Socio-Economic Status of Smallholder Rubber Farmers in the Moneragala District

D.M.A.P. Disssanayake[1], Wasana Wijesuriya[1], H.M.L.K. Herath[2] and P.K.K.S. Gunaratne[1]

ABSTRACT

This study was focused on the Moneragala district which is one of the districts in the Uva Province of Sri Lanka. Rubber cultivation, being a new initiative there is a high risk of resource wastage in these areas which necessitated a detail study for proper planning of this exercise. Hence, the objective of this study was to assess the socio-economic conditions of rubber farmers which are a basic necessity for planning community development projects. A questionnaire survey was done to collect household and rubber relevant information from 255, 248 and 143 respondents in the respective categories of farmers who are prepared to cultivate rubber (potential farmers) and those who own immature and mature rubber plantations. More than 50% of the farmers had only primary level education. Hence, education needs to be considered as a constraint in improving the awareness of rubber farmers in the nontraditional rubber growing areas. The higher percentage with a monthly income of less than Rs. 10,000 should also be regarded as a bottleneck for the adoption of recommended technologies and proper monitoring methodologies need to be adopted in disbursement of subsidies to minimize resource wastage. Use of family labour for different activities in the category who own immature holdings were 75%. In mature plantations about 65% of the farmers use family labour for activities such as tapping, weeding and fertilizer application. Motorable roads are available to access the homesteads of 86% of the smallholder units. Electricity is available in 56% of the houses and 30% of the smallholders owned vehicles. There is a considerable improvement in the status of rubber farmers who own mature rubber plantations which is a good indication of profitability of rubber. Societal involvement by 'potential' farmers was 21% and 27% percent of farmers who own immature plantations are members in *Thurusaviya.* Farmers of mature plantations have taken much interest on the societies as 46% hold memberships. However, experience on rubber cultivation is low as expected calling for efficient extension programmes giving emphasis on poor educational status. Moreover, rigourous monitoring of use of subsidy for rubber farming is vital to minimize resource wastage.

Key words: Smallholders, Non-traditional areas, Socio-economic characteristics

INTRODUCTION

Increasing productivity and extent under cultivation are the two possible solutions to achieve the national targets in the rubber sector. However, declining rubber extent is an issue of national concern to Sri Lanka. The rubber extent in late 1970s, which was recorded above 200,000 ha, reduced drastically since 2002 to 114,000 ha. This is mainly due to change in land use that took place in traditional rubber growing areas in the wet zone of Sri Lanka. Further, new planting programmes in these areas remain at a very low level due to non-availability of land. The state response towards this issue was a very positive one, giving emphasis on non-traditional rubber growing areas in Uva and Eastern provinces where land and labour are assumed to be non-limiting factors. If properly implemented, the rubber planting programmes in these areas will probably fit into two of the themes in Millennium Development Goals (MDGs); poverty alleviation and environmental sustainability.

The nontraditional rubber growing areas have been focused in many development projects aiming the rural poor but with very little prospective results. There is some obvious evidence since Uva province is still the poorest with poverty Head Count Index[1] (HCI) of 27% while

[1]*Rubber Research Institute of Sri Lanka, Dartonfield, Agalawatta, Sri Lanka*

[2]*Department of Agribusiness Management, Faculty of Agriculture and Plantation Management, Wayamba University of Sri Lanka, Makandura, Gonawila (NWP), Sri Lanka .*

[1] Size of poor population fall underneath the poverty line

Moneragala and Badulla districts have HCIs of 33.2% and 23.7%, respectively and being ranked as 2nd and 4th districts based on this index (Department of Census & Statistics, 2009). With this background, there is a risk of resource wastage unless proper planning is done at the initial stages of rubber development programmes in these areas. This is especially important in development of the smallholder sector where resource wastage is expected to be more due to poor awareness and adoption of technical recommendations related to rubber planting and processing. Further, many development programmes have failed due to insufficient attention on the needs and thoughts of the community, in the planning process.

