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Lease land Farming by Women Collectives: An Enquiry into Earnings of Kudumbashree Groups

Dimple Tresa Abraham



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An autonomous research institute supported by the Indian Council of Social Science Research

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Dimple Tresa Abraham

List of Abbreviations

ADS	Area Development Societies
ASHA	Accredited Social Health Activists
BPL	Below the Poverty Line
CBO	Community Based Organisations
CDS	Community Development Society
DAY-NRLM	Deendayal Antyodaya Yojana - National Rural Livelihoods Mission
DDUGKY	Deen Dayal upadhyay Gramin Kaushalya Yojana
GOI	Government of India
GOK	Government of Kerala
GP	Gram Panchayat
GSDP	Gross State Domestic Product
Ha	Hectare
ICDS	Integrated Child Development Scheme
IKP	<i>Indira Kranti Patham</i>
JLG	Joint Liability Group
KLRAA	Kerala Land Reform Amendment Act
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MKSP	<i>Mahila Kisan Sashaktikaran Pariyojana</i>
MoA	Ministry of Agriculture
NHG	Neighbourhood Groups
NABARD	National Bank for Agriculture and Rural Development
NRLM	National Rural Livelihoods Mission
NSS	National Sample Survey
NSSO	National Sample Survey Organisation
NULM	National Urban Livelihoods Mission
SHG	Self Help Group
SPEM	State Poverty Eradication Mission
SVEP	StartUp Village Entrepreneurship Project
VFPCK	Vegetable and Fruit Promotion Company of <i>Keralam</i>

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Introduction

Farming as an occupation and agriculture as a means of livelihood is no longer a preferred choice for 76 per cent of farmers (CSDS, 2014), largely owing to price and production risks. The returns to households from tiny¹ and fragmented land holdings are so meagre that many, largely rural men have moved out of agriculture² to non-farm occupations within the village or nearby towns. Some have migrated either on a seasonal or permanent basis to far away cities and urban centres to work in low-paid informal jobs in precarious sectors like construction to support families left behind.

The migration of men to other sectors has resulted in greater involvement of rural women in farming, particularly as primary cultivators³. But they suffer from inequality of a disproportionate nature, stemming from disadvantage in accessing productive assets including land, labour and capital, inputs and services in addition

¹ The Situation Assessment Survey (SAS) of the National Sample Survey (NSS) 70th round indicate that average area owned by rural households fell to 0.592 Hectare (2012-13) from 0.725 (2002-03).

² The share of agriculture in the GDP has fallen to less than 15%, but about 39.5% of rural households continue to be dependent on agriculture activities as a primary source of income (GOI, 2014b). The SAS of NSS 70th round (July 2012-June 2013) has estimated 9.02 crore households (57.8%) out of 15.61 crore rural households to be agricultural households (is one where at least one member is self-employed in farming, in principal or in subsidiary status during the last 365 days and having total value of produce in the last 365 days to be more than Rs.3000).

³ Not all are considered as farmers though. 'Land possession' was a necessary condition to be recognised as 'farmer' in the NSSO rounds including the 59th round. This was done away with in the 70th Round and replaced by the concept of 'agricultural production unit' as one which produces crops, livestock etc. The 59th round in its report *Situation Assessment Survey of Farmers* defined farmer as a person who operated some land (owned, on lease or otherwise possessed)

NOTE: In Kerala, common land measure is in cents and Acre. **100 cents = 1 Acre; About 2.47 Acre = 1 Hectare;** Secondary data in the paper is given in hectare (Ha) while all other references to land size with respect to the field study on JLGs is in acres. All references to money in terms of rupees. 1 USD = 70.50 INR (on 10 Jan, 2019)

to technological knowledge and credit access and availability. Their employment prospects and independent wage earning activities are also limited because of gender roles, wherein they bear primary responsibility as care givers, helpers on family farms, and also additional burdens of water and firewood collection. Most earn their livelihoods from farms as cultivators or agricultural wage labourers and from available non-farm activities, but face inequality in wage earnings and access to resources.

Rural women wanting to farm without support from male members are constrained by lack of access to land, small sized and fragmented land holdings, reducing not only their ability to ensure food and nutrition security to their families, but also production and productivity losses for the community. Despite scarcity of cultivable land, some states has also witnessed landowning families leaving their fertile lands fallow⁴, either due to outmigration, lack of interest or rising input costs. This has resulted in reduced availability of locally produced foods and loss of rural livelihoods for both landless agricultural labourers and farm households with marginal landholdings who depend on wage labour to supplement meagre farm incomes.

Few of the Indian states during the past few decades undertook certain proactive steps with targeted interventions. These include programmes such as the *Kudumbashree* of Kerala and the *Indira Kranti Patham* (IKP) of Andhra Pradesh, which built on multi-tier collectives within the framework of community based organisations (CBO), which have often been cited as models that have worked towards sustainable agriculture based livelihoods for rural women. Both these interventions enabled women's access to land through collective land leasing. These models were later adopted in the national women farmers' empowerment programme or the *Mahila Kisan Sashaktikaran Pariyojana* (MKSP), a sub-component under the National Rural Livelihoods Mission (NRLM)⁵.

Thus government programmes are supporting and facilitating women's collectives to jointly farm on leased lands, but the larger question is, are they being 'encouraged' to take up farming as men are withdrawing due to general distress

⁴ Left uncultivated for a season or two for rejuvenation, or for many seasons/years because of other reasons including rising costs of cultivation, lack of time, engagement in other occupation, family residence shifted out of the village and so on; Here, reference is to the second

⁵ NRLM was launched by Ministry of Rural Development, GoI in June 2011. In 2012 *Kudumbashree* was recognized by the Ministry of Rural Development, GoI as a National Resource Organization (NRO) under NRLM.

and risk in the agriculture sector. Women have always played a critical but largely invisible role in subsistence farming systems as helpers on family farms, but now as members of collectives their roles as producers are becoming more visible. They are empowered to choose what to sow, whether to access credit, quantity to sell and hold for home use and other decisions. In this context, it is important to examine earnings or returns to farming. Examining women's collective farming on lease lands under the *Kudumbashree* programme in Kerala, this paper looks into economic returns and discusses general issues and challenges they face. The paper is organised as follows.

Continuing with the introduction laid out here, the first section lays down the research questions and further sets the background and context of study. The section gives a brief account of size of agricultural holdings, an overview of shift in cropping patterns and history of tenancy relations. The second section discusses the impact of land reforms on women in agriculture, emergence of new tenancy contracts and changing character of land. The third section deal with the emergence of *Kudumbashree*, and its role in the promotion of women's collective farming and how institutionally supported access to leased lands have enabled women to take up joint cultivation of a variety of crops for household consumption and for the markets. Section 4 discusses the research methodology, while Section 5 discusses the farming groups, and returns earned by Joint Liability Groups (JLGs)⁶. It also discusses issues and challenges faced, supporting with case studies of select JLG. In the concluding section the paper advocates for institutionalisation of lease rights for bringing not only greater participation of women in farming but also to reduce exploitation of their labour as they engage in land based livelihood activities.

Research Objective

The main objective of this paper is to understand returns⁷ (in terms of both cash and non-cash earnings) attained by groups engaged in lease land farming. Towards this an economic analysis is undertaken, taking into consideration costs

⁶ A JLG generally consist of 4-5 women, who are jointly liable to repay the loan. JLG concept is an innovation of NABARD to enable women groups to avail institutional credit without collateral (explained in detail later)

⁷ The returns may depend on numerous factors, both internal and external and may vary according to crops cultivated. Being an exploratory study, the research tries to identify issues and challenges in addition to estimating annual earnings of the farming groups/JLGs for the reference year 2015-16.

and returns incurred by JLGs selected into the study (the methodology followed, area selected for the field study⁸ and details of sample selection is discussed in Section 4). In addition, the paper attempts to identify challenges and issues faced by the JLGs, and also gives a macro picture on the number of JLGs, area cultivated and crops grown by them across districts. As the focus of this paper is more towards determining returns to farming, relatively less attention is paid on social dynamics though some discussion on social dimensions are brought out through cases of individual JLGs.

I. Background & Context

Small and marginal farmers suffer economic disadvantages in cultivation owing to lack of scale, small operational size and fragmented holdings, but continue to farm economically unviable land holdings to meet subsistence needs or supplement non-farm earnings. The average size of operational holdings in the country has drastically reduced over the years from 2.28 hectares in 1970-71 to 1.15 hectares in 2010-11 (GOI, 2014a) thereby leading to falling share of income from crops in rural livelihoods.

Table 1: Distribution of Households and Area Owned by Category of Landholdings

Size (in Hectare (Ha) /Class of Ownership Holding/ Category of Landholdings	All India		Kerala	
	% Households	% Area Owned	% House holds	% Area Owned
Landless (≤ 0.002 Ha)	7.41	0.01	9.35	0.0006
Marginal (>0.002 but ≤ 1 Ha)	75.42	29.75	86.41	64.52
Small (>1 ha but ≤ 2 Ha)	10.0	23.54	3.33	21.43
Semi-medium (>2 but ≤ 4 Ha)	5.01	22.07	0.74	9.79
Medium (> 4 to ≤ 10 Ha)	1.93	18.83	0.18	4.28
Large (>10 Ha)	0.24	5.81	0	0

Source: GOI, 2015a (NSS Report No.571: *Household Ownership and Operational Holdings in India*)

⁸ Field study for this paper involved interviews with 20 JLGs. This was completed in June 2016

Table I gives land ownership status of rural households in the country and in the state of Kerala. The proportion of rural households in the state who are absolutely landless is 9.35 per cent, while those with marginal landholdings are 86.41 per cent, which is substantially higher in comparison to all India figures. Following the Kerala Land Reform Amendment Act (KLRAA) 1969, landlessness had declined among rural labour households from 33.2 per cent in 1964-65 to 6.7 per cent in 1984-85 owing to distribution of homesteads to landless households (Oommen, 1994:134). But since then, landlessness seems to have increased in the state in comparison to all India average. The *Household Ownership and Operational Holdings in India* published by GOI (2015a)⁹ report that 7.41 per cent of rural households does not even possess homestead¹⁰ ownership of even a few cents of land. Small operational holdings lead to production and operational inefficiencies in agriculture and consequently generation of smaller livelihoods.

The average operational holding size in the state is just 0.22 hectares (in 2010-11), an underlying reason for fall in the share of agriculture and allied sectors in the Gross State Domestic Product (GSDP) which continue to decline¹¹. With respect to the state of Kerala, just 27.3 per cent¹² of rural households were agricultural households¹³. The data from the 70th NSS round¹⁴ results draw attention to the fact that in the case of many rural households in the state, land area owned was too small for household sustenance from farming alone. The data also indicated that 61 per cent were having income from other activities¹⁵ or non-farm sources of income. It must also be noted that even in the early 1980s, more than half of the landowning households (54 per cent) in the state had non-farm

⁹ Based on NSSO 70th Round; NSSO estimate 9.35 per cent of households to be landless on including even those who owned tiny plots of land (≤ 0.002 hectares of land) under landless.

¹⁰ The Socio Economic Caste Census (2011) do not consider homestead land (the patch of land surrounding the house) owned by households when assessing the landownership status of a household. Therefore, according to SECC (2011), the share of landless households in the country is highest in Kerala with 72 per cent of rural households being recorded as landless.

¹¹ In recent years it has fallen from 12.7% (2008-09) to 8.83% (2013-14)

¹² While 57.8 per cent of the total estimated rural households in the country were agricultural households (GOI,2014b)

¹³ As per the Situation Assessment Survey (SAS) of Agricultural Households in the NSS 70th round;

¹⁴ The SAS was conducted in 4,259 villages across India and covered 35,200 households. Most of the states also participated in the survey, supplementing the Central sample. 159 villages in Kerala were surveyed covering 1236 households in visit I and 1217 households in visit II.

¹⁵ According to the SAS of the NSS 70th round, the main source of income for rural households with less than 0.01ha of land was wage /salary and income from rearing livestock; for those possessing 0.01 ha to 0.4 ha of land, wage/salary as well as cultivation was major sources of income; while for those households with more than 0.04ha of land, cultivation was the major source of income

income which were much higher than other states¹⁶ (Saradmoni, 1991: 71-72), and therefore may have become disinterested towards cultivation of food crops¹⁷, particularly paddy which was disproportionately labour intensive, in comparison to returns. The disinclination of land owners towards cultivating low return food crops and shift to other crops, consequent conversion of farm lands particularly wetlands along with increasing urbanisation¹⁸, led to falling food grain production, particularly that of paddy, and rising gap between consumption requirements and production achievements (Table 1 in appendix). The shift in cropping patterns is discussed next.

Shift in Cropping Patterns

The state has a low base of food production with only 10.4 per cent of the gross cropped area¹⁹ being devoted to food crops. The area under paddy which occupied 39.6 per cent of total area in 1961-62 reduced to 11.3 per cent in 2009-10. The same period also saw an increase in area under coconut from 26.6 per cent to 37.7 per cent, of pepper from 5.3 per cent to 8.31 per cent, but substantially of rubber from 7.0 per cent to 25.6 per cent. This shift is rooted in many factors, shortage of labour, high costs of cultivation, export prospects of commercial crops, increase in number of absentee land owners and low profitability (Thomas, 1999). Field studies in the state by Krishnadas (2009) records the net income from cultivation of one acre²⁰ of rice to be 2400 rupees whereas the net income from cultivation of one acre of banana was Rs 46,000.

The shift from cultivation of traditional food crops to plantation crops like rubber and coconut witnessed large scale conversion of wetlands/paddy fields to garden lands, which also resulted in decline of local employment opportunities. Wetland agriculture, particularly paddy cultivation provide consistent and larger number of days of wage employment, especially to women agricultural labourers. Rajendran (2007) estimate 600 labour days for cropping one hectare of wet land in a year.

