

# AGRICULTURAL HOLDINGS AND OFF-FARM INCOME OF THE RUBBER GROWERS – A FARM FAMILY APPROACH :

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## INTRODUCTION

The percapita rubber holding size in Kerala is a misleading variable in policy analysis. The total resources under a single management unit in a farm family may be considered as a relevant one for analysis. In studying the profit maximisation motive of the growers this is the relevant concept. The importance of off-farm sources of income cannot be ignored in any farm management analysis. The sources and magnitude of the total on farm and off-farm incomes of the farm families have to be integrated in the framework. This study is an attempt towards this direction.

## METHODOLOGY

The study was conducted in Taliiparamba taluk of North Kerala and Kanjirappally taluk of Central Kerala, being the two older areas of rubber cultivation in the state. The appropriate unit of investigation for the study was the farm family rather than farm operator or the head of the family. The rationale is that the farm family plays a primary role in determining resources allocation such as land, family labour between on farm and off-farm employment, capital etc. The farm family is not only a consumption unit but also an important

decision making unit for factor supplies and resource adjustments.

One hundred and twenty farm families were selected for the study and data were collected through a pre-tested schedule by personal interview. Lorenze curves and Gini ratios were worked out to find out the concentration of land holdings. Income from off-farm sources were analysed separately. The data were collected during 1990 and 1991, keeping the reference period of the study as 1989 - '90.

## HISTORICAL LAND UTILISATION PATTERN

In Taliiparamba taluk ninety one percent of the sample growers were migrants from the erstwhile Central Travancore region and on an average the growers migrated 27 years back. During the initial years of migration the farmers got cultivation rights from the intermediaries. In the erstwhile Malabar region due to the concentration of land ownership in the hands of Jenmi households the majority of cultivating households hold land under the usual tenancies, viz, kanam, kuzhykanam and Verumpattam (Varghese, 1970). The punam cultivation and lemongrass cultivation were prevalent in earlier years followed by a

combination of crops like tapioca, cashewnut, pepper coconut and arecanut. Natural rubber was introduced in later years. The average years of experience of growers in agriculture was 31 years and that of rubber cultivation was only 16 years. The crops introduced in the different parts of the taluk varied depending on the previous experience of the growers in the erstwhile Central Travancore region. The amendment to the Land Reforms Act in 1969 conferred full ownership on the tenants in respect of land in their possession and brought them into direct relationship with the state by the abolition of all intermediary rights (Oommen, 1975).

In Kanjirappally taluk the crops prevalent were tapioca, coconut, pepper and rubber. Natural rubber was introduced from very early times and all the growers interviewed have replanted rubber. The average years of experience of the growers in agriculture and rubber cultivation was 38 years and 35 years, respectively.

## LAND ACQUISITION PATTERN

The percentage of growers who got land by purchase or through Land Reforms Act was found to be the highest category in Taliiparamba, (Table 1).

**TABLE 1**  
Land acquisition pattern (per cent of growers)

Taluk	Inherited	L.R.Act/purchased	Both inherited and purchased
Taliparamba	26	62	12
Kanjirappally	31	28	41

A group of migratory growers was also found in the region who disposed the land in one location and purchased it in another, mainly through capital gains, though the percentage was negligible. The percentage of growers who got land by inheritance combined with purchase was found to be the highest in the Kanjirappally region. However the percentage of growers who acquired land additionally during the last five years was only 10 and 7 respectively, in Taliparamba and Kanjirappally taluks.

#### STRUCTURE OF AGRICULTURAL HOLDINGS

The concept of farm family is used to denote the land resources held by all family members whose incomes were pooled together under a single management unit. For practical purposes the whole farm family should be considered as the valid unit of analysis.

Kerala agricultural household is characterised by a typical multicrop environment. The crop mixture grown in Taliparamba were mainly coconut, cashewnut, pepper, arecanut, rubber and banana. The study revealed that on an average 50% of the agricultural land was devoted to rubber and the remaining 50% to other crops (Table-2). The major crop replaced by rubber was cashewnut and three reasons were attributed for this replacement. The first and foremost reason was

the institutional effort of the Rubber Board. The second reason mentioned was the absence of a well developed marketing strategy for cashewnut and the third was the advantage of realising distributed income for rubber throughout the year as against three months for cashewnut.

On a farm family basis the share of land allocated to rubber in Kanjirappally was 93 per cent. This percentage of land allocation to rubber clearly indicates its importance in the household economic structure. The land allotted to crops other than rubber was only 7 per cent in Kanjirappally region.