Being a new initiative, there is a high degree of uncertainty about the sustainability of the attempt on expanding rubber into non-traditional areas due to inadequacy in knowledge on environmental, socio-economic, technological and institutional aspects (Dissanayaka *et el.,* 2005a). This necessitated a detail study of the above issues. Research related to community development needs analysis of general conditions. The conditions analyzed relate to the environment, the availability and need for resources and the socio-economic characteristics of the population. Studying these conditions is a basic necessity to identify areas, which need to be strengthened to increase productivity through appropriate planning and proper extension services. This is a timely need in the absence of abundant information on smallholders especially in non-traditional rubber growing areas. Hence, the main objective of this study was to investigate the socio-economic status of smallholder rubber farmers in the Moneragala district.

METHODOLOGY

Description of the Study Area

Rubber is found in 8 out of 11 Divisional Secretariat (DS) divisions in the Moneragala district. This study covered 7 DS divisions in Moneragala district. Data from Dombagahawela which represented the DS division, Siyambalanduwa was removed from analysis due to lack of data.

Questionnaire Survey

Questionnaires were designed to gather information falling into socio-economic, environmental, technological and institutional aspects of the smallholder rubber sector. Three questionnaires were prepared to collect information on household details of those who expect to start rubber cultivation and those who own immature and mature rubber lands. Stratified random sampling was employed based on the existing and authorized rubber plantations in DS divisions. This paper is based on the information gathered from all the farmers surveyed. A total of 255, 248 and 143 rubber farmers were interviewed during the study in 2008 under the respective categories of potential, immature and mature conditions of the crop (table 1).

RESULTS AND DISCUSSION

Demographic Characteristics and Educational Status

The Key socio-economic characteristics of the smallholder farmers are given in Table 2. There was an indication of the younger generation's preference for rubber cultivation in these areas as the proportion under 50 years of age is more under categories of 'potential' and farmers who own immature holdings compared to farmers who own mature holdings. The proportion of smallholder farmers under 40 years of age was about 17% in traditional rubber growing areas, which is comparatively low compared to non-traditional rubber growing areas.

Table 1: Study sites in different DS divisions

Divisional secretariat	Sites	No. of farmers interviewed	
		Immature stage	Mature stage
Badalkumbura	Lunugala Janapadaya, Kotamuduna, Karawila Karandagama, Madugahapattiya, Hela Thunkala	98	67
Moneragala	Batugammana, Tanwatta, Tenagallanda	52	23
Bibila	Radaliedda, Pitakumbura , Badullegammana	35	20
Medagama	Polgahapitiya, Rathhanadeniya	29	16
Wellawaya	Siyambalagune	16	11
Buttala	Yudaganawa	10	05
Madulla	Kolladeniya	10	08

The education levels of the smallholders were categorized into (1) Primary (2) Ordinary level qualified (3) Advanced Level qualified or higher. More than 50% of the farmers had only primary level education. The percentage under primary education in Kegalle, Kalutara and Ratnapura districts are comparatively low with respective percentages of 23%, 38% and 18%. Hence, education needs to be considered as a constraint in improving the awareness of rubber farmers in the nontraditional rubber growing areas.

Income Level

The higher percentage with a monthly income of less than Rs. 10000 should also be regarded as a bottleneck for the adoption of recommended technologies and proper monitoring methodologies need to be adopted in disbursement of subsidies to ensure proper use of state funds. The improvement in economic status is evident in the 'mature' category, as a higher proportion of farmers were observed above the income level of Rs. 25,000 compared to 'potential' and 'immature' categories (Table 2).