¹⁶ In West Bengal it was 40% while in Tamil Nadu it was 39%

¹⁷ Traditionally the major food crops in the state were rice, pulses and tapioca (a major cereal substitute popular in the state). There has been hardly any cultivation of pulses in recent years.

¹⁸ As per 2011 census, 47.7 percent of total population live in urban areas, much higher than the national average (31.2 percent)

¹⁹ The gross cropped area in the state was 25.92lakh hectares in 2012-13

²⁰ 1 acre = 0.405 Hectares

The shift in cropping patterns is also linked to abolition of multi-tier tenancy that was prevalent in the state before the enactment of KLRAA, 1969. The following section discuss the evolution of tenancy relations, the changes in these relations leading to emergence of new patterns of leasing, in addition to terms and conditions of land leasing that are currently in practice.

History of Tenancy Relations

Historically, across the country land and its economic utilisation were feudal in nature. At the time of independence, various forms of tenancy relations²¹ were common and the landless cultivated land owned by aristocratic class. The tenant lived on and cultivated the land, paid rent for usage to the landlord but had no ownership rights. The debates around feudal hegemony and widening class relationships, extraction and exploitation of labour and sub optimal output are beyond the scope of this paper²².

As Herring (1983: p157) quotes '*the land tenure system was both complex and bewildering with a maze of intermediary rights, esoteric usufructuary²³ mortgage tenures and complex subinfeudation*'. There was a strong class-caste overtone in the land tenure system wherein the upper caste Brahmin-*Namboodiri* and *Nair-Nambiar* enjoyed the position of landlords and superior tenants while the *Ezhava/Tiyya* Muslims and Christians were inferior tenants. At the lowest rung were the actual cultivators of land comprising of lower castes, particularly untouchable castes like *Cherumas, Pulaya* or *Poliyars* forming the mass of landless labourers (for details see Herring, 1983).

Post-independence, tenancy was widely considered to be an evil, and land reform legislation with focus on abolition of intermediaries, tenure security and land ceiling was undertaken by all states with many enacting land tenancy Acts during 1960s and 1970s. The legislation with regard to tenancy varied across states (Haque, 2013:p.35), with agricultural land leasing being prohibited leading to a blanket ban of landlord-tenant organisation of production in Kerala, to more

²¹ The tenancy relations in the state at the time of independence had an extremely complex and multi-tiered tenancy structure that was quite different from rest of the country. The evolution of multi-tier tenancy and emergence of deep caste based agrarian structures had occurred over a protracted period lasting several centuries (Refer Pillai (1970) for details).

²² Refer Pearce (1983) for detailed discussions

²³ Usufruct is a limited right combining 'usus' or the right to use directly without altering it; while 'fructus' is the right to earn and enjoy profits from a thing possessed

formalised tenancy institutionalised in West Bengal (Revathi, 2014). While land leasing was prohibited in Kerala and Jammu and Kashmir, it was allowed for certain category of land owners (disabled, minors, widows and such vulnerable groups) in Uttar Pradesh and Bihar, or under certain conditions²⁴ (Haque, 2001). Thus the area under tenancy declined from 35.7 per cent to about 6.5 per cent in 2003 (NSSO, 8th and 59th Rounds). With respect to Kerala, after its formation in 1956, rights of the actual cultivators were finally addressed following implementation of land reforms, based on KLRAA, 1969.

The Kerala Land Reform Amendment Act (KLRAA) of 1969

The section discusses only provisions of the KLRAA which is relevant to this paper. Out of its three major provisions, the first has important implications to lease land farming, as this provided the conferment of ownership rights of tenanted lands (lands taken on *pattom* or lease) on the cultivating tenants. According to the government order, the ownership rights of all tenanted lands would vest²⁵ in it and would be subsequently transferred to the cultivating tenants on payment of a nominal purchase price. The tenants were exempted from paying any further rent (to government or landlord) and creation of new tenancies was completely banned²⁶. The Second provision in the Act dealt with providing homestead lands to the *kudikidappukars* who were living on the premises of the landlords' property, wherein they could purchase, at highly subsidised²⁷ prices from their landlords, homesteads of 3 cents (city or major municipality), 5 cents (municipality) or 10 cents (in a panchayat)²⁸. The third major provision under the Act was the possession of the surplus land above ceiling limit²⁹ by the state for

²⁴ The tenant has the right to purchase the land from land owners within a specified period as in Punjab and Gujarat.

²⁵ Land is said to be vested in ownership when it gives a right to the immediate possession and ownership of it

²⁶ With retrospective effect from April 1964

²⁷ The *kudikidappukars* were required to pay only 25 per cent of the market value of the land in 12 equal annual instalments, with half of the purchase price being subsidised by the state government. In cases where the landlord possessed land above the ceiling limit then only half of this amount had to be paid.

²⁸ This provision alone helped more than 3 lakh agricultural labourers to finally have their own hutment dwellings (Oommen 1994).

²⁹ A family of five could possess maximum of 20 acres; but there were ceiling exemptions to coffee, tea and rubber plantations; private forest lands as well as land belonging to religious, charitable and educational institutions were exempted.

redistribution among the landless labourers and poorer peasants. The first two provisions of the land reforms were implemented quite successfully, but the last was a total failure³⁰. In total, 66,984 acres was distributed to about 1,57,841 households, which effectively meant that the average size of plots was just 0.63 acres.

II. Land Reforms, its impact on Women & Emergence of *Kudumbashree*

The state of Kerala is unique with respect to women's inheritance rights, with some of the dominant caste groups following matrilineal³¹ system of inheritance, and the management of the extended household (*tharavad*) being under the control of the matriarch. But, in spite of such a system, land reforms had devolved mostly through a patrilineal and patriarchal framework, and therefore women gained comparatively lesser³² than men (Kodoth, 2004). This may owe to the fact that even within the matrilineal society, in reality the norms of male supremacy was maintained through the power the oldest male (*karanavar*) of the household wielded. It may also be that, over time, there was a shift to dowry (*sthridhan*) even among the matrilineal groups, while it was customary among patrilineal communities – the Christians, Muslims, Izhavas and Nambudiris (Kodoth, 2004).

The women in landowning households were adversely affected by the land reforms both directly through ceiling and redistribution, and indirectly as increased nonfarm employment opportunities and occupational mobility was now more available to men which over a period of time saw their marked withdrawal from agriculture. Studies validate that following the reforms, women in landowning

³⁰ By 1988, just about one-tenth of the estimates of surplus land were surrendered (Oommen, 1994). Hence did not ensure enough land redistribution to those who would have utilised the land for cultivation using family labour (Radhakrishanan, 1981)

³¹ Meaning the property transferred from the mother to the daughter. The caste groups following matrilineal system included Nairs, Tiyas, Mappilas, and Izhavas. up to the mid-1970s women continued to inherit some property among the matrilineal groups, though distinctions were drawn among different kinds of property (Gough 1952; Fuller 1976)

³² Women have gained lesser wherever there have been land reforms, which were recognised finally by the Central government in the eighth Five-Year Plan, which directed the states to allot 40 per cent of ceiling surplus land to women, and the rest, jointly, in both husband and the wife's name (Agarwal 1994: 7). Rules under the Kerala Land Assignment Act, 1960, were amended in 1997 to make joint pattas mandatory for married people applying for assignment of land (GO (P) No 764/P1/97/RD in GOK 1997)

households irrespective of class were found to be involved extensively in all aspects of cultivation and management of land (Saradmoni 1983, 1991; Mencher 1993). Studies also give evidence with regard to the land lost as part of land reforms³³ both due to ceiling or absentee landlordism disproportionately being those owned by women. Saradmoni (1983: 118) based on a study of three largely Brahmin villages in Palghat show that one-fourth of those who lost land were Brahmin widows.

In addition, with abolition of tenancy, capability of women to retain possession over land, organise cultivation for market or even to escape impoverishment became dependent on the employed adult males of the family (Saradmoni, 1983; Franke, 1993:253-264). Also, owing to migration and occupational mobility, overseas remittances and opportunities for non-farm employment, farming as an occupation became a rare choice for males who shifted the responsibility of farming and 'taking care' of the 'farm land' to women who as Morrison (1997) quote 'remained at home'. Saradmoni (1983) observe that about 30 per cent of male workers in former tenant households did 'other work' but in the case of women workers, about 50 per cent were in 'agriculture', and the remaining combined 'agriculture and other work'. In the case of former landlord households, 12 per cent of female workers were engaged in 'other work' indicating some occupational mobility owing to better educational attainments.

Table 2 indicates clearly the fall in the proportion of female cultivators out of total rural workers³⁴, which fell from 17.4 in 1961 to 8.4 per cent in 1981 (by which time, major redistribution had been completed). In comparison, in the case of men the fall was lesser (from 26.1 to about 19.0 per cent). In the case of agricultural labour, the proportion of women working as agriculture labour out of total rural workers rose from 29.4 (1961) to 47.2 per cent (1981), while during the same period among rural male workers, the proportion of those working as agricultural labour rose from 14.9 to 27.8 per cent. But since 1991, there has been an overall decline in workers engaged agriculture. Comparing 1991 and 2011 Census figures, it is also clear that proportion of women engaged as cultivators and as agriculture labourers reduced to half, with those engaged as cultivators falling from 10.9 to 5.9, and those working as agriculture labour from 42.3 to 21.41

³³ Major provisions in the Kerala Land Reform Amendment Act (KLRAA) 1969 included abolition of tenancy, land ceiling and land to hutment dwellers or koodikidappukar

³⁴ According to Population Census 'Total Workers' are the sum of number of cultivators, agricultural labourers, household industry workers and other workers.

per cent. So has been the case with rural male workers with those engaged as cultivators falling from 17.9 to 10.6, while those engaged as agriculture labour among male workers fell from 27.8 to 15.3 per cent. As mentioned before, the fall observed in recent decades indicate a general movement out of agriculture, owing to shift in cropping patterns, conversion of paddy lands and increasing urbanisation.

Table 2: Gender-wise Cultivators and Agricultural Labourers in Rural Kerala

Type (% Worker)	Cultivator		Agricultural Labour	
	Men	Women	Men	Women
1961	26.10	17.40	14.90	29.40
1981	19.01	8.40	28.10	47.20
1991	17.90	10.90	27.80	42.30
2001	10.10	5.99	17.50	25.99
2011	10.62	5.90	15.30	21.41

Note: Census 1971 figures are excluded because of problems recognised in count of workers in 1971. A worker (main + marginal) is classified as a cultivator if he/she is engaged in cultivation of land owned or held from government or held from private persons or institutions for payment in money, kind or share; agricultural labour is defined by the Census as one who works on another person's land for wages in money/ kind/ share.

Source: Census of India, Kerala, in Kumar (1994:3251), Census of India, Kerala, 1991, 2001, 2011.

The discussion outline how land reforms and abolition of tenancy and progressive out-migration of men from farming, led to a situation wherein women left in charge of family lands found it increasingly difficult to cultivate them. Another point to note is that these lands were generally fragmented (that is not a contiguous plot, but in two or more separate pieces), comprising wet lands or garden lands³⁵, and in many cases both. The fragmentation of land holdings also lead to non-agricultural use of land including diversion to real estate (George, 1986; Balakrishnan, 2008). As agricultural wages rose, lands were left fallow by even larger categories of landowners who held on the land as an asset rather than for farming leading to reduced work opportunities for agricultural workers, particularly women from landless families. Table 1 indicate that majority of the

³⁵ Garden lands/ purayidam (or *kara*) or dry lands and wet lands (*nilam* or *padam*) in Kerala have different market rates because of usage restrictions. The wetlands can be used only for paddy cultivation (many also alternate fish/shrimp cultivation with paddy). The Kerala Conservation of paddy land and wetland Act was passed in 2008 to conserve and protect paddy fields and wetlands in the state. This Act has made the conversion of paddy fields to garden lands almost impossible.

operational holdings in Kerala are of marginal size and therefore insufficient for farming on a commercial basis. Some utilised the lands, specifically the area around their houses cultivating a mix of annual fruit and vegetable crops along with perennial fruit trees like mango, guava, jackfruit and others in addition to the quintessential coconut palms, using mostly household labour. But there were many agricultural holdings, both garden and wet lands that were left fallow or underutilised. Notwithstanding the abolition of tenancy subsequent to the KLRAA 1969, a new form of tenancy relations and pattern of leasing based on annual contracts emerged in the eighties, as small and large parcels of agricultural lands left fallow by landowners disinterested in cultivation (or were not living in the area) were being let out on informal arrangements.

Emergence of New Tenancy Contracts

The land reforms were to set right centuries of oppression of the landless and toiling poor who depended on agriculture for livelihoods. But it was observed that in the years following the reforms, many exited from agriculture, average operational holding size decreased, and by the nineties, annual contract based leasing³⁶ emerged and became widespread (Omana, 2003). The rent for leasing the land and the mode of payment³⁷ varied depending on type of land, region and crops. The duration of contract on an average was a year, and the lease rent could be paid in cash or as share³⁸ based on either written or oral contractual agreements specifying terms and conditions of input supply as well as sharing of harvested produce between the tenant and the landlord. Many studies Rene (1999), Omana (2003), John (2004), Latha and Madhusoodhanan (2004) in Ernakulam, Pathanamthitta, Kottayam, Wayanad and Trichur districts respectively, found that

³⁶ A lease is a contractual arrangement calling for the lessee (user) to pay the lessor (owner) for use of an asset.

³⁷ Rent for Banana in Trichur was Rs.12-15/plant, in Wayanad it was Rs.15/plant, in Kottayam it was Rs.12/plant while in Pathanamthitta it was Rs.9000/ acre which had to be paid in cash (50% at planting and the rest at harvesting). In Pathanamthitta, the rent was Rs.11,000/acre/year for betel vines (Nair and Menon, 2005:15).