The diffusion of innovations is a pre requisite for any technology adoption. The planting materials and other complementary inputs and institutional assistance were more readily available in Central Kerala than in North Kerala. The spread of the devastating disease of coconut (Root wilt), one of the major competing crops for land was cited as another reason. The third reason pointed out was that the spread of a single perennial crop in the surrounding region influenced the growers to switch over to that crop. Above all a

grower will cultivate a crop provided the relative profitability of the crop is high. The growers mentioned that the relative profitability of rubber was on the higher side compared to other competing crops.

#### CONCENTRATION OF LAND HOLDINGS

The Lorenz curves indicating the concentration of land holdings are shown in figures 1 and 2. Gini ratios were worked out. The ratios were 0.39 for Taliparamba and

**TABLE 2**  
Average 1 and holding of farm families (Ha)

Taluk	Immature rubber	Mature rubber	Area under othercrops	Total area
Taliparamba	0.65	0.41	1.07	2.13
Kanjirappally	1.08	0.83	0.15	2.06

0.38 for Kanjirappally taluks which indicates that the concentration on land holdings is almost similar in the two regions.

#### INTERCROPPING

The intercrops cultivated in rubber small holdings were ginger, sweet potato, colocassia, sesamum, tapioca and banana.

Ten per cent of the growers did not resort to intercropping owing to non-economic reasons. However the scenario was different in Kanjirappally taluk. Twenty four percent of the growers had not planted intercrops. Lack of managerial input (for 6%) and possible influence of agricultural and non-agricultural incomes (for 18%) were stated to be the reasons for not planting the intercrops. The practice of intercropping for profit maximisation motive was less

pronounced in the region possibly due to higher on farm and off-farm sources of income. Such type of growers may give more weightage to utility maximisation than profit maximisation.

**STRUCTURE OF INCOME OF THE FARM FAMILIES**

The study revealed that the farm families depending on agricultural income alone was found to be 48 and 34 per cent respectively, in Taliparamba and Kanjirappally taluks (Table 3).

among 47% of US farm families, 72% in Japan, 40% in Taiwan and 50% in Kenya (Paul Shaw, 1979). The off-farm income of farm families in Japan accounts for over 90% of the total income (Hayami, 1990). It tends to reduce vulnerability of farmers to wide swings in farm prices and net farm income by providing a more even cash flow for capital deepening or debt servicing. The study revealed that 52 per cent of the farmers in Taliparamba and 66 per cent of farmers in

Kanjirappally were having other gainful activities (OGA). (Table 3). Even though 52 per cent of the farm families in Taliparamba were having other gainful activities, 20 per cent were engaged in work in other farms as agricultural labourers or tappers. Excluding this group 32 per cent of the farm families were found to have off-farm work while the percentage in Kanjirappally was the entire sixty six.

**SOURCES OF OFF-FARM INCOME**

The sources of off-farm income shows certain distinct differences in the two regions. The sources for the highest percentage of growers came from Govt. or private employment in Taliparamba (Table 4).

**TABLE 3**  
Sources of income of the farm families (percent of growers)

Taluk	depending on agricultural income alone	more than 50% income from rubber	income from rubber alone	other gainful activities
Taliparamba	48	15	0	52
Kanjirappally	34	66	3	66

The percentage of farm families to whom total income was more than 50 per cent from rubber cultivation alone was sizeable in Kanjirappally region. This indicates that the entire economic activity of an agricultural household is closely interlinked with the productivity and the price of natural rubber. The situation is slightly different in Taliparamba region where the typical multicrop economy persists. The percentage of growers depending on rubber alone was on the lower side. From the point of view of risk, crop diversification is an added advantage and it may act as a cushion in difficult times.

**OFF-FARM INCOME OF THE FARM FAMILIES:**

Off-farm income is a common feature in developed countries. Off-farm work is prevalent