It was reported in a previous study in selected rubber growing areas in Moneragala district that , 50% of the rubber smallholders are poor (Herath *et. el*., 2005). According to the latest publication by the Department of Census and Statistics, Moneragala and Badulla districts were ranked as 2nd and 4th poorest districts in the country respectively. According to the survey, the highest percentage (75%) was repeated with a monthly income of less than Rs. 10,000, while a considerable proportion (17%) received a monthly income between Rs.10,000 to Rs.20,000 (Table 2). This situation suggests that low income is a bottleneck in adoption of recommended technologies and proper monitoring methodologies, need to be adopted in disbursement of subsidies to ensure proper use of funds.

Smallholder farmers engage in different occupations. The majority of the farmers (93%) who are involved in farming get an income less than Rs. 10,000 per month. Nearly 70% of the farmers who are involved in occupations receive a monthly income of less than Rs. 10,000. The proportion of farmers receiving an income above Rs. 15,000 through an occupation is only 16%. Income through business is also not satisfactory with 75% of the farmers receiving less than Rs. 10,000 per month. These figures suggest that the income status of smallholder farmers who own immature plantations (do not have any income from rubber) is not satisfactory and the need for introducing intercrops in their rubber plantations should be given priority in awareness programmes. Expenditure Patterns

Smallholder farmers spend major part of their income for food. The average

10297, which is partitioned into various categories (Figure 1). total expenditure for the sample is Rs.

Table 2: Key socio-economic characteristics of smallholder farmers

Characteristic	Categories surveyed		
	'Potential' rubber farmers	**Farmers own immature fields**	**Farmers own mature fields**
Size of household	Range: 1-8 Average: 4	Range: 1-10 Average: 5	Range: 1-10 Average: 5
% female smallholders	22	18	13
Age structure (%)			
Under 40 years	34	27	21
40-49 years	35	34	26
50-59 years	26	26	31
60 & above	5	13	22
Level of education (%)			
No schooling	2	0	0
Primary	51	60	54
OL	36	32	34
AL & higher	15	8	12
Level of income (%)			
<Rs. 10000	57	70	23
Rs. 10001-25000	31	29	46
Rs. 25001-50000	10	1	17
>Rs. 50000	2	-	13

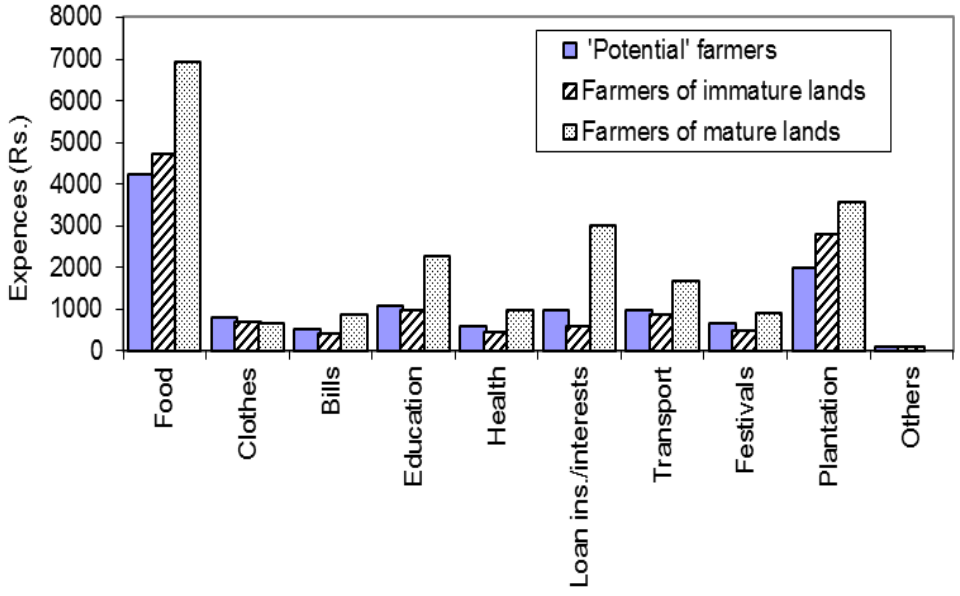
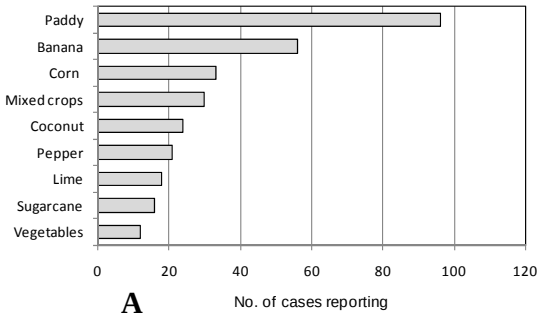