³⁸ The results from Land and Livestock Survey 2012-13 by NSSO (2014c) indicate various forms of tenancy contracts in the country. In the case of 32.6% of households, the terms of lease was for fixed money; while for 26.2% it was for share of produce; 14.6% was from relatives for no specified terms; 14.2% was for fixed produce; and the rest (13.5%) under other terms (Yadu and Satheesha, 2016).

the incidence of tenancy³⁹ varied from 46 to 70 per cent and that 35 to 48 per cent of tenants were agricultural labourers.

A rich peasant may lease in for expansion of scale of production and profits by producing for the market or undertaking commercial cultivation by use of better technology and improving productivity, a small peasant may lease lands due to insufficient area of their own, for subsistence and also because of lack of employment opportunities (Patnaik, 2000). For a poor peasant from landless and marginal landholding families, access to cultivable lands of economic size may be possible only through leasing. For poor women from landless and 'land poor' households access to independent and secure land rights through inheritance⁴⁰ as well as government transfers have always been limited, and market purchases next to impossible as they suffer from severe resource constraints (Agarwal, 2002), and therefore land leasing may be the only option towards accessing cultivable agricultural land.

Land as a Productive Resource and Asset

Chronic underutilisation of land is a long standing feature in the state, as people hold on to it for asset value and not for cultivation or farming purposes (Harilal and Eswaran, 2015). Remittances of non-residents working outside the state, particularly in the middle-east fuelled a real-estate boom resulting in astronomical land prices⁴¹ and increasing land inequality (Oommen, 1993; Harilal, 2008); micro level studies also indicate that migrants' remittances was invested in

³⁹ incidence of tenancy is the percentage of area under tenant cultivation to total area under cultivation

⁴⁰ Inheritance in India was traditionally patrilineal conforming to existing socio cultural norms with an overarching preference and gendered bias towards males, except in parts of the Southern state of Kerala and Meghalaya in the North East, where matrilineal forms of inheritance were common. Women elsewhere as a norm, only inherited in the absence of male heirs, even in which case they played role of 'caretakers' (daughters and widows generally passed on the land to their sons) with negligible selling/disposal rights of the inherited land. With respect to government land transfers, again women were discriminated, due to different perceptions of ground level staff as well as the non-comprehension and insensitivity of policy makers to the need for separate or even joint title rights for women. Land related policies of government were formulated largely on the assumption of a unified household within which resources transferred to men (referring to land transfer to landless households after enactment of land reforms in certain states) was for the benefit of the entire family. The state, from officials involved in land registration at the village level to the legislators were not only gender blind but also prejudiced against women being joint/independent title holders as they feared 'break-up of families' (Agarwal, 2001)

⁴¹ One-hundredth of an acre or one cent of land even in the rural areas cost about Rs.100, 000.

to buy up land (Oscella and Oscella 2000). But even though land has become a favoured investment instrument, non-residents mostly hold it as an asset and leave it fallow or uncultivated, as landlords cannot effectively oversee farm operations from overseas. Labour costs in the state have also escalated to such proportions that farming of labour intensive crops such as paddy was abandoned even by resident land owners owning fertile paddy and parcels of garden lands. Because of the above mentioned reasons increasing numbers of small, medium and large sized parcels of cultivable land was left fallow over substantial length of time, spanning many years.

Thus, shifting cropping patterns and falling cultivation of paddy resulted in a situation where food grains produced in the state accounted for only 15 per cent of consumption requirement (GoK, 2010: p.106); production consumption gap further widened to 2.44 million tonnes in 2011-12, rose to 2.53 million tonnes in 2012-13 and further to 2.57 million tonnes in 2013-14 (Table 1 in Appendix). The large scale conversion of paddy fields for residential and commercial purposes and for cultivation of less labour intensive crops like plantation crops, coconut and banana decreased employment for agricultural labour, particularly female agricultural workers. Many studies reported growing indebtedness and misery of small peasants and agricultural labourers (Nair and Menon 2009; Mohanakumar and Sharma 2006).

Interventions towards Utilisation of Wet Land

The large scale conversion of agricultural lands, particularly paddy lands had taken place in spite of the Kerala Land Utilisation Order of 1967 being in force. Understanding the grave risk of unchecked reclamations and conversions, and to put in place a strong legal deterrent, the Government passed the Kerala Conservation of Paddy land and Wetland Act in 2008 which in addition to illegalising conversion of wetlands, also prohibited rice fields being left fallow or using them for other purposes without permission from district/state level monitoring committee (GoK, 2009). The Act reduced conversion of wetlands, but it could not arrest the decline in utilisation of productive land for farming and cultivation of food crops.

Following the 73rd and 74th amendments which lead to the institutionalisation of decentralisation of governance in 1993 the optimum utilisation of natural resources, local governance and planning for local level development is the

responsibility of the panchayat raj institutions (PRI). Kerala state is cited as one of the few states which has achieved relatively greater success and effective devolution of power to the PRIs than other states, due to better preparedness to implement the constitutional amendment in a substantive manner owing to experiments and existence of movements such as *Kerala Sastra Sahitya Parishad*⁴² (Kannan, 2015) and organisations such as the Centre for Development Studies (CDS)⁴³ and the Centre for Earth Science Studies (CESS)⁴⁴. Thus utilisation of land, one of the basic resources of production was in the collective consciousness and an area to be acted upon for furthering development.

Emergence of *Kudumbashree*, its Structure and Activities

Another significant development around the early nineties was the evolution of *Kudumbashree*⁴⁵, a network of women's groups organised into three-tiers of community based organisations (CBOs) with every family below the poverty line (BPL) organised into '*ayalkootams*' or neighbourhood groups (NHG). In 1998, the state government decided to implement all its poverty alleviation interventions

⁴² The *Kerala Sastra Sahitya Parishad* played a unique and central role right from the mid-seventies in bringing into the consciousness of people the importance of decentralization and further towards orienting them to think of local developmental priorities and possible solutions. The group approach for locally adapted sustainable agriculture was also adopted as a model to reduce farmers' individual costs and to push agriculture from low to high productive activity. Even earlier the government of 1987-91 had initiated and advocated for taking up farming practices jointly by farmers in a contiguous geographical area such as *padashekharams* (contiguous plots of paddy fields belonging to different owners who for production purposes operate as one) for economies of scale.

⁴³ CDS has advocated for decentralised planning at the district level with Raj in 1971 strongly recommending it in the first working paper published by the Centre. Later the CDS had put forward the idea of 'labour banks' which was reframed as 'labour-cum-development banks' and considered as a feasible option for providing gainful employment to surplus labour towards tackling unemployment in the state (Kannan, 2015)

⁴⁴ The CESS had piloted resource mapping for Ulloor panchayat which was later extended to large number of panchayats in the state following peoples' plan campaign in 1996 leading to resource maps at panchayat level drawn up for the first time in the country (Chattopadhyay and Frankie 2006).

⁴⁵ *Kudumbashree* means 'prosperity for the family'. The *Kudumbashree* network, considered as the largest women's movement in the country arose out of an urban poverty alleviation scheme in Alappuzha municipality in early 1990s which developed a system of identifying the poor households by using a deprivation index and then targeting the women of the household for organising and come out of poverty through constitution of 'mutual help societies'. In 1998 the state government decided to implement all its anti-poverty programmes through the *Kudumbashree* network and set up the state poverty alleviation mission (SPEM) as a government support system to the *Kudumbashree* units in the state. In 2011 it was also designated as the Nodal agency for implementing the National Rural Livelihood Mission in the state.

through the *Kudumbashree* network, and set up the State Poverty Eradication Mission (SPEM), with the minister of Local Self Government (LSG) as its governing body chairperson. *Kudumbashree* is formally registered as the SPEM, a society registered under the Travancore Kochi Literary, Scientific and Charitable Societies Act 1955. According to Kannan (2015:14), the SPEM is an innovative 'handholding agency' for the organisational and economic empowerment of women from poor households.

The NHGs (a synonym for self-help groups or SHGs in Kerala), is a building block of the CBO under the *Kudumbashree* network. Each NHG consist of 15-40 families with every family being represented by one woman. These NHGs were formed at the lowest or grass root level with the purpose of inculcating savings and thrift among members, which progressed to internal lending and bank linkage, with few over time venturing into some joint economic⁴⁶ activity. The NHGs are federated to area development societies (ADS) at the level of wards in every panchayat, and all the ADS in the village panchayat are federated into a registered body called the Community Development Society (CDS). Over time, they have grown in stature, and play an important role in influencing local governance structures including implementation of many of the government schemes in the locality. As on March 31, 2018 there were 2.77 lakh NHGs, over 19,854 ADSs and 1073⁴⁷ CDSs in the state.

Kudumbashree is involved in a number of activities related to poverty alleviation and overall well-being of the society, which it carries out with some support and collaboration⁴⁸ from local panchayats. For instance, *Kudumbashree* groups⁴⁹ supply a nutritional powder as take home ration to *Anganwadi* children under the Integrated Child Development Scheme (ICDS), work as Accredited Social Health Activists (ASHA) under the National Rural Health Mission and also care for the aged and the destitute under *Ashraya* scheme of the state government (Kannan, 2015). In 2018 it functioned as the nodal agency for six flagship

⁴⁶ Termed by *Kudumbashree* as micro-enterprise activity

⁴⁷ <http://www.kudumbashree.org/pages/7> accessed on 06 July 2018

⁴⁸ . The CDS, the apex of the three-tier organisational structure is allocated an office space for its functioning in every panchayat building, and its representatives attend regular panchayat meetings. *Kudumbashree* groups supply a nutritional powder as take home ration to Anganwadi children under the Integrated Child Development Scheme (ICDS), work as Accredited Social Health Activists (ASHA) under the National Rural Health Mission and also care the aged and the destitute under *Ashraya* scheme of the state government (Kannan, 2015).

⁴⁹ The nutrimix units manufacture this. These groups are formed under the micro-enterprise development programme

programmes of the Central government, the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM), the National Urban Livelihoods Mission (NULM), Deen Dayal upadhyay Gramin Kaushalya Yojana (DDUGKY), StartUp Village Entrepreneurship Project (SVEP), MKSP, and the Prime Ministers Awas Yojana (Urban), in addition to implementing several state initiated programmes including those targeting marginalised social groups such as the tribals and trans-genders. A discussion on the expanded activities⁵⁰ carried out by *Kudumbashree* is available in its Annual Action Plan 2018-19⁵¹.

During the initial years of the programme, the focus was on encouraging women to be part of 'local economic development'. Support (in terms of loans and subsidies) was extended from *Kudumbashree* to the NHG women who ventured into group based micro-enterprise activities which opened up income earning opportunities. These enterprises⁵² ranged from those engaged in traditional food processing to those operating computer centres. It was observed that while some women continued to work in these group based enterprises, others were found to drop-out due to various reasons, including enterprise failure. The average income earned by women as well as its continuity or sustenance varied across types of enterprises (Abraham, 2016). As part of expanding the scope of income earning activities of rural women, initiatives to encourage them to take up group farming was first experimented in 2004.

This section briefly explained how following land reforms and the blanket ban on leasing, informal or unofficial leasing arrangements emerged. It also discussed how land moved from being a resource to an asset and the emergence of *Kudumbashree*. The next section discusses how *Kudumbashree* institutionalised group rights for farming on lease lands.

⁵⁰ The website gives details and data and can be accessed at <http://kudumbashree.org/>

⁵¹ http://www.kudumbashree.org/storage//files/2hsyq_plan%202018%20-%202019.pdf accessed on 7-08-18

⁵² <http://kudumbashree.org/pages/142>

III. Institutional Support to Women in Lease land Farming

In many states which had imposed land leasing restrictions post land reforms, there was a recognition of its adverse impact on livelihoods and income earning opportunities for the poor (Haque, 2001). This led to some states such as Andhra Pradesh (AP)⁵³ and later Kerala permitting leasing of lands to members of SHGs (Haque and Nair, 2014).

The idea of supporting women interested in taking up farming either jointly or individually originated when there was growing realisation that rural women, particularly those women engaged as agricultural workers and many others with no prior experience in commercial cultivation of crops were interested⁵⁴ in taking up farming for a livelihood, but could not individually, as they were limited by either small or marginal land holdings or were landless⁵⁵. Though women in rural households with small and marginal holdings has always worked on family land, gender norms relegate it as an extension of household work, or as Arun (1999:22) and Osella and Osella (2000:42) notes, as duty towards fulfilling her role as 'housewife'. In small and marginal landholding families, women's responsibility towards farming is internalised as her duty to maximise household welfare and to reduce market dependence for food. Many use their homesteads⁵⁶ for cultivation of commercial crops like coconut and spices, and majority maintain kitchen gardens for supplementing fruits and vegetable requirements of the family (Ramakumar, 2006).

⁵³ The AP SHG Women Leasing of Agricultural Land Act 2010 was passed by the state assembly in October 2010; Women SHGs in AP has used micro credit for leasing agricultural lands for cultivation. One of the earliest interventions in group leasing was in Medak district, when in 1989, the group leasing programme was initiated by the Deccan Development Society (DDS) which supported women groups who paid 25% of lease rent with interest free loans to pay up the rest and initiate cultivation. About 144 women's groups of 5-15 members were cultivating on 210 acres (Agarwal, 2010). In 2000, the success of DDS prompted the AP government to launch the five year Sustainable Dry land Agriculture Project (popularly known as Samatha Dharani) with support from UNDP and the Central government involving women groups supported by the Andhra Pradesh Mahila Samata Society (APMSS). This project involved 13,745 women cultivating 3940 acres of land across 500 villages in the Telengana region of the state (Haque and Nair, 2014)

⁵⁴ <http://thekudumbashrestory.info/index.php/programmes/economic-empowerment/collective-farming/ks-farming-story> (accessed on 6 July, 2017)

⁵⁵ Rural women in households with 10-20 cents of land are considered as landless. Kerala is dominated by marginal farmers with less than 1 hectare of land (Table 1). The average holding size was 0.13 Ha, indicating that majority hold only their homestead lands.

