

Annex

Progress of Crop Diversification in the Mahaweli Projects

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THE ACCELERATED MAHAWELI Development Programme (AMDP) has made every effort to diversify its cropping programs from rice to Other Field Crops (OFCs) in all its project areas. (See map which shows the AMDP Projects [p. 124].) This effort, from modest beginnings a decade ago, achieved its best results in yala 1990 when diversified cropping in all Mahaweli projects produced crops valued at Rs. 1,797,026,500 or US\$44,935,662. Diversification to OFCs in the Mahaweli projects which have rice-based irrigation systems, was undertaken to increase settler incomes and to make better use of the land and water during the dry period.

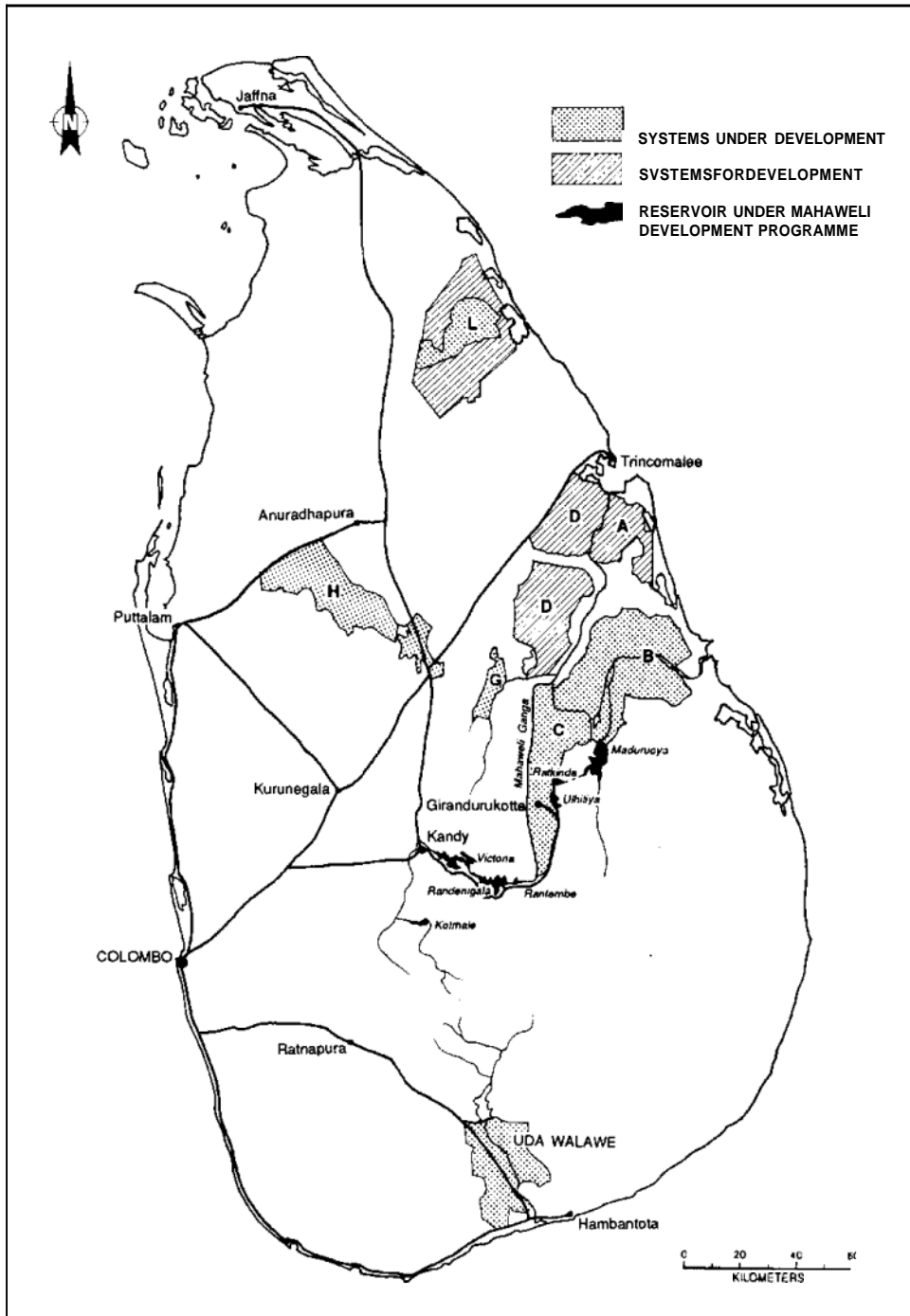
Detailed below are some of the areas in which significant diversification progress has been made.