Figure 1: The expenditure pattern of smallholder farmers in different categories
Dependency on Rubber

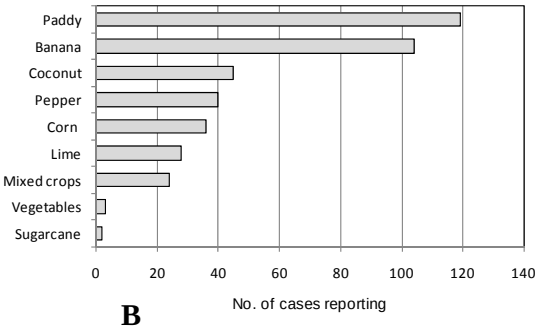
The rubber farmers in the non-traditional rubber grow different crops as a source of income and do not solely depend on rubber. Sixty four percent of the 'potential' rubber farmers and 67% of the farmers who own immature holdings depend on other crops as a source of income. The situation in mature holdings is that, the proportion of farmers solely depend on rubber as the income source is only 13%, while 50% of them depend on rubber and other crops (Figure 2). Farmers in non-traditional rubber growing areas cultivate a variety of other crops compared to traditional rubber growing areas.

Distribution of Land Extents

In non-traditional rubber growing areas in Mneragala, Badulla and Ampara districts, majority of the lands (78%) were found in the land size class 1-2 ac. It was around 25% in Kegalle, Kalutara and Ratnapura districts and majority of the lands in these areas have extents less than 1 ac. Approximately 10% can be accounted for the land size ranging from 2.1 to 3 ac and 6% of the lands have an extent below 1 ac (Figure 3). Hence, most of the farmers can gain substantial economic benefits from their rubber lands.



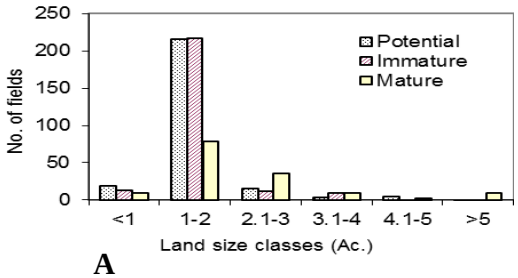
A



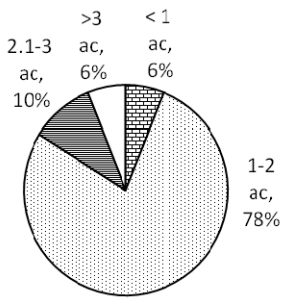
B

Figure 2: Different types of crops cultivated by rubber farmers

A - 'potential' rubber farmers
B - rubber farmers



A



B

Figure 3: Distribution of extents of rubber lands

A - in numbers
B - as a percentage

Ownership and Operation

Single ownership is more pronounced (77%) in rubber lands while nearly 20% are cultivated under authorized licenses. There were several lands with group ownership and a few are owned through *Jayabhoomi* or *Swarnabhoomi* deeds (Figure 4). Operation is mainly by the farmer himself and only in a few occasions (5%), caretakers are employed for the farming operations.