⁵⁶ The land surrounding the house on which a variety of plants are cultivated.

Kudumbashree Support

The support to rural women interested in farming from *Kudumbashree*, opened up totally new livelihood options particularly for those landless engaged as agricultural workers and also to others with marginal landholdings. Absence of choices had compelled many to accept comparatively lower wages⁵⁷ to ensure regular work on farmlands of wealthy landowners in own or nearby villages. For the state, it also offered a pathway to revitalise agriculture, particularly cultivation of paddy and other food crops⁵⁸ which was declining due to rising labour costs as well and general lack of interest. As discussed earlier, paddy had witnessed a rapid and continuous decline.

To facilitate women's participation in farming, support was offered from different avenues. The groups could cultivate on one of the three types of lands, namely, own (belonging to members in the group), leased private, or leased government lands, with majority of farming groups taking up private lands on lease for cultivation. The office bearers of the CDS and the ADS as well as *ayalkootam* members assisted farming groups in identifying suitable lands which were lying unutilised with land owners⁵⁹, and for negotiating lease rates, which were either 'fixed rents' or 'crop share'. In 2014, a participatory system, termed *Bhoonidhi*⁶⁰ scheme was institutionalized for identification of cultivable fallow lands. This programme could have created active land lease markets, but did not meet much success, which to some extent may be attributed to historical influences⁶¹ and fear among land owners of losing their land (personal communication, 2016)⁶².

After land, credit was the next major issue, as loans from the NHG (at 12% interest rates) or advances from traders at higher rates were the only available option for availing credit for cultivation, in spite of agricultural loans being available at 7-9% interest (upon submission of application including proof of cultivation and receipt of land revenue paid). As majority of the JLGs cultivated lands taken on

⁵⁷ Gender wage gap are high across states, but is highest in Kerala (Sudarshan, 2011).

⁵⁸ Area under food crops had declined in the state due to conversion to cash crops like rubber

⁵⁹ mostly holdings ranging from as low as 0.08 – 1 Ha, that is of sub-marginal and marginal sizes, and those categorised as 'small' where land area ranged from 1.01 - 2 Ha

⁶⁰ Under this scheme the land owner could volunteer and register his willingness to lease out uncultivated farm land; the panchayats acted as intermediary between the landowner and the lessee.

⁶¹ KLRAA, 1969 provision of land vesting with the tenant

⁶² The Interview with the Ernakulam District Mission Coordinator of *Kudumbashree*, Ms. Tanie Thomas in June 2016.

lease, they could not avail the traditional agricultural loans. To overcome this constraint, on the basis of the National Bank for Agriculture and Rural Development (NABARD) guidelines, in 2010, *Kudumbashree* formulated a policy to organize and register groups of women farmers as joint liability groups (JLGs)⁶³, which opened up the route to agricultural credit, and became the basic institutional format for collective farming (GoK, 2015a). The formation of JLGs was facilitated by the *Kudumbashree* ADS and CDS, and the JLG members elected a president and secretary as its representatives. For obtaining loans from banks, a JLG had to submit certain documents, which included the CDS certificate stating authenticity of the JLG, copy of lease agreement with the land owner, land tax paid receipt obtained from land owner and minutes of JLG meeting indicating decision to cultivate during the year.

The JLGs were further supported by Government of Kerala (GoK) interest subsidy scheme⁶⁴ for all crop loans, which entailed an interest subvention of 5%. The banks claim this from *Kudumbashree*, which is generally paid as a single instalment to the bank in the first month after loan is sanctioned and disbursed to JLG. At the end of the crop loan period, the JLG effectively had to pay only 2-4% interest and principal due to the bank. The loan or repayment period was 12 months or less depending upon the cropping period. As the JLGs were also offered an incentive of 2% for prompt repayment (the repayment period was 365 days), the loans of some JLGs who paid within the period were effectively 'interest free'.

Women leasing in lands for farming were also provided cash incentives for commercial cultivation⁶⁵. Since 2009-10, only groups (and not individual women) undertaking commercial cultivation were provided with incentives as the emphasis shifted to collective farming. Area incentives was given to women only in cases where they had taken 'land on lease' and had completed planting a stipulated minimum area (50 cents or approximately 0.2 hectare), while production incentives were given to those producing a minimum quantity, by taking up new cultivation

⁶³ A typical farming group consist of 4-10 women and are organised as Joint Liability Groups (JLG) to make available institutional credit and easy monitoring

⁶⁴ The interest subsidy scheme for Kudumbashree NHGs and JLGs was sanctioned vide GO (Rt) No.2725/09/LSGD dated 22.10.2009. The State Level Bankers Committee (SLBC) had approved operational guidelines for Interest Subsidy scheme on 14.1.2010. Clause 2.b in it mentions Joint Liability Groups (JLG) doing collective farming will also be eligible for interest subsidy if they avail bank loan (GoK, 2015a). The usual interest rates charged for agricultural loans by banks id 9% per annum, and 7% in case of Central government interest subvention (a term for subsidy)

⁶⁵ During initial years, until 2009-10, individuals cultivating more than 0.1 Ha and groups cultivating more than 0.8 Ha were considered as commercial cultivators

on own or leased farms either individually or as a group (Kudumbashree,2012). The area incentive was disbursed prior to the harvest, which on an average was about 10% of the production cost, while production incentives was disbursed in cases where the yield exceeded the threshold level fixed by the government, and was also higher by an additional 10% for those cultivating on leased lands. These monetary incentives from *Kudumbashree* were given during the initial years, from 2004-05⁶⁶ onwards and reached a peak in 2009-10, when Rs.20.12 crore was disbursed to those eligible. These have reduced since, but *Kudumbashree* support to groups continue in the form of input and interest subsidies, in addition to marketing support and capacity building activities under the MKSP.

Other Support to Farming Groups

In addition to incentives from *Kudumbashree*, assistance was also made available to groups in the form of input subsidies from the Ministry of Agriculture (MoA) disbursed through the *krishibhavans*⁶⁷, and labour support through convergence with the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) through the *panchayats*⁶⁸. Farming groups received support from MGNREGS for preparing the land for cultivation until the planting stage and for creating new or improving existing irrigation facilities. Input subsidies from the MoA such as seeds and fertilisers were made available through the *krishibhavans*. At times, there was also cash incentives from the MoA for specific crops, such as for banana (Rs.10/plant), for pineapple (a one-time support⁶⁹ of Rs.10, 000 per

⁶⁶ Rs.0.36 crore was disbursed as incentive (Gok, 2015a)

⁶⁷ Krishibhavan also make available seeds free of charge in the case of number of crops, particularly rice. It also provides fertilizers at 50% subsidized rate for application during the land preparation stage and also later.

⁶⁸ The grama panchayats in Kerala are powerful institutions, with both personnel and financial resources. A campaign for panchayat and NREGS linkage in 2009-10 saw an exponential increase in women talking up farming, with over 2.32lakh women belonging to JLGs took up lease land agriculture during the year. An executive decision was taken by the Government to have all 'mates' (work supervisors) for the programme from among the ADS of Kudumbashree. Kerala became the only state in the country with 100% women 'mates' in the programme (there are 1.2 lakh women mates, selected from the general body of the ADS who were jointly trained by Rural Development Department and Kudumbashree Mission). The mates identify work opportunities, mobilise groups for work, prepare estimates in consultation with the overseer or engineer, supervise work, prepare and submit muster rolls, and handle emergencies at work (Muraleedharan, 2012).

⁶⁹ This amount partly supported expenses incurred in the first year of planting. Pineapple crop yields 3-4 harvests over 36-42 month period, which is generally the lease period (a landless farmer enter into agreement with the land owners). The JLGs apply for the incentive by submitting an application and

acre⁷⁰), and others, to support small and marginal farmers to meet the cost of cultivation. The ministry also incentivised those who engaged in organic farming, provided it was certified by the agriculture officer (*krishi* officer) of the panchayat. A group could apply for the incentive by submitting documents that certified cultivation of a particular crop on a certain piece of land along with the receipt of land tax paid (this had to be obtained from the land owner).

There was also assistance for marketing the produce directly through weekly markets facilitated by the panchayat as well as through the Vegetable and Fruit Promotion Company of *Keralam* (VFPCCK)⁷¹ which collected fresh produce on fixed days from collection centres in the panchayat for sale through its outlets; they could also sell the produce to traders who collected and marketed the produce. Under NRLM, Farmer Facilitation Centres⁷² (FFC) has been formed in 972 gram panchayats which are both knowledge dissemination centres and service delivery points. They also provide agricultural equipments and implements for hire at nominal rates⁷³. These measures led to large number of JLGs taking up commercial cultivation on lease lands across the state. The progress in the number of JLGs and area cultivated by them is discussed next.

Progress in Number of JLGs and Area cultivated over Time

The number of JLGs, women engaged in these JLGs and area cultivated by them do not indicate progressive increase or a clear trend, but rather significant

supporting documents (lease deed, Pass book of bank account of the JLG, and tax receipt of land). In the case of some of the JLGs interviewed the land owners were not co-operative with respect to sharing the tax receipt of land, an important document for availing incentives from agriculture department

⁷⁰ The amount was the support fixed by the state agriculture department in 2015 for small and marginal farmers

⁷¹ VFPCCK was established in 2001 as a successor of the Kerala Horticulture development Programme (KHDP) which is one of the most successful agricultural development projects undertaken in the country. A major stake in VFPCCK Company is owned by self help groups (SHG) of farmers who own 50%, while the government of Kerala own 30% and the rest is owned by related institutions. One of the support areas of the company is in facilitating group marketing, under which 10-15 SHGs numbering to about 250-300 farmers who have formed a Swasraya Karshaka Samiti (SKS) trade their produce collectively. The larger volumes for sale enable better negotiations and bargaining power with wholesalers and traders. VFPCCK in 2016 had 8906 SHGs and about 171660 farmers (vfpcck.org/self_help_group.asp)

⁷² The FFCs acted as knowledge and service points at every village and were basically community managed extension centres and also provided machinery support for agricultural groups. FFCs are funded under MKSP, a component under NRLM

⁷³ A sprayer with a 10 litre jar could be hired for Rs.50/day

variability across years. If we examine the increase in number of women engaged in lease land farming over a decade, from 2006-07 and 2016-17, the numbers have risen to 2, 88,005 women (engaged in 65,601 JLGs) from 2,34,812 women (engaged in 26,499 JLGs) in 2006-07. Thus the numbers of women in the JLGs have increased by 22.7 per cent, while the farming groups or number of JLGs have risen by 147.6 per cent. This difference is attributed to one major change, the introduction of the 'joint liability groups'. With the JLG concept, the initial farming groups that were larger (with about 10 members on an average) shrunk to smaller sized groups, comprising of 4-5 members. Table 3 gives the progress in number of JLGs and area cultivated by them over time.

Table 3: Progress in Area cultivated by JLGs over time

Year	No. of groups	Area cultivated (Ha)
2006-07	26499 (2,34,812)	17370
2007-08	31680	21805
2010-11	39734	19850
2011-12	45776	44549
2014-15	61836	38706
2015-16	54,167	49,960
2016-17	65,601 (2,88,005)	51,113

Note: figure in bracket corresponds to total number of women who are members of these groups.

Source: Kudumbashree various years. Data and reports available at <http://www.kudumbashree.org/pages/42> (accessed 25 August 2017)

As stated earlier, the JLG innovation introduced by NABARD enabled access of the groups to credit, at effective interest rates ranging from 2-4 per cent. Therefore, while 2, 34,812 women formed 26,499 JLGs in 2006-07, significantly lower numbers or, 1, 75,835 women formed 39,734 JLGs in 2010-11. Another institutional change over the years was that until 2011 the JLGs were under the state/*Kudumbashree* support, but since then it is under NRLM and its sub-component the MKSP⁷⁴. Table 3 clearly indicate that with respect to area under

⁷⁴ MKSP (*Mahila Kisan Sashaktikaran Pariyojana*) was launched in Kerala in 2011 as a sub component of NRLM (Nation Rural Livelihood Mission) with the objectives of increasing the visibility of women in agriculture, reducing drudgery and providing livelihood opportunities by adopting sustainable and eco-

JLG cultivation, across the years, there has been rise and fall in the total area cultivated by groups. In 2011-12, there were 45,776 JLGs engaged in collective farming on 44,549 hectares⁷⁵ of land, while in 2013-14 though the number of JLGs increased to 47,611, the area cultivated fell to 40,218 Ha. In 2014-15, the numbers of JLGs substantially rose to 61,836, though the total cultivated area fell to 38,706 Ha of land (Table 3). In 2015-16, there were 54,167 JLGs cultivating on 49,960 Ha. In 2016-17, following a campaign⁷⁶ to invigorate the numbers of JLGs there was a remarkable increase to 65,601 JLGs cultivating 51,113 Ha (as per data till March 2017).

Out of the total lands leased by JLGs in the state, majority or 93.66 per cent were cultivating lands belonging to private land owners on short lease of 11 months to 1 year. These land owners were in most cases marginal farmers themselves (86.4 per cent of agricultural holdings in the state were less than 1 Ha, as illustrated in Table 1). Of the remaining JLGs, 6.07 per cent were cultivating lands belonging to members in their own farming groups, while 0.27 percent was farming government land.

Area and Crops Cultivated by JLGs across Districts

Lease land farming has not only improved availability of nutritious food such as fruits and vegetables for home consumption, but also cash income of JLG households through marketable surplus⁷⁷. It has also improved overall availability of locally produced food, with the *Kudumbashree* mission supporting the sale of JLG produce through weekly, monthly and festival-season markets, and also disseminate information on the date and location of markets through a website⁷⁸.