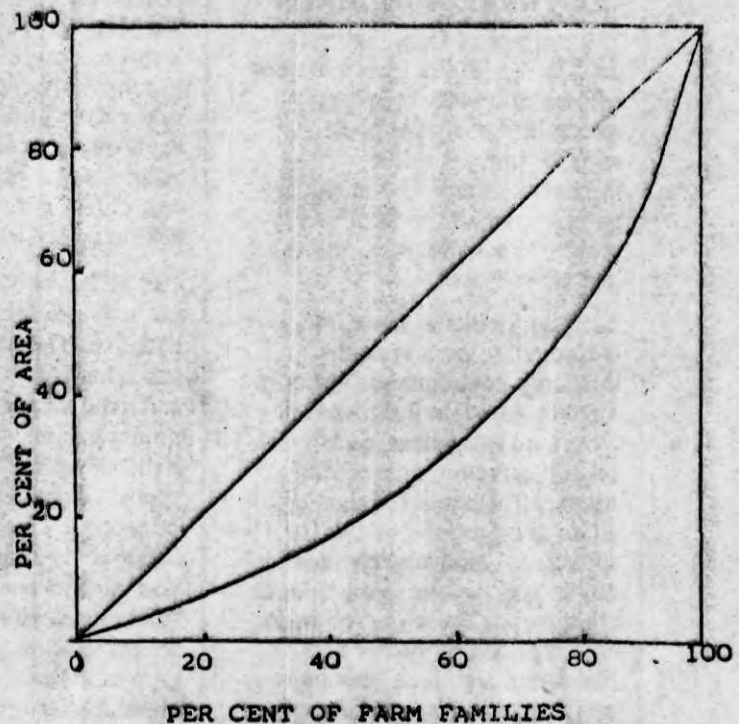


Figure 1 - LORENZE CURVE (KANJIRAPPALLY)

**TABLE 4**  
Sources of off-farm income (Per cent of growers)

Taluk	Govt/private employment	Non-agril. labour	Business	Gulf employment	others
Taliparamba	32	19	24	8	17
Kanjirappally	40	0	50	10	0

and IBH publishing Co, New Delhi.pp 14-38

Shaw,Paul,R (1979). Canadian farm and non-farm family incomes. American Journal of Agricultural economics 61 (4), pp 676 - 682

The non-agricultural labour sources of income comprises skilled and semi skilled labour in the non-agricultural sector, mainly in the construction sector. The percentage of farmers engaged in business constituted the second largest source of off-farm income. However the structure of off-farm income is different in Kanjirappally. The largest source of off-farm income was from business followed by employment. The income from non-agricultural labour was absent in the region. The off-farm income sources cannot be ignored in analysing any policy aspects.

**POLICY IMPLICATIONS**

In analysing the income flows of the growers income from the farm operation and off-farm sources of the farm families should be taken into account. In order to implement any farm management programme the availability of total farm family resources including off-farm income may be given due consideration. The practice of daily tapping, plant protection and the agromanagement techniques can be correlated with the on farm and off-farm amount of income of the farm families. However, further studies are infact essential to understand the structure and flows of the income of the farm families to analyse the motive of profit maximisation vs utility maximisation of the rubber growers. But data extraction on

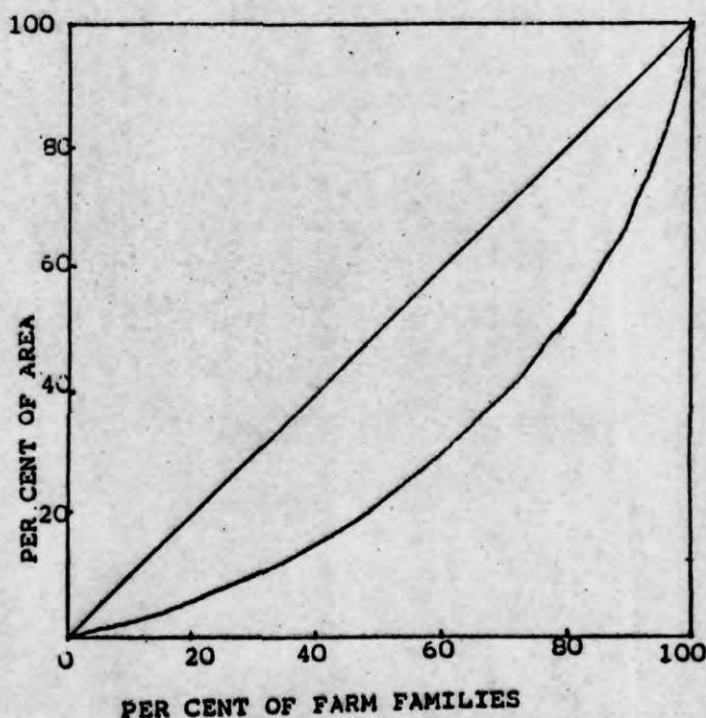


Figure 2 - LORENZE CURVE (TALIPARAMBA)

income and economic behaviour from especially higher income group may be a difficult task.

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