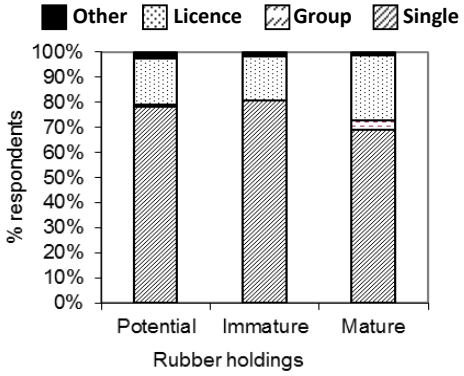


Figure 4: Different types of ownership of rubber lands

Family Involvement in Rubber Farming

Potential Rubber Farmers

Majority of the farmers (80%) believed that there will be improvement in their social status due to involvement in rubber industry. Nine percent stated there will be moderate effect and 11% were indifferent. In response to a question on what type of a conversion is expected by involving in rubber industry, 75% was confident that the involvement will create an efficient and enthusiastic environment within their families. Thirty seven percent of the sample was confident about the next generation's involvement in rubber industry while 59% was uncertain and 4% said 'no' in response to this question. Majority of the farmers (69%) were willing to use family labour for the immediate activity, viz. land preparation.

Farmers Who Own Immature Rubber Lands

Seventy eight percent of the farmers (78%) believed that there would be improvement in their social status due to involvement in rubber industry while 14% stated there will be moderate effect and 8% were indifferent. Seventy seven percent was confident that the involvement would create an efficient and enthusiastic environment within their families. Forty four percent of the sample was confident about the next generation's involvement in rubber industry while 53% was uncertain and 3% said 'no' in response to this question. More than 75% of the farmers use family labour for activities such as, land preparation, weeding and fertilizer application (Figure 5).

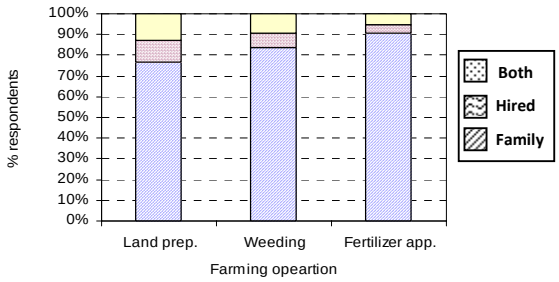


Figure 5: Family labour involvement in various activities of farmers who own immature rubber lands

Farmers Who Own Mature Lands

Majority of the farmers (88%) believed that there will be improvement in their social status due to involvement in rubber industry. Nine percent stated there will be moderate effect and 3% were indifferent. In response to a question on what type of a conversion is expected by involving in rubber industry, 86% was confident that the involvement will create an efficient and enthusiastic environment within their families. Forty six percent of the sample was confident about the next generation's involvement in rubber industry while 48% was uncertain and 6% said 'no' in response to this question. More than 65% of the farmers use family labour for activities such as, tapping, weeding and fertilizer application (Figure 6).

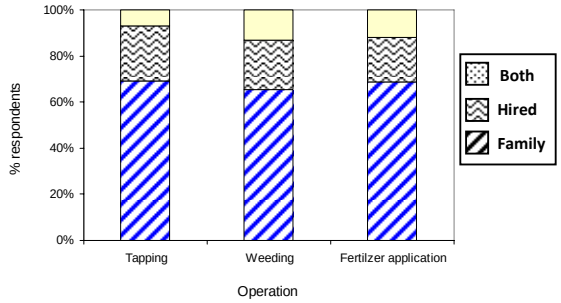


Figure 6: Family labour involvement in various activities of farmers who own mature rubber lands.

Societal Involvements

'*Thurusaviya*' is the farmer organization in operation in the Moneragala area. There was a good indication on societal involvement by 'potential' farmers since 21% of the sample had already taken memberships in this organization even before cultivating rubber. Twenty seven percent of farmers who own immature plantations are members in *Thurusaviya*. Farmers of mature plantations have taken much interest on the societies as 46% hold memberships. However, promotional campaigns on the importance of societal arrangements in different operations in rubber farming, especially marketing need to be arranged to improve the membership. A previous study which reported about the inefficiency of the market system for rubber in this district also suggests that societies can make a remarkable change (Edirisinghe *et al.*, 2005).