Table 4 clearly indicate that the area under various crops differed across districts. In some districts, area under paddy was higher in comparison to other crops, while in some others banana or vegetable cultivation were more preferred

friendly agriculture. Kudumbashree, the programme implementing agency (PIA) of NRLM, has been in the process of implementing the scheme through JLGs. The FFCs (Farmers' Facilitation Centres) established under MKSP now play role in supporting and monitoring farming activities, and was established in 962 CDS offices by January 2016. Support to lease land farming have been further strengthened under MKSP.

⁷⁵ 1 acre = 0.405 hectares. In 2011-12, JLGs were cultivating 109997 acres (Table 1 in Appendix)

⁷⁶ The aim was to have as many JLGs as the number of SHG/NHG in every ward/panchayat

⁷⁷ This is the part of produce sold in the market for earning cash incomes. In subsistence agriculture most of the produce is just enough for household consumption and only what is left is sold.

⁷⁸ <http://www.naattuchantha.com/index.php> was launched in April 2018

by the JLGs. This to a large extent may primarily owe to type of land available on lease in the locality, interest of groups and terms of lease. For instance, over the years, paddy fields/wet lands were left largely uncultivated by land owners (more than a decade or two in some cases) and therefore was readily available for leasing in many districts; In addition, the terms of lease for paddy was generally crop-share basis (preferred by many JLGs), and the probability of receiving some wage support for field preparation (until transplanting/sowing) under MGNREGS⁷⁹ was higher in the case of paddy. These factors may have influenced share of area under paddy cultivation being higher than other crops. In January 2016, paddy was being cultivated by the JLGs in about 13,300 Ha or comprised 29.5 per cent of the total area cultivated by *kudumbashree* JLGs in the state (Table 4).

The contribution of JLGs to some extent may have slowed down the fall in the total area under paddy, which otherwise may have been even higher. As stated earlier, the area under paddy has continuously reduced in the state over the years, with the most recent decade recording a 35 per cent decline, from 3, 22,368 Ha in 2001-02 to 2, 08,160 Ha in 2011-12 (GoK, 2013). If we examine the total area on which paddy is grown in the state, in 2011-12 paddy cultivated on lease lands by *Kudumbashree* JLGs was 14,958 Ha which accounted for 7.19 per cent of total area⁸⁰. Hence, it will not be incorrect to say that *kudumbashree* JLGs and their and even towards reducing the production-consumption gap of paddy in the state (Table 1 in Appendix). It also validates the observation laid out in the beginning of this paper, that is, the state by encouraging and supporting poor women's entry into lease land farming has also in fact, rejuvenated paddy farming in the state. *Kudumbashree* itself has published numerous success stories (refer case of *Thennala* gram panchayat (GP) given in the Appendix) wherein it has brought out clearly how JLG involvement in lease land farming has resulted in utilisation of hundreds of acres of wet lands and rekindled interest in paddy farming across GPs.

⁷⁹ Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is the flagship programme of ministry of rural development. Following the enactment of MGNREGA in 2005 which guarantees right to work and ensures one member of every rural household 100 days of work in a year at notified wage rates the scheme became operational across all rural districts of the country since 2008.

⁸⁰ as recorded by Directorate of Economics and Statistics, Government of Kerala

Table 4: District wise data on Area and Crops cultivated by JLGs

S. No	Name of the District	No. of JLG	Total Area (Hectare)	Area under cultivation by different crop (hectare)				
				Paddy	Banana	Tubers	Vegetable	Others
1	Thiruvananthapuram	4212	3455	252	1787	565	694	157
2	Kollam	3455	1722	178	353	783	244	164
3	Pathanamthitta	3493	2261	303	724	411	734	89
4	Alappuzha	5206	2396	923	264	402	561	246
5	Kottayam	1924	1486	379	508	345	193	61
6	Idukki	6522	3745	122	840	1194	1178	412
7	Ernakulam	4173	7847	2801	1604	1198	1833	410
8	Thrissur	4366	3927	1473	1163	457	762	71
9	Palakkad	2832	4877	2343	1325	615	560	35
10	Malappuram	3146	4425	1742	1089	611	793	190
11	Kozhikkode	3560	1664	243	633	416	309	64
12	Wayanad	4374	1120	327	198	414	170	11
13	Kannur	4014	4853	1824	944	742	854	489
14	Kasaragod	2890	1330	390	275	210	385	70
Total Area (% area with the specific crop grown out of total area cultivated by JLGs)		54167 (No. of JLG)	45108 (100)	13300 (29.5)	11707 (26.0)	8364 (18.5)	9268 (20.5)	2469 (5.5)

Source: Kudumbashree, 2017. The data is as on January 2016. Available at <http://thekudumbashreestory.info/index.php/programmes/economic-empowerment/collective-farming/jlgs> (accessed on 10 September, 2017)

As laid out in the introduction, the main focus of the study is to determine the earnings of JLGs engaged in lease land farming. In the following Section, research methodology is discussed.

IV Research Methodology

Returns to farming were assessed for the last completed year/period of lease (generally one year, during which the JLG may have cultivated many crops, or a single crop: paddy, banana, tapioca, vegetables or a mix of these). In case of those growing pineapple, returns over the entire lease period ranging from 36-42 months was assessed. Annual returns per acre was computed for the JLG and individual members both in terms of gross income (also referred as gross profit) earned in cash terms, and net income that took into consideration all imputed costs⁸¹. Here imputed costs include primarily cost of labour by JLG members and family, seeds and manure, and own capital if any. Net interest paid for loans availed was considered under cash costs, while any cash incentives received was added to cash earnings.

Gross Profit/Gross Income = Total Cash Earnings - Cash costs incurred in cultivation

Net Profit/ Net Income = (Cash + Non-Cash Earnings) - (Cash + Non-Cash costs)

The gross income is estimated as the total value of the produce in cash terms realised from sale of produce (including subsidies and other incentives in cash terms) after deducting all paid out cash expenses incurred by the JLG. In the net income earned, total cash and non-cash costs are subtracted from the total cash and non-cash earnings. The main non-cash cost considered is the imputed value of labour (that is unpaid work of JLG members and others which is valued at prevailing market wages in the locality for hired labour in 2016), while the produce used for own consumption by JLG members is the main non-cash earnings.

The Department of Economics & Statistics of Government of Kerala (2016), classifies cost of cultivation into Cost A, Cost B1, Cost B and Cost C. Here for computing gross profit/gross income, Cost A (which includes all paid out expenses actually incurred by the cultivators) is deducted from total cash earnings. Net income is calculated taking into consideration imputed costs relevant to JLG

⁸¹ In general, value of family labour, rent of owned land and interest on owned fixed capital

farming, but not the entire Cost C, which include all imputed costs, that of land, labour and capital. Here as the JLGs are involved in farming lease lands, the major imputed cost considered is pertaining to unpaid JLG labour, while cost of land is a paid out/cash cost in case of cash-term lease agreement and a non-cash cost in case of crop-share lease arrangement. In the case of JLGs having crop share terms, only the share of the JLG is considered for determining income. The crop share to land owner is payment for the land, which is in non-cash terms and are not taken into consideration in determining economic returns as they cancel out in earnings and cost side.

The issues and challenges concerning the JLGs were identified based on qualitative information collected through interviews with JLG members, and from focus group discussions involving JLG members, ADS and CDS representatives of *Kudumbashree* network in the selected panchayats.

Sample and Study Area

The study employs both primary and secondary sources of data. Primary data was collected through personal interviews with women belonging to 20 JLGs, and from key informant interviews (officials and volunteers of *kudumbashree* at district, block and panchayat/CDS level). The interviews with the JLGs were conducted in June 2016 wherein detailed information was gathered using a pre-tested interview schedule (having both close and open ended questions covering relevant aspects related to lease land farming such as negotiations for land, group composition, production and marketing activities, cash and non-cash returns and so on). The secondary sources of information included *Kudumbashree* documents such as annual reports, published documents related to JLG farming, and its official website⁸².

The JLGs were selected from Ernakulam⁸³ district, purposively chosen since it accounted for 17.4 per cent of total area⁸⁴ under *kudumbashree* JLG farming groups. The district also had sizable area under popular crops such as paddy, banana, and tubers (Table 4). As the study wanted to compare income earned by JLGs engaged in different crops, such as paddy, pineapple, banana, vegetables,

⁸² <http://www.kudumbashree.org/>

⁸³ The district in 2017 had the maximum area cultivated by JLGs accounting for 17.4 per cent of 45108 hectares.

⁸⁴ 45,108 Hectares in January 2016

and others, it was important to select blocks where sufficient number of JLGs engaged in farming of these crops were available; After studying the data from the district *kudumbashree* mission office, *Moovattupuzha* block⁸⁵ was selected. The block had many JLGs engaged in pineapple cultivation (a cash crop) as the town '*vazhakkulam*' (popularly known as pineapple city) was located here. JLGs in general cultivate a mix of crops, that is those growing either pineapple/paddy was also growing vegetables, tapioca, and banana. As pineapple cultivation is more capital intensive, with significantly higher lease rentals in comparison to paddy there is scope for comparative analysis on earnings between JLG groups.

Table 5: Number of JLGs across GPs of Moovattupuzha Block in 2015

Name of Panchayat →	Avoly	Arakuzha	Ayavana	Kalloorkad	Manjalloor	Valakam	Paipra	Marady
Total No. of JLGs (307)	81	12	17	20	35	52	50	40

Note: Muvattupuzha municipality area had 5 JLGs. **Source:** Respective CDS offices, *Kudumbashree*.

The number of JLGs across GPs is illustrated in Table 5, which indicate that in total there were 307 JLGs engaged in group farming in the block. Two GPs, Avoli⁸⁶ and Manjalloor were purposively selected, as both had sufficient numbers of registered⁸⁷ JLGs (Table 6). The sample was fixed at 15 per cent of the total number of registered JLGs in each of the study GP. It may be noted here that majority of the wards had more number of NHG/SHGs (ayalkootam) than JLGs. In fact, many of the JLGs that were selected into the sample comprised of members from 2-3 neighbourhood groups, which may indicate a disinterest towards farming for many, as on an average NHGs are larger and comprise of 10-12 members while

⁸⁵ Moovattupuzha block has 8 panchayats. These are Arakuzha, Ayavana, Manjalloor, Paipra, Avoly, Kalloorkad, Marady and Valakam.

⁸⁶ Avoly GP is located near the banks of a river which skirt it over a length of 15Km. The location is a blessing as crops need water during almost every stage of its life cycle, though the monsoon months at times are challenging as the area is also prone to recurrent flooding (last in 2013). Manjalloor is less blessed with respect to assured water availability

⁸⁷ Since 2015-16, the JLGs have to register yearly under *Kudumbashree* at the CDS office paying a first time registration fee of Rs.260, and annual renewal fee of Rs.75. Only registered JLGs are eligible for availing loans from banks and other benefits.

the JLGs are comparatively smaller with 4-5 members. The data also supports this, as at the time of the pilot study (May 2015), while number of NHGs across the two sample GPs were 244, there were only 116 JLGs (81 JLGs in Avoli and 35 in Manjalloor), indicating clearly that the number of JLGs were less than half of the number of NHGs.

Table 6: Number of Neighbourhood groups and JLGs in the study GPs

No. of Wards	Manjalloor No of NHG	Manjalloor No of JLG	Avoli No. of NHG	Avoli No. of JLG
1	5	0	9	6
2	8	5	9	2
3	10	5	11	5
4	11	2	12	4
5	11	4	11	17
6	14	1	3	2
7	5	0	16	8
8	8	1	12	9
9	2	2	15	13
10	9	5	7	6
11	6	1	5	2
12	11	4	10	6
13	12	5	7	0
14	-	-	4	1
Total	113	35	131	81

Note: Certain wards did not have any JLGs (due to the entire area mostly being urban, or because cultivable lands were unavailable for lease). Only in a single ward there were more number of JLGs in comparison to NHGs, which was Ward 5 in Avoli GP. In this ward there were many farm/agricultural labour households owning just a few cents of land (lesser than 0.2 Ha on an average) and were keen to lease lands for cultivation. The names of the JLGs in each ward across the GP is given in Table 2 in the appendix. **Source:** Manjalloor and Avoli CDS Office, Kudumbashree.

The field study conducted in June 2016, selected 20 JLGs in total, 12 from Avoli and 8 from Manjalloor, ensuring not more than two JLGs were from a single ward. The sample JLGs were purposively selected, that is only those that met certain basic criteria were chosen, namely, members should belong to NHGs of

Kudumbashree, and should be JLGs engaged in lease land farming for at least two years since 2012.

V. Findings

In this section, the study findings are discussed, beginning with the background of JLG women, their motivation to enter in to lease land farming, crops cultivated, the terms of lease with landowners, loans availed by farming groups, support from government, marketing and sale of crop produce, as well as group dynamics and changes in the JLG over time. The section also examines the returns to farming for various farming groups, as well as the issues and challenges faced by the groups.

Background of JLG Members

The sample JLGs were found to comprise either of 4 or 5 members. The modal education attained was elementary level with about 35 per cent being 8th standard pass, while only 9.8 per cent had completed higher secondary or college education. There were also few with no formal education. Majority or close to 52 per cent of women were between 36-49 years, while 40 per cent were between 50-65 years of age. In comparison, the participation of younger women was quite low, with those between 26-35 years being very few (7 out of the 92 women). Sample JLGs were heterogeneous with respect to socioeconomic and religious background. Muslim women were comparatively lesser in number (may be owing to the locality having fewer Muslim households), though there were few JLGs comprising of women from the three major religious groups in the state (Hindu, Muslim and Christian). The number of women belonging to marginalised caste groups, such as schedule castes (SC) and other backward classes (OBC) were almost equal to number of women from general caste groups.

The JLGs were formed from a single NHG/SHG only in the case of four (of the 20), while in the case of others, members from two or commonly three NHGs within a ward had joined to form the JLG.