Intermediate Season

With the objective of giving the farmers in System H an additional income, the Mahaweli Economic Agency (MEA) organized a short-duration cultivation in the fallow period between the maha 1989/90 and the yala 1990 seasons. Pulses were encouraged as their water requirement was less and the growth duration and cultivation costs low.

Soon after the maha 1989/90 rice harvest in System H, an extent of over 100ha was sown with soybean, cowpea, and green yam. With no tillage the seed was just dibbled into the soil in an effort to use the residual moisture in the field. This media or middle cultivation, also called sandwich cropping, proved a success in terms of farmer enthusiasm, farmer incomes and agricultural production potential capability. It is hoped to increase the area under this type of cultivation after the maha 1990/91 harvest as well using the experiences that have been gathered in the past effort. Most farmers made over US\$370 per hectare (Rs 6,000 per acre) from this cultivation. These successful cultivations gave farmers the incentive and confidence to cultivate more OFCs in the yala season that followed.

Figure 2. The Accelerated Mahaweli Development Programme, Sri Lanka.



Big onion. Though the Mahaweli planned a large scale cultivation of big onion in Systems B, C, G, and H, a shortage of reliable seed caused a setback to the planned program. The MEA, however, made special arrangements to make seed available to the farmers from other sources. With difficulty, especially in terms of the credit facilities necessary for seed purchases, adequate quantities of seed were purchased from the private sector, their viability tested and cultivated by the Mahaweli farmers.

A total of 4,210 metric tons of big onion from 566 hectares, valued at Rs35,785,000 or US\$894,626 were to be harvested from the Mahaweli areas this yala season. Special training sessions on the storage of big onion were organized for the farmers, as such large quantities coming in at once would cause a glut in the market, resulting in low prices and waste through spoilage.

Chili. System H has established itself as the largest chili producing area in Sri Lanka. Chili was one of the first crops encouraged under the Mahaweli Diversification program that started in System H in 1980. Now, System H produces nearly 50 percent of the country's chili. In yala 1990 season, 9,330 ha of chili valued at Rs. 612,990,000 or US\$15,324,750 were cultivated in the Mahaweli projects. The total production was 13,622 metric tons. A variety of diseases, including leaf curl, affected production but the yields harvested were satisfactory.

Gherkin. In the last four years, the export of gherkin from the Mahaweli projects, mainly to Australia and some European countries, has grown very fast. The 1990 yala season saw export orders for gherkin valued at Rs 22 M. The Mahaweli farmers are now quite experienced in the cultivation of gherkin having grown it over the last four years. Since this is a fast-growing crop and the project has to be harvested at the correct time, it is a very labor-intensive crop. Family labor is utilized intensively. In spite of Sri Lanka's growing export trade in gherkin no research has been carried out yet by the Department of Agriculture on this crop.

Banana. The cultivation of banana under irrigated conditions has become popular in some of the Mahaweli areas, especially the Uda Walawe Project in south Sri Lanka. The reddish brown earths which are well-drained have promoted the change, together with the high profits that can be achieved by this crop.

Earlier, banana was planted with the onset of the maha monsoon rains and the plant went through some stress in the following dry yala period, to bear fruit during the next maha season. Small bunches were produced due to the stress experienced during the intervening yala season.

The Mahaweli Economic Agency introduced banana cultivation under irrigation with a view to increasing the incomes of the farmers and also to counter a water shortage in the tail-end sections of the Uda Walawe Project. The area under banana has increased from 205 ha in 1985 to 801 ha in 1989. High profitability, low labor input, a low water requirement and tolerance to drought make banana a popular crop. It also has the potential for intercropping with cowpea, chili, green gram, and onion in the initial stages and later with ginger, turmeric and yams.

Banana requires a considerable amount of moisture which has to be met by supplementary irrigation. Farmers in Uda Walawe use mainly furrow irrigation though some farmers have used flood irrigation which has caused water waste and lodging. Proper rotational water issues, 5-7 days initially and 7-10 day issues after 6 months are resorted to. Proper drainage is an important factor in the cultivation of banana under irrigation.

Irrigation

The Mahaweli irrigation systems have been designed for a rice-OFC cropping system. One of the main yala season cultivation problems in the Mahaweli, as elsewhere in the country, is the lack of adequate water. With diversification to OFCs, it is possible to cultivate a larger extent of land with the same quantity of water. The water requirements of each of the other crops are different and, therefore, rotational issues of water have to be extended accordingly. In poorly drained soils in the bottom of the valleys, only rice can be grown due to stagnation of water.

Effective rotational water issue systems have been worked out and are being implemented. These have worked fairly well as close monitoring of water issues is being carried out within the Mahaweli projects and at the macro Mahaweli system level as well.