Facilities Available In Non-Traditional Rubber Growing Areas

Motorable roads are available to access the homesteads of 86% of the smallholder units. Electricity is available in 56% of the houses and 30% of the smallholders owned vehicles (Figure 7). Further, there is a considerable improvement in the status of rubber farmers who own mature rubber plantations (Figure 8).

Experience on Rubber Farming

As expected experience on rubber farming was very low. Only 11% of the farmers who own immature lands had previous experience. The situation in immature holdings was 14%. Majority of the farmers did not have experience on rubber cultivation (91%). But nearly 9% of the farmers had experience on rubber cultivation.

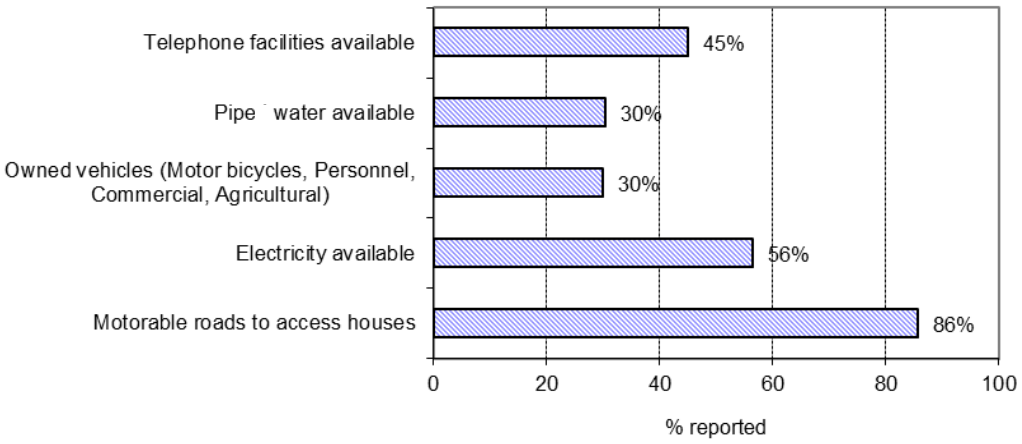


Figure 7: Some indicators of well-being among smallholder rubber farmers (overall status)

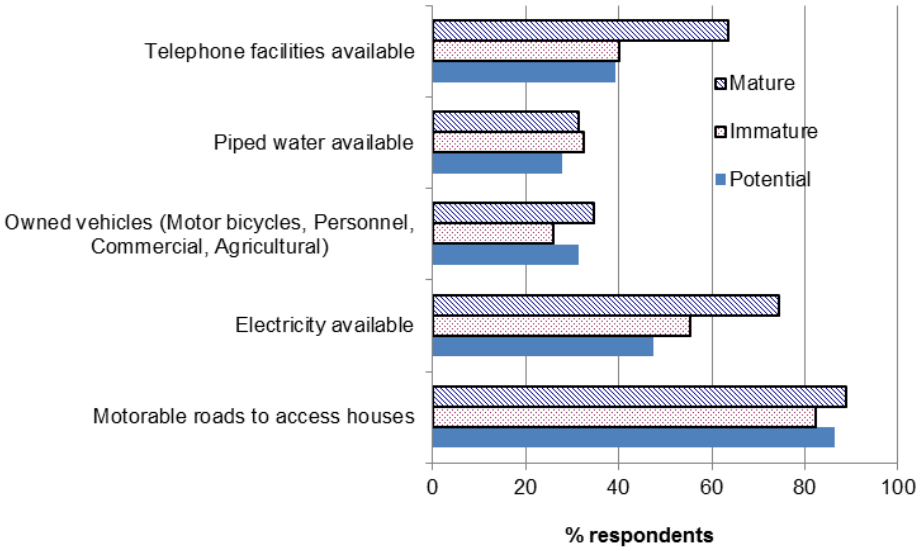


Figure 8: Some indicators of well-being among smallholder rubber farmers under different farming situations