*Annana*⁸⁸ JLG of *Avoli* GP was formed by four women from diverse socioeconomic and religious backgrounds belonging to three⁸⁹ different NHGs. The initiative to form the group came from Janet whose family had suffered financial setbacks. She was keen to venture into collective farming for supporting the household, and was able to convince Nancy, who despite belonging to an economically better off family joined in as she shared a love for farming. Within a few days, Sareena and Ramla, both belonging to financially weaker households, also joined in to form the four member JLG. For Ramla, a widow with two children from the Muslim community, collective farming gave an opportunity to earn an income within her village. None of the women or their families owned agricultural lands.

It was observed that majority of the JLG women or 85 per cent were from lower income households, while the rest, or 14 out of the 92 women were from households that were comparatively in a better economic condition⁹⁰.

Nancy Toni of *Annana* JLG in *Avoli* GP was comparatively better off than other women in the JLG and owned some gold ornaments (about 240 grams) which she had willingly pledged 3-4 times to meet short term cash requirements of the JLG. Her gesture was appreciated by her group members, who were of the opinion that despite having the JLG loan, it was the willingness to use her private asset to raise short-term loans for farming requirement that had helped them to cultivate the high value pineapple crop, as well as repay the loans in time. Nancy's husband who worked as a manager in a private company was supportive of her initiatives.

⁸⁸ Pseudonym. The names of all JLGs and any name of person quoted is changed to protect identity. The official names of all 116 JLGs in the two sample GPs is given in the Appendix. As mentioned before, the study had selected 8 JLGs from Manjalloor and 12 from Avoli GP

⁸⁹ The fact that four member JLGs are formed from three NHGs/SHGs means that only about 4-5 women out of 40 women are interested in farming. The *ayalkootams*/NHGs/SHGs in the ADS on an average had 12-14 members) implies that only few are interested in taking up farming owing to arduous work and risky returns associated with agriculture based livelihoods.

⁹⁰ The research considers households owning 20 cents -1 acre of land with at least one earning member with a regular income above Rs.10, 000 or households with less than 20 cents of land but with at least one member having a regular monthly income of Rs.20,000 or above as those belonging to better economic condition. Households in both cases are marginal land holding families (those with less than 2.4 acres or 1 hectare)

With respect to land ownership, most of the women were from households with land holdings ranging from about 3 cent to 2 acres (0.01 Ha to 0.85 Ha); in all only about 13 per cent (of the 92 women were from households owning more than half an acre or more than 0.2 Ha of land).

Prathyas JLG in Manjalloor GP, was formed by five women. All except one were from households with land ownership ranging from 0.5 to 1.75 acres. So was the case with *Jona JLG* also from the same GP, wherein land ownership of member households ranged from 0.05 to 1.5 acres. In the case of *Sneha JLG in Avoli GP*, the five members belonged to *Vishwakarma* caste group and were from the same extended household which jointly owned about 2 acres of land. The members farmed the family land and also 0.5 acres of leased in land. In the case of *Karuna JLG of Avoli GP*, one member was from a household with 1.5 acres while the rest possessed homesteads ranging from 0.05-0.2 acre of land. There were also JLGs where none of the members possessed more than 0.1 acre of land, as was the case of *Bhagya JLG in Manjalloor GP*.

Examining prior/continued engagement in other paid work, out of the 92 women, close to half were engaged in paid work, many as agricultural wage workers in pineapple cultivation. The rest had never engaged in paid work, and reported themselves as 'housewives' who were engaging in commercial farming⁹¹ activities for the first time, though some were cultivating a mix of vegetable crops on their homestead lands even before primarily for household consumption. Most of the women except for few were active workers under MGNREGS. One woman had also held an office job, but this was long before when she had lived outside the state. Many continued to work as casual agricultural wage workers whenever work was available, few were working in pineapple processing units on weekly wages, some in tailoring, while two women took up paid care work (home nursing) from time to time. There were also cases of couple of women who ceased to be active JLG members after they got full time employment.

Out of the four members in *Jona JLG of Manjalloor GP*, two were regular agricultural workers (mostly working on large pineapple farms in the locality). On an average they earned about Rs.350 for working

⁹¹ In this research 'commercial farming' simply means at least part of the produce is meant for sale in the market

from 8 AM-2 PM (male workers on the other hand received on an average Rs.450-500 for the same hours of work). All four members of this JLG were active NREGS workers.

For instance, Nancy of *Annana JLG*, had worked in Delhi in a secretarial position before relocating to her native village because of family problems. There were also few who had worked as professional care workers, and were continuing to take up home nursing assignments from time to time (mother and baby care, as part-time hospital attendants and so on). In *Dhana JLG*, one member who had completed a lab technician course, left the group when she got a regular job with a monthly salary of Rs.8, 000.

Out of the women, eight were single/widowed women while the rest were married with spouses working in private transport sector as drivers, conductors and cleaners, while few were working in pineapple processing units, some were head load workers and agricultural wage workers. Few others were self-employed as plumbers, painters, carpenters and masons. Some JLG members also had spouses who were into lease land pineapple farming, either individually or in partnership with other men.

Entry into Lease Land Farming & Progression over Time

Almost all JLG members stated the primary motivating factor for venturing into lease land farming was support from *Kudumbashree*. While most JLGs had erstwhile agricultural workers, some did not have any member with farming experience. But the initial support and motivation by the CDS and ADS chairpersons and members for negotiating with land owners, training support and inputs such as seeds and fertilisers from *krishi bhavans* and incentives from *Kudumbashree* gave them the confidence to venture in to collective farming. It will not be incorrect to state that this institutionalised support has contributed to the transformation of identity of many JLG women, particularly that of erstwhile 'agricultural workers' who were proud to become 'farm producers'. As members of JLG they were now knowledgeable about access to inputs and channels of access like the *krishi bhavans* for seeds, fertilisers, agronomic and pesticide management, and over the years, many have attended trainings and exposure visits.

Almost all the JLGs selected in the sample were interacting with agricultural officers in the area, and a couple of women were selected as 'master farmers'. Members from two of the sample JLGs had the distinction of being awarded with 'best woman farmer' title, while in one case the JLG farm was being selected as the 'model' or 'demonstration plot' in the block. Over the years, MGNREGS support towards land preparation has also helped particularly in case of cultivating paddy fields that was left fallow over many years.

In the case of *Annana JLG* a friend had offered 0.5 acres of land 'free of charge' for 18 months. This was in 2010 and they had continued as a JLG ever since. Incentives from *kudumbashree* and support from *Krishi bhawan* and panchayat further gave confidence to the women. The first crop planted by the group was 'nendran' banana⁹², based on considerations such as 18 month lease duration, perception of the crop being a comparatively 'safe bet' because of assured demand and good prices (particularly if harvest is planned around the *Onam*⁹³ festival month). They had also grown vegetables as an inter-crop during the initial months when the seedlings were small. The initial land preparation was tough and costly as the land had been left fallow for more than five years, but the group harvested a profitable crop, which motivated them to lease more lands and take up pineapple cultivation which was more intensive in terms of capital and labour requirement. *Annana JLG* had never cultivated paddy, as members were averse to its cultivation.

In the case of *Dhana and Pavi JLG* in *Avoli GP* it was MGNREGS support as well as various input support from agricultural office/*krishi bhavan* towards initial land development that had motivated the JLG to first venture into collective farming on leased lands. In both these cases, the lease terms was crop share basis (one-fourth to the land owner unlike the usual one-third. The land owners agreed for smaller share as the field was uncultivated for over a decade, and hence the difficulty in field preparation was very high).

⁹² Nendran is a variety of banana grown extensively in Kerala used for making 'banana chips'

⁹³ An important harvest festival celebrated in the state. Kudumbashree plans special Onam markets where JLG groups can sell their fresh or processed produce.

Crops, Period of Lease and Area cultivated

Depending on crop preference and availability of land, the JLGs were farming paddy, pineapple, banana, tapioca and different kinds of vegetables by leasing in suitable wet or garden lands. Many JLGs in addition to cultivating either pineapple/paddy was also growing vegetables, tapioca, and banana, and in most cases a mix of these crops, while some only grew a mix of banana, tapioca and vegetables. The crops grown, period of lease and area cultivated by some of the sample JLGs is illustrated in Table 7.

Table 7: Lease Terms and Area cultivated by selected JLGs in 2015-16

JLG	Crops Grown by JLG	Land Type	Period of Lease	Rate in Rs/acre/year or Terms of lease	Total lease land area Cultivated
1	Rice*(double crop)	Wet land	Annual	One-third to landowner	1.5 acres
2	Rice (single crop) (and vegetables)	Wet land	Annual	One-third to landowner	1.2 acre
3	Tapioca & vegetables*	Garden land	12 months	One-fifth to land owner	2.0 acre (in 3 plots)
4	Banana (<i>Nendran</i>) & vegetables	Garden land	18-24 months	1 bunch for land owner out of 6 (it was 1:9 in cases where there was a rent of Rs.5000/acre)	1.5 acre (in 2plots)
5	Pineapple (& vegetables)	Garden land	42 months	Rs. 30,000 /acre/year	3.25 acre (in 3 plots)

Note: All JLGs have a specific name, but here they are represented with numerals to ensure anonymity* Some JLGs growing tapioca and vegetables was giving one-third of crop produce to the land owner. **Source:** Field Study, 2016

Total area leased by a group depended on availability of land and willingness of the JLG to cultivate. In majority (60% or 12 out of 20) of the JLGs, area leased in by groups was on an average between 1-3 acres (1-2 acres in *Manjalloor*, and 2-3 acres in *Avoli*). Most of the JLGs in the sample preferred to lease 2-3 acres of

garden land (where they could grow a mix of vegetables and a main crop such as pineapple, banana or tapioca) as they felt it to be more manageable with respect to labour and cash requirements. But there were few groups that had leased larger areas, growing multiple crops, in which cases, both cash and labour time required was higher. There were also groups that leased less than an acre of land.

Bhagya JLG in *Manjalloor*, had preferred to lease in small plots of land. Over the past three years, they had consecutively leased a paddy field of 0.8 acres, from which they were able to produce enough for meeting their household rice consumption requirement after giving one-third share to the land owner.

Terms of Lease with Land owners

The terms and duration of lease varied according to crop, type of land and negotiation with land owners. For wet lands/paddy fields that was leased by seven JLGs, the duration of lease was generally one year, while term of lease was share of crop produce in case of all. Thus for those JLGs engaged in paddy cultivation, the cash costs incurred for cultivation was lower, as they were able to negotiate wet lands on crop-share agreement from land owners.

Over the years, *Annana JLG* in *Avoli* has cultivated a variety of crops, primarily by leasing in lands belonging to individuals. They have entered into lease agreements (after careful consideration of various aspects, like soil fertility and water availability) with many private landowners for periods ranging from 12-42 months; some landowners have given them their land at a discount to market rates and for successive periods. But not everyone they'd approached were willing. One landowner with five acres of garden land, and many acres of wet land was particularly reluctant towards giving his lands on lease, and had turned down all requests including mediation from the agricultural officer in the area stating, *'It's my land, if I have no problem in leaving my land fallow why should others have a problem?'* The group had successfully bid for a 1.2 acre plot of panchayat land some years back for Rs. 58,000 (total for 42 month period), and was the most profitable lease term they had ever obtained for pineapple. Though they had

hoped to get the land for a second term, they had been outbid⁹⁴ by a rival male group who were opposed to the JLG.

In the case of garden lands the terms of lease was: crop share only, crop share + cash terms or cash terms only. The period of lease in these cases was generally one year, or for the duration of the crop. Among crops, the lease period was longest in case of pineapple with JLGs entering into written contract based agreements with land owners for a period of 36-42 months (enabling harvest of three crops from one time planting). Lease agreement was generally renewed annually (except for pineapple), but most landowners were reluctant to give garden lands to the same JLG for more than one year/ duration of crop. Cash only terms was more prevalent in the case of leasing for pineapple cultivation, though there were two JLGs (out of the 6) who had leased lands for 36 months in 'exchange'⁹⁵ for 'planting and maintenance of rubber saplings' for the landowners.

For the seven JLGs who were cultivating a mix of banana, tapioca and vegetables (yam, cowpea, turmeric and other vegetables) it was cash + crop share terms in case of four while it was crop-share terms only in three JLGs. Even for the same crop, depending on negotiations, the lease terms varied among groups (Table 7). The highest lease rates in cash terms was for pineapple, which was Rs.25,000-30,000/acre/year. For other crops, the most common term of lease was one-third share to the landowner (50:50 in the case of landowners sharing costs of inputs like fertiliser/manure and machinery). Crop and lease details of a sample JLG is given in Table 8. Out of the 7 paddy growing JLGs in the sample, only six were growing paddy during the reference year (2015-16). Out of these, five grew a single crop of paddy, followed by vegetables, one JLG had cultivated two paddy crop followed by vegetables, while one grew only a vegetable crop. But only a single JLG had sold paddy, the rest had milled their paddy into rice and used it for home consumption. It was also observed that the vegetable crop had given the JLGs some cash income through sale of crop. The JLGs had found it easier to negotiate wet lands on lease for longer periods, in comparison to garden lands. This may be largely owing to landowners disinterest in paddy farming, high labour

⁹⁴ Panchayat/government land are auctioned in an open bidding process. The men had bid very high, the JLG felt that to outbid them would be 'foolish' and costly

⁹⁵ In rubber plantations, pineapple is a choice intercrop during its initial years and about 85 per cent of farmers opt for the same in the region during the immature phase of rubber growth (RRII, 2011). Many large and small rubber farmers prefer to lease out for cash or at times for 'planting of seedlings and their maintenance' contract to pineapple farmers

costs and low returns, as well as the law⁹⁶ that prohibit wetlands being left fallow. Except for one JLG, all others who had leased in wet lands found that land owners were willing to renew the lease consecutively, with some groups leasing land from the same land owner for the sixth consecutive year.

