions for paddy cultivation in the Matara District are not very favourable due to soil and climatic conditions and the potentials for improvements are limited.

Home-gardens are presently under-utilized,and a large number of people could derive profits from an intensification of home gardening. No other single component of the farm occurs as frequently as the home-garden, and it is not possible to find another economic activity in which such a large number of households is engaged. It can therefore be argued that an improvement of home-gardens and home-gardening is an important way to raise the living standards in the Matara District, and in other districts of the Wet Zone of Sri Lanka as well.

THE PRESENT SITUATION OF HOME-GARDENS AND HOME-GARDENING.

General:

The home-garden forms an integrated part of holding in which a variety of annual and perennial crops is cultivated in a mixed cropping and multi-storeyed system. The home-garden is a stable cropping system which suits the climatological, ecological and soil conditions of the area.

The variety of species in the home-garden is large. In a sample 148 species were counted with an average of 20-30 species per home-garden. These crops vary from root crops, green leaf plants and vegetables to small bushes and large trees. Three different canopy layers can be distinguished. This composition produces micro climatic conditions which are probably better than in hgihland plots. The complex root structure gives a good protection against erosion. Trees are predominant in home-gardens and the top layer is often too dense. This influences the production in lower layers in a negative way through reduction of light intensity. A problem is the relatively large number of non-producing plants because they are too old or too young. Besides cultivation, the home-garden can also be used to rear livestock although this is not very common.

Inputs:

The home-garden has low requirements as far as inputs are concerned. Planting material is mostly freely available in the own garden, or received as gift from others. In general little manuring is done. Recycyling of nutrients is a feature of the

system itself because decomposed organic material produced by the home-gardener is main source of nutrients. Making of . compost and using it as manure is often not done. Artificial fertilizer is hardly used in the home-garden and, if done, only for certain plant species.

In some cases capital is spent to hire labourers to do large tasks in the home-garden. On the whole however, it can be said that capital investment for home-gardening is very low.

The labour input is highly flexible in intensity, regularity, timing and division by sex. The home-garden forms the closing entry of the farming system and other off farm and household activities in human as well as material inputs. For instance, in paddy cultivation it is crucial to do all husbandry activities in time. The home-garden however can survive considerable amounts of neglect without major problems. This is an important feature of the home-garden.

The labour division by sex and age is more flexible for home-gardens than for other lands. All able household members do some work in the home-garden Climbing of trees and work with the mammoty is in most cases done by men, women do more work on cultivation of annual crops. However, the labour division is not very rigid.

The husbandry practices in home-gardens can be improved. Specially uprooting of trees hould be done when they are low producing or produce too much shade. Husbandry practices on seedlings and young plants can also be improved.

Output -

The produce of home-gardens can be put to a varied use and may serve different household needs. Firstly, it ensures a minimum availability of food items for the household throughout the year. It serves as a buffer during periods of scarcity of other food like rice because a lot of items can be preserved too. Coconuts, one of the main crops in home-gardens, are necessary in the Sri Lankan way of cooking. Like the coconut, jak, breadfruit and tubers are major sources of energy. Vegetables and

fruits are important protective food as they contain vitamins and minerals. Specially green leaves and yellow fruits like papaw and mango are important in this respect. Vegetables could be grown much more in home-gardens. Presently a major part of the vegetables has to be bought. Several home-garden crops and animal products are important body building (i.e. protein containing) food. Rearing of livestock in home-gardens however can be intensified.

Further more, home-gardens may provide an additional income through sale of cash crops or by saving money which otherwise would have been spent for purchase of food or other items. The major functions of the home-garden are oriented towards subsistence of the household without intervention of the market. In addition excess of home-garden produce is distributed freely among friends and kinship relations.

Conclusion:

In summary one can say that the home-garden is a flexible and multi-functional system. Its multiple functions are providing food, cash income and non-food items like firewood, timber and medicines. Further more, it strengthens social relationships through gifts, it spreads the risk in the case of cash-crop failures and other problems of the household. Specially the most under-privileged households cannot afford to spend money for their home-garden. Cultivation of cash crops, specially in a mono-cropping system, is risky and therefore not feasible for them. Through home-gardening they can obtain a fairly stable production with few inputs, and in this way reduce their risk.

These recommendations are given under headings corresponding with the different operational requirements for home-gardening.

(a) Availability of land.

The availability of land as such is a given resource which cannot be changed. We however find that the legal status of the land influences the potentiality of home-gardening . Legal procedures should be adjusted to make titles on home-gardens secure in a less costly and time consuming way than at present.

(b) Availability of labour

The availability of labour is also a fact which hardly can be influenced. Programmes should be adjusted to this factor as mentioned above. Lack of interest and demotivation are prevailing specially among male youths. Motivational programmes and educational efforts should be launched to reverse this tred.

(c) Availability of capital.

Home-gardens require little capital and also maintenance costs are low. This feature should be guarded and any measure should be as capital extensive as possible. This means e.g. that organic manuring be promoted instead of artificial fertilization. New varieties or cultivars should not need a whole package of inputs.

(d) Planting material.

Planting material must be made available in any mixture desired without preconditions regarding quantity to respond maximally to the household's needs. The propagation of food crops (including fruit trees) requires more attention, while breeding should be focussed not only on yields, taste, resistance etc., but increasingly on required planting space to facilitate cultivation on limited land resources.

(e) Husbandry practices

There is an enormous scope for further improvement of husbandry practices. They vary from choice of crop composition and spacing to manuring, uprooting, pruning and watering. The required knowledge could be provided along different channels. Firstly, proper husbandry practices can be included in the curricula of primary and secondary schools. Practical exercises through school home-gardening can be extended. Furthermore, the K.V.SS should be equipped to disseminate all necessary knowledge regarding home-gardens under the unified extension service of the Department of Agriculture. Ideally extension about animal husbandry should be included in agricultural extension service too, since it cannot be seen separately from cultivation of crops.

It must be evident that all extension activities are not performed from a technical, agronomic point of view alone. Attention to economic, health, social and cultural factors is essential as well. The extension messages should be tuned towards the particular needs, problems and aspirations of the area, household or even individual operator. Moreover, the extension message should concurr with existing beliefs and practices. A lot of knowledge exists about husbandry practices although not all people use it. These practices should be studied and included in the extension message. When extension is based on people's own beliefs and knowledge, it will be easier accepted by them than totally new and alien ideas.

(f) Processing and preservation:

Processing and preservation of excess produce should be promoted. As no specific data are available with us on this topic we recommend that a more in-depth study be carried out before arriving at specific recommendations.

(g) Marketing.

For marketing the same applies as under (f) above.

(h) Consumption.

Attention should be focussed on specific nutritional problems specially among vulnerable groups, viz: pregnant and lactating women, children and sick persons. These groups are at risk as far as nutrition is concerned and home-gardens could be utilized to improve their food-intake and hence their nutrition. It should be kept in mind that an increase in production per se does not always imply an increase in individual consumption. Food intake is also determined by the distribution of food within the household, which is in some cases very uneven.

The broad set of recommendations is tentative and has to be put into larger detail before it can be implemented in practice. This operationalization however has to be done at the local level in dialogue with recepients and their organizations. In each specific situation a different emphasis may be struck and different priorities set. We therefore suffice with these more general recommendations for home-garden development.