CONCLUSION

There was an indication of the younger generation's preference for rubber cultivation in these areas as the proportion under 50 years of age was more under categories of 'potential' and farmers who own immature holdings compared to farmers who own mature holdings. The proportion of smallholder farmers under 40 years of age was about 17% in traditional rubber growing areas, which was comparatively low compared to non-traditional rubber growing areas.

More than 50% of the farmers had only primary level education. Hence, education needs to be considered as a constraint in improving the awareness of rubber farmers in the nontraditional rubber growing areas.

The higher percentage with a monthly income of less than Rs. 10,000 should also be regarded as a bottleneck for the adoption of recommended technologies and proper monitoring methodologies need to be adopted in disbursement of subsidies to ensure proper use of state funds. The rubber farmers in the non-traditional rubber grew different crops as a source of income and did not solely depend on rubber. However, the improvement in economic status was evident in the 'mature' category, as a higher proportion of farmers were observed above the income level of Rs. 25,000 compared to 'potential' and 'immature' categories.

Caretakers were employed in only a few occasions (5%) and single ownership was more pronounced. More than 75% of the farmers who own immature holdings used family labour for operations during the immature stage. In mature plantations, about 65% of the farmers use family labour for activities such as tapping, weeding and fertilizer application.

Motorable roads were available to access the homesteads of 86% of the smallholder units. Electricity is available in 56% of the houses and 30% of the smallholders owned vehicles. There was a considerable improvement in the status of rubber farmers who owned mature rubber plantations.

There was a good indication on societal involvement by 'potential' farmers since 21% of the sample had already taken memberships in this organization even before cultivating rubber. Twenty seven percent of farmers who own immature plantations were members in *Thurusaviya*. Farmers of mature plantations have taken much interest on the societies as 46% held memberships.

ACKNOWLEDGEMENTS

This paper reports findings from a study, 'An approach towards sustainable development and economics of the smallholder rubber sector', funded by the National Science Foundation (NSF) under the Coordinated Thematic Research Programme. Authors greatly acknowledge the financial support provided by NSF. The extension officers of Advisory Services Department of RRISL and officers attached to Rubber Development Department (RDD) in the Moneragala regional office who helped in facilitation and organization of workshops is also acknowledged. A sincere appreciation is extended to smallholder farmers for their unreserved support.

REFERENCES

Department of Census & Statistics. (2009). Poverty indicators. Ministry of finance & planning, Sri Lanka.

Dissanayake, D.M.A.P., Wijesuriya, Wasana and Edirisinghe, J.C. (2005a). Smallholder rubber sector in the Moneragala district: Potentials and constraints. *Bull. of the Rubber Research Institute of Sri Lanka,* Vol. 46: 25-31.

Dissanayake, D.M.A.P., Wijesuriya, Wasana and Abeywardene, Vidura. (2005b). Farmers' perspectives: expectations and constraints faced by smallholder rubber farmers in Moneragala. B*ull. of the Rubber Research Institute of Sri Lanka,* Vol. 46: 70-79.

Edirisinghe, J.C., Dissanayake, D.M.A.P. and Warnajith Prasad, A.K.D. (2005). Rubber marketing and related problems in the Moneragala district. *Bull. of the Rubber Research Institute of Sri Lanka,* Vol. 46: 62-69.

Herath, Keminda, Wijesuriya, Wasana, Puhambugoda, Rukmal and Abeywardene, Vidura. (2005). Income status of rubber smallholders in the Moneragala district: Reporting from participatory rural appraisals done in four villages. *Bull. of the Rubber Research Institute of Sri Lanka,* Vol. 46: 52-61.