Table 8: Crop and Lease Details of a Sample JLG

Crop	Rate in Rs/acre/year or Terms of lease	Total area Cultivated In 2015	Landowners Residing in
*Pineapple **(and vegetables)	30,000	2.75 acre 3.25 acre	1.Kuwait 2.Same village (elderly #)
Tapioca	One-fifth to land owner	0.5 acre	3.Same Village (elderly#)
Banana (<i>Nendran</i>) & vegetables	1 bunch for land owner out of every 7	1.25 acre 1.5 acre (in 2plots)	4.Same Village 5.Same Village (elderly#)

Note: * Pineapple being a capital intensive crop has a longer lease period (farmers incur expenses that approximately amount to Rs.1, 50,000/acre or even more in the first year). Once planted, the same plant could give three crop yields. For the crop, 36-42 months was the standard lease period.

**Vegetables were grown as inter-crop during initial stages of main crop (pineapple, banana) and did not have any terms, though the JLG shared part of the vegetable produce with landowners if they were residing in the village

The landowners had special consideration to this JLG as the association

Note: The above JLG cultivated the largest area among all JLGs in the GP. Source: Field Study, 2016

In cases where the landlords were elderly living in the village, there seemed even a preference to lease to *Kudumbashree* JLGs than others. Few were those who had shifted to non-farm occupations while some others had migrated out of the area. But except for very few land owners in the sample, all others belonged to the marginal farmer category, owning between 0.5 to 2 acres of land. This meant that in cases of JLGs requiring larger area or in cases where a contiguous land parcel consisted of plots belonging to different individuals, multiple agreements have to be made after negotiating with each land owner individually.

⁹⁶ Kerala Conservation of Paddy land and Wetland Act in 2008 which in addition to illegalising conversion of wetlands, also prohibited rice fields being left fallow or using them for other purposes without permission from district/state level monitoring committee.

In *Avoli GP*, a 15 acre contiguous plot of paddy land that was not cultivated over a decade was brought under cultivation by 13 JLGs in 2009. The paddy field was contiguous but highly fragmented in terms of ownership and belonged to 27 different people who owned individual plots within the contiguous parcel of land. This meant that the groups had to draw up lease deeds with each of the 27 owners. It was primarily because of the efforts by Phelo, the president of *Dhana JLG*, over 11 months that the 27 land owners initially agreed to give their land on lease. The *Krishi* officer and the CDS chairperson of the GP had also intervened in cases where landowners were reluctant and had even accompanied Phelo to their houses for negotiations. As the land had been fallow over a decade, the wages for land preparation, up to planting stage was eligible for funds under MGNREGS, and there was also support from the *krishi bhavan* in terms of free seeds and fertilisers. The lease continue even in 2015, with 10 JLGs⁹⁷ including *Dhana JLG* jointly cultivating the second (*makaram*) crop of paddy every year.

Loans availed by Farming Groups

Though the JLGs could avail loans at almost zero rates of interest, it is clear from the administrative data that only 27,381 JLGs or just 46 per cent of JLGs had availed loans from banks⁹⁸ in 2015-16. This means not even half of the registered JLGs had availed loans, but in comparison to the previous years it was higher, as in 2014-15 only 23.6 (of 61,836 JLGs) and in 2013-14 only 17 per cent (of 47,611 of JLGs) had availed bank loans. But the number of JLGs availing loans fell during 2016-17 (in comparison to 2015-16), as out of the 65,601 JLGs, only 26,738 or 40.8 per cent were linked to banks (total credit availed was Rs.331 crore). Whether this indicate a general hesitance by JLGs towards availing loans for meeting cultivation expenses was an issue that was probed. Majority of the sample

⁹⁷ 3 JLGs out of the 13 had quit initially and abandoned their plots after a few weeks, not even completing the weeding operation. After land preparation, germinated seeds are sown directly on 4th or 5th day after the soaking. After seeding the weeding and thinning/replanting of the germinated seedlings have to be done between 19-25 days

⁹⁸ Rs.341crores was availed in total during the year. District Missions across the state had liaised with banks for ensuring JLGs across its blocks could avail loans as per NABARD guidelines applicable to farm loans. Among the branches of nationalized banks in the study area, some banks were more supportive of JLGs, and sanctioned loans faster lending than others

JLGs who had availed loans, had initially taken smaller amounts in the range of Rs.25,000 -30,000 but had increased the loan amount to about Rs.1,00,000 in the subsequent years.

Sneha JLG of Avoli GP, had taken crop loans every year since 2011-12 (when they had first availed a loan of Rs.30, 000). In the following year, they had taken Rs.60, 000 and ever since Rs.1,00,000 loan every year, ensuring repayment before the 365th day (the loan period). Though they were eligible for higher amounts, they found Rs.1,00,000 sufficient as they were growing only garden crops such as banana, tapioca and vegetables. The JLG was not keen on pineapple due to exorbitant lease rents, which meant they had to performe avail larger loans.

It was observed that 70 per cent⁹⁹ of the sample JLGs had loans with nine JLGs having taken loans consecutively during the past three years. With respect to crops cultivated, all JLGs engaged in pineapple cultivation had availed new loans or renewed existing loans during 2015-16 (study reference year), with one JLG having more than Rs.2, 00,000 as its outstanding amount. Another observation was that in the case of these JLGs who were reluctant about availing loans, there was also a distinct preference for lease terms on 'crop share only' basis.

Lakshmi JLG of Avoli GP, was reluctant towards availing loans for cultivation purposes. All members of the JLG were in their late fifties, and were inclined to cultivate crops with lower cost of cultivation, and preferred 'crop share only' lease terms. The group had not undertaken any lease land farming in 2015-16, but they had cultivated vegetables and tapioca during the past three years without availing any loans.

Though loans up to Rs.1, 50,000¹⁰⁰ could be availed at 2 per cent effective interest rates, few JLGs in the sample were averse to taking loans as they were worried

⁹⁹ Significantly higher than 46 per cent recorded for all JLGs in the state

¹⁰⁰ groups could also avail larger loans depending on crop and lease area, but at 7 per cent interest rate as Kudumbashree subsidy was applicable only up to Rs.1,50,000

about repaying it on time (within 365 days), particularly if they suffered crop loss¹⁰¹.

Sonya JLG of Manjalloor GP has been engaged in lease land farming for over ten years. In 2013-14 the JLG had suffered huge losses due to heavy winds damaging their almost mature banana crop. The JLG had then really struggled to repay the loan, borrowing from family and friends.

MGNREGA Support

In many panchayats, paddy fields that had been left fallow over many years had become cultivable after the entry of *Kudumbashree* JLGs into farming. In many such instances of paddy lands lying fallow/uncultivated over long period of time, the field was overgrown with weeds, large shrubs and in some cases even 7-8 feet tall trees. The initial land preparation was therefore very hard and the GP had included many of these works under MGNREGA, which meant wages as per existing notified MGNREGA wage rates would be paid to the workers. Not all JLGs received this support, but the probability of receiving labour support was higher in cases of those engaged in paddy cultivation, and in cases of JLG members belonging to BPL families. For the reference year of the study (2015-16), four JLGs in the sample had received labour support from MGNREGA (towards land preparation).

Dhana JLG of Avoli GP had received MGNREGA support for carrying out land development work of a government school compound. The JLG had cleared the land and planted different crops in one part of the school compound that was overgrown with weeds. Many crops including paddy, banana, tapioca and vegetables were planted which was also to be a learning project for the school children. The entire exercise involved 377 MGNREGA labour days (meaning, in total, 377 days of prevailing MGNREGA wages were provided to all workers who were on the muster roll for this school garden development project. About 38 people, including all four JLG members had worked towards clearing the compound and getting the land ready for planting).

¹⁰¹ The 70th NSS round indicate about 52 per cent of the agricultural households in India are indebted with an outstanding loan of Rs.47, 000 per household.

Thereafter, the JLG members had planted, tended and harvested various crops for which they could have received half of the harvested produce as their share. But the JLG had not taken it and the entire harvest was used for enriching the mid-day meals provided to the children.

Marketing & Sale of Crop Produce

The method of marketing and sales varied with crops. Pineapple was sold to traders/ agents in the *Vazhakkulam* wholesale pineapple market. Few JLGs with large quantity (more than 10-15 tonnes) tied-up with commission agents who paid as per daily market rates (fluctuated and varied according to grades). A small part of the pineapple produce was directly sold to consumers locally, and in these cases the price was in the range of Rs.30-40/kg. In the case of banana and tapioca, the produce was mostly sold through commission agents who paid according to prevailing market rates. In the case of paddy, all JLGs except one had produced quantity that was just sufficient for home consumption, and excess quantity if any was sold to households in the locality. Only a single JLG in the sample had excess produce (in the range of about 1 - 1.5 tonnes) and this was sold to a rice mill, but many times the JLG felt the prices given by the mills was very low.

In the case of vegetables, again it was mostly direct sales. People around the locality were ready to pay a 'premium' price, as locals believed in the quality and purity of the produce and that it was 'organic'. Many JLGs stated that their produce, particularly vegetables received 'the price they quoted'. In fact, JLGs who were growing vegetables said that people residing in the panchayat enquired about harvest days in advance and came to their fields to buy the produce.

Most of the JLGs sold their produce at prevailing market prices, while few sold at about 10-15 per cent premium (as the general understanding was that they could not over charge neighbours). In spite of their produce being 'organic' and was widely recognised in the locality as 'pure and chemical free' and could have been sold at much higher prices in the nearby towns, the JLGs felt they 'could not' or 'should not' price much higher than the local shop prices. It was also observed that among the 20 JLGs in the sample, just two were operating their farming activity as a farming enterprise, meaning they planned and phased harvests, grew many different crops, with the JLG members putting in more than four hours of work regularly, or on a daily basis.

For instance, *Annana JLG* marketed tapioca¹⁰² quite ingeniously which helped them to realise much higher prices. Here, the group adopted phased harvests (by phasing the planting too) and limited it to about 150 kilos every week over an extended harvest period spanning about 6-8 months. They sold the produce directly to consumers in a 2kg pack priced at Rs.30, which helped them to realise on an average about Rs.15/kg in comparison to Rs.7-8/kg that they would otherwise have received had they sold to an agent (who would have bought the entire harvest, and collected from the field). But then the gate-to-gate direct sales was enabled because one member had a two-wheeler. The JLG also had purchased agricultural equipments worth over a lakh of rupees, including pump sets (for irrigation of pineapple) and sprayers, long hoses, gloves and even a weighing machine. Members put in 5-8 hours of work regularly, in various agricultural operations ranging from planting, weeding, watering, manuring, staking, mulching, harvesting and marketing.

The returns earned by those JLGs undertaking direct sales and selling processed form of crop produce (paddy as rice, raw turmeric as turmeric powder, raw tapioca in a dried form and so on) was higher. But, in spite of returns being higher, only few of the JLGs or in case of some crops part of the produce was sold in processed form. For instance in case of turmeric, most JLGs sold it after processing to turmeric powder, but crops such as tapioca and paddy was mostly sold unprocessed though few did sell part of their produce after partial processing. Pineapple, vegetables and banana were all sold unprocessed or in the raw form by all JLGs in the sample, though there was scope to process them, particularly banana into banana chips which would have enabled much higher returns.

Sneha JLG, a five member group in *Avoli GP* in 2015-16 had earned Rs.4, 500/person from sale of processed tapioca. The JLG had leased in 0.5 acre of land on crop share basis (two-third to the JLG). After catering for home consumption, they were able to sell about 346Kg of processed tapioca @ Rs.65/Kg. By selling as processed product, that is 'unakka kappa or vatta kappa' meaning dried tapioca, the JLG was able earn approximately 121 per cent higher returns than selling in

¹⁰² a tuber and popular source of starch in the state

raw form. (Calculated taking into consideration conversion weight from raw to dry, and also accounting for labour and fuel costs. At the time of harvest prevailing prices were Rs.12/kg for fresh produce and Rs.65/kg for dry tapioca. 10 kg of raw produce converted to 4.5 kg of dry tapioca. According to the group, processing cost was Rs.27/kg including labour and fuel cost. Accounting for all costs, group was able to realise Rs.26.55/kg in dried form, while in fresh form they earned Rs.12/kg).

Group Dynamics and Changes in JLGs over Time

It was observed that over the years, few of the JLGs (4 out of the 20 in the sample) had progressed into groups that remained as a collective for administrative purposes alone. In these cases, operationally either there were two sub-groups within a JLG or all the members were separate, that is they were farming individual plots¹⁰³ of jointly leased lands with support from family members. This means, for all administrative requirements, such as registration of the JLG, meetings, application for credit/loan, repayment, insurance, lease negotiations and signing of lease the JLG remained as a group, while for all operations involved in raising the crop, harvesting, post-harvest and sale of crop produce, members acted individually. Some of the major reasons for this progression to sub-groups or individual operations were: (1) members had different crop preferences (2) there was disagreements with respect to sharing labour and cash costs involved in cultivation. It is assumed that in group cultivation, profits are shared, commensurate to inputs (labour, capital) contributed by each member. Profits from farming may be possible only in the event of all group members spending sufficient time regularly towards tending the crops as well as planning for phased planting and harvesting to ensure regular incomes. Unequal labour hours put in by members, or some regularly shirking work lead to conflicts (3) members who were the backbone or binding force of a JLG either fell sick/ died/ dropped out because of age related problems or other issues leading to break-up of the group.

¹⁰³ One sample JLG in Avoli GP had leased 2 acres of land which was divided among the four members. Each farmed their plots separately, but for registration, loans, lease negotiations and application for benefits they were a unified JLG.

In case of few JLGs, for example in *Dhana JLG* (mentioned earlier), a member had dropped out as she had obtained regular employment. The four members of *Dhana JLG in Avoli GP* broke up into two operational units from the second year. This happened as two members were keen on paddy farming while the other two were more inclined to grow banana, tapioca and vegetables.

