ABSTRACT

Investigations into the allocation of labour on smallholdings, with respect to rubber farming in combination with other crop farming activities, have been very limited in Sri Lanka. This study is aimed at examining how farm labour is allocated among different farming and non-farming activities of the mixed smallholder rubber farms in a selected rubber growing area in Sri Lanka. A case study approach is followed with a sample of 10 farms from 3 villages in the Hedigalla Rubber Extension Officers Division in Kalutara district.

Two methods of analysis are employed in this study: (a) simple tabular and graphical analysis and (b) whole farm analysis which is an application of the linear programming (LP) technique.

Simple tabular and graphical analysis gives insight into the existing farming situation of these farms and identifies the key factors which influence the labour use pattern. It also shows possible reasons for the inter- and intra-farm variations in labour use. Whole farm analysis using the LP technique generates optimal farm plans for two selected medium sized farms within the sample. Optimal farm plans are generated in respect of two different farming conditions: with and without rubber replanting.

Simple tabular and graphical analysis reveals that traditional technologies dominate in paddy farming activities among the case study farms. A variation in allocation of time for different paddy farming activities between, as well as within, the Maha and Yala seasons has been observed among these farms. Seasonality in expected labour use in paddy farming prevails in these farms. Also they show a relatively

high degree of variability in expected labour use per ha. with regard to paddy farming activities. This includes inter-farm variations in both Maha and Yala seasons as well as intra-farm variations between seasons within the same farms. Two types of variation in expected labour use in rubber tapping have been identified. They are: (i) variations in expected labour use within the individual farms between different months of the year, and (ii) variations in expected labour use between the individual farms within different months of the year. Also, except for felling and clearing the old rubber stand, the inter-farm variation in the expected labour use is relatively low for all the other rubber replanting activities among these farms.

LP solutions present a staggering of paddy planting and rubber replanting for both the farms selected for the whole farm analysis. However, the marginal opportunity cost (MOC) of not staggering the paddy crops is very low. The marginal value product (MVP) of labour for the farmer with less family labour is raised during peak periods. The MVP of cash remained low for both the farms under both replanting and non-replanting conditions. Inclusion of rubber replanting vectors has raised the cash surplus for both the farms considerably.

As a whole this study has been useful in indicating positive directions towards altering certain farming activities so as to accommodate new farming activities such as technologically improved paddy farming techniques and rubber replanting.