In the case of *Nalini JLG*, a four member farming group from *Manjalloor GP* the members after a couple of years of joint farming had decided to be operationally separate, meaning for leasing in the land and loan purposes they were a four-member JLG. But for operations, they divided the leased land and loan amount among themselves and individually farmed their share of the land.

Roshan JLG in *Avoli GP* during the initial years had worked as a close knit group of four women. But over time due to disagreements with respect to crops and unequal labour contribution the JLG trifurcated in to three operational units. Activities such as leasing of land and processes for availing the bank loan was completed jointly (these resources was later divided equally). The members cultivated mostly vegetables such as cowpea, yams, turmeric, ginger and tapioca and sold the produce separately, mostly within the neighbourhood¹⁰⁴.

The four members of *lakshmi JLG in Avoli GP* were all above 55 years of age, and had not done any lease farming as a JLG in 2015-16. In the case of *Sneha JLG* from the same GP, the sickness and subsequent passing away of the leader of the group, a woman in her 50s lead to the JLG not undertaking any cultivation since 2015.

Economic Returns to Group Farming

The main objective of this study was to assess economic returns or profits earned by JLGs from collective farming. As mentioned, out of the 20 JLGs in the sample, seven were engaged in paddy dominant farming enterprises, six were growing pineapple and vegetables, while the remaining seven were growing a mix

¹⁰⁴ Even within the neighbourhood, there was good demand for crops grown by the JLG

of crops, banana, tapioca, and vegetables. The economic returns was estimated in terms of annual gross income and net income for the JLG and for individual members. In addition, annual gross and net income per member from unit area (1 acre) was also calculated to compare returns earned by JLGs engaged in cultivating different crops. While net income is estimated for the JLGs to get an idea about returns if imputed costs (particularly labour hours put in by JLG women) are taken into consideration, greater emphasis was on estimating gross income which took into consideration only the cash costs and returns, to reduce approximation and subjectivity in responses.

Out of the 7 JLGs which had leased in wet/paddy lands only a single JLG had raised two crops of paddy, and returns of this JLG is illustrated in Table 9. Economic returns earned by a sample JLG that had taken up pineapple cultivation along with crops such as banana and vegetables was calculated over a three year lease period (as a pineapple plant yields about 3 harvests over a period of three years) is illustrated in Table 10. The economic returns was examined for 2015-16 based on details such as costs of all inputs including labour costs, and revenue earned from crop produce. The sample JLGs illustrated in Table 9 & 10 had made profits only when gross income was considered. When all costs, including imputed labour was taken in to account, or when net income was calculated, the earnings were negative for the JLG that had grown a mix of paddy and vegetables (illustrated in Table 9).

Table -9: Economic Analysis of a JLG Farming Paddy & Vegetables

Cost heads (1 acre of paddy land)	First Paddy Crop	Second Paddy Crop	Vegetable (cowpea)
<i>Costs Incurred</i>			
Cash Expenses incurred by JLG	Rs 17,800	Rs 15,800	Rs 15,900
Less Subsidy (fertilisers)	Rs 2,200	Rs 2,200	Rs 2,000
Cash Costs (A)	Rs 15,600	Rs 13,600	Rs 13,900
Total Cash Costs in year			Rs.43,100
Non-Cash Costs (B) (Imputed labour, Seeds, fertilizers, machine hours, interest)	Rs 25,500	Rs.24,400	Rs.11,500
Total Cost = A + B	*Rs 43,300	Rs 40,200	Rs 27,400
Total Costs in year			Rs.110,900

<i>Revenue Earned</i>			
Quantity of Harvest	2363 Kg	2205Kg	1050Kg
Share of JLG (approx.2/3 rd harvest)	1575 Kg	**1470 Kg	750Kg
(1/3 rd to the landowner)			
#Own consumption	400 Kg	400 Kg	100 Kg
Cash Earnings from sale of paddy, vegetables	Rs. 22,325 1175 Kg paddy sold @19/kg)	Rs.19,760 (520 kg of rice sold Rs.38/kg)	Rs.32,200 (@46/kg) (Rs-40-80/kg)
Earnings from Hay	-	10,000	-
Cash Earnings (C)	22,325	29,760	32,200
Non-Cash Earnings (D) (own consumption)	7,600	7,600	4,600
Total Cash Earnings in the Year			Rs.84,285
Non-cash earnings(value of own consumption)		Rs.19,800	
Gross Income to JLG = C - A = Rs. 84,285 - Rs.43,100 = Rs.41,185 (cash costs and revenues is considered)			
As it is a 4 member Joint Liability Group		Gross Income /member/year = Rs.10, 296	
Net Income to JLG (all costs, both cash and non-cash & all earnings is considered)			
Total Earnings - Total Costs = (C+D) - (A+B) = (Rs.84,285 + Rs.19,800) - 110,900 = - 6,815 Net Income /member/year = - Rs.1,721			

Note: First Paddy Crop (chingam harvest in Aug-September); Second Paddy Crop (makaram harvest in mid-February); vegetables - mainly cowpea (harvest synchronised with vishu, around mid-April). *The components of the total cost for the first crop is given in Table 2 in the Appendix ** The JLG had stored the paddy in their houses and sold it after processing to rice at Rs.38/kg. Processing paddy to parboiled rice involves both cost and time, and quantity reduces to a little more than half or by 50%; inclusive of these costs. I consider value of 100kg of paddy equivalent to 50kg of rice. #value of own consumption of grains is computed at the price of paddy sold in the first season, that is at Rs.19/kg. Valuing at price of rice will also give approximately similar amount; for vegetables is determined at the same rate as average market price for the produce

Source: Field Survey, 2016

Table -10: Economic Analysis of a JLG Farming Pineapple & other crops

Cost heads (1 acre for 3 years)	Pineapple (3 harvests)	Banana	Vegetable (cowpea, okra & others)
<i>Costs Incurred</i>			
Cash Expenses incurred by JLG on all inputs and on land (for 3 years) Lease rent for 3 years (govt. Land)	Rs 2,20,000 Rs 58,000	Rs 5,800	Rs 18,000
Less Subsidy (fertilisers)	Rs 3,000	Rs 500	
Cash Costs (A)	Rs. 2,75,000	Rs 5,300	Rs 18,000
Total Cash Costs for all crops over 3 years ¹⁰⁵ =			
Rs.2,98,300			
Non-Cash Costs (B) (Imputed labour, planting material)	Rs 94,500 (@ Rs.350/person/ day * 270)	Rs.3,500 (Rs.350/person day * 10)	Rs.14,000 (Rs.350/person day * 40)
Total Cost = A + B	* Rs 3,69,500	Rs 8,800	Rs 32,000
Total Costs over 3 years = Rs.410,300			
<i>Revenue Earned</i>			
Quantity of Harvest	32,000 Kg	2200Kg	4000Kg
Share of JLG (full harvest)			
#Own consumption	300 Kg	200Kg	500Kg
Cash Earnings from sale of pineapple, banana & vegetables (average price considered)	Rs. 480,000 @15/kg)	Rs.39,600 (Rs.18/kg)	Rs.142,000 (@40/kg) (Rs-20-60/kg)
Earnings from sale of pineapple slips/suckers (planting material)	Rs.40,000		
Cash Earnings (C)	Rs.5,20,000	Rs.39,600	Rs.140,000
Non-Cash Earnings (D) (own consumption)	Rs. 4,500	Rs.3,600	Rs.20,000
Total Cash Earnings = Rs.6,99,600			
Non-cash earnings(value of own consumption) = Rs.28,100			
Gross Income earned by JLG (in 3 years) = C - A = Rs.6,99,600 - Rs.2,98,300 = Rs.4,01,300 Gross income of JLG per year = Rs.1,33,767 (cash costs and revenues is considered)			
Gross Income /member/year = Rs.33, 442			
Net Income /member/year (all costs and earnings is considered) Total Earnings - Total Costs = (C+D) - (A+B) = (Rs. 6,99,600 + Rs.28,100) - 410,300 = Rs.7,27,700 - 4,10,300 = 3,17,400/ 12 = Rs.26,450 Income /member/year taking in to account all costs & earnings = Rs.26,450			

Note: Calculated for three years or period of lease. As it was a lease of government land which the JLG had won in an open bidding process, the lease rate is only about 65 per cent of market rates

Source: Field Survey, 2016

¹⁰⁵ Over the 3 year lease period along with the main crop of pineapple, the JLG has cultivated banana along the border of the plot. During the initial months they grown cowpea and other vegetables for home consumption and also sold some of the produce

Table -11: Area, Produce sold & Income earned by some JLGs

JLG	Area (Own + Lease) in acre	No. of members in OP JLG	Crop Produce Sold by the JLG	Approx. gross income /JLG/annum	Approx. gross income (Rs)/member/ annum/ (month)	Approx. gross income (Rs) /member / annum from 1 acre)
1	(0 + 8.5)	4	Banana, Pineapple, Tapioca, Vegetables	334,417	83,604 (6967)	9,836
2	(0 + 2.7)	2	Paddy, Vegetables	82,370	41,185 (3432)	15,254
3	(0 + 1.5)	2	Banana, Vegetables	83,588	41,794 (3483)	27,862
4	(1 + 2)	1+1+2	Tapioca, Vegetables	NA	18,000 (1500)	6,000
5	(0 + 0.5)	5	Tapioca	22,500	4,500 (375)	9,000
6	(0 + 3)	5	Pineapple	155,000	31,000 (2583)	10,333
7	(0.5 + 1.5)	4	Pineapple, Vegetables	95,600	23,900 (1992)	11,950
8	(0 + 0.5)	4	Banana, Vegetables	- 9,600	- 2,400 (-200)	- 4,800

Note: Column II is the area currently under lease. In case of JLG 1, the area was 8.5 acres, as they were almost completing lease of a 2 acre plot but had also taken a new lease for 3.5 acres on which they were yet to plant pineapple. All JLGs had 4-5 members, as a minimum of 4 members were required for meeting eligibility requirement, but overtime, in few cases, operationally the JLG broke into smaller units with 1-3 members in each sub group, the number of members in the OP (operational) JLG is given in the third column. As elaborated in the methodology, in computing gross income only paid out costs are deducted from revenue earned through crop & crop product sales.

Source: Field Survey, 2016

The above JLGs were among those that had leased in larger area in comparison to average JLGs. The income earned by some of the sample JLGs and individual members within each JLG during the reference year (2015-16) is given in Table 11. For comparison, returns have been worked out for one acre, which indicate paddy-vegetable cultivation to yield lower economic returns in comparison to banana-vegetable cultivation (JLG 2 & JLG 3 in Table 11). In the case of those engaged in pineapple cultivation, the steep lease rates took away a huge part of the income earned, and in the event of low prices coinciding with harvest, there

were chances of the JLG incurring losses. Few JLGs in the sample were also cultivating land (area ranged from 50 cents to 2 acres) owned by one or more members in the group in addition to leased in lands. Here members considered it more advantageous as lease rents were lower, or even without any rent (as was the case of JLG 7).

Out of the 20 JLGs in the sample, except for one which had suffered loss of crop (banana due to wind damage), all had positive earnings during the reference year of the study (2015-16). The variability and unpredictability of crop earnings was also observed in case of banana crop, with one JLG earning Rs.27, 862 from an acre while another made a loss of Rs.4, 800. It was also observed that only a single paddy growing group (JLG 2 in Table 11) had sold their produce to earn cash incomes, while for the rest, paddy cultivation only ensured rice for home consumption. In general, for all JLGs that had leased in wetlands, the possibility to raise one or two vegetable crop after the paddy harvest was a major attraction as it provided an opportunity to earn some cash income (through vegetable sales). In general, it was observed that JLGs comprising of one or two members who were previously or even currently active agricultural wage workers were more inclined to lease wet lands because of its easy availability on crop share basis.

Individual earnings of members depended on crops and area cultivated by the operational group. Some of the JLGs in the sample had downsized to two member operational groups (JLG 2, 3 and 4) though on paper they remained as the original 4/5 member full sized JLG (discussed under group dynamics in the previous section). It was also observed that between JLG 4 & 5, there was substantial difference with respect to individual member earnings, with members in JLG 4 earning Rs.6, 000/annum from cultivation of tapioca and vegetables (on 2 acres) while members in JLG 5 earned Rs.9, 000/annum from tapioca cultivation alone (on 0.5 acre). While there were many dissimilarities between these JLGs (as illustrated in Table 11), the difference in earnings primarily arose as JLG 5 sold bulk of its produce in processed form (as dried tapioca) which had fetched them higher prices.

As indicated in Table 11, the gross annual income earned by individual members indicated high variability and ranged from – Rs.2, 400 to Rs.83, 604 (earnings of members of *Annana* JLG that had leased in the highest area among all sample JLGs). Working out individual income earned on monthly basis, the average earnings of sample JLGs cultivating about 1.5-3 acres was in the range of Rs.2,000 to Rs.3,500 (for the group that cultivated the highest area, of over 8

acres, it was close to Rs.7,000/month). Here it is important to note that cash earnings from farming is comparatively lower than that from regular employment, which may be the reason for some members dropping out upon obtaining regular employment (as was the case in two of the JLGs in the sample).

Issues and Challenges

The section discusses issues and challenges faced by the JLGs. As brought out in previous sections, certain JLGs, and particularly those growing pineapple or a mix of vegetable and other crops were able to earn better returns in comparison to others.

Availability of suitable lands at reasonable lease terms was of great significance to all JLGs and specifically for those in pineapple cultivation, both on cash terms and on 'maintenance contracts' (in cases of pineapple being planted as intercrop in new rubber plantations)¹⁰⁶. Many JLGs stated that land owners preferred them over male groups/contractors for the simple fact that they 'trusted' the *Kudumbashree* women to take care of rubber seedlings better, and some landlords were even willing to reduce rentals to 'reliable groups'.

A major limitation cited by some of the groups was *the short lease period and high lease rates*. But in the case of pineapple, despite high lease rates of about Rs.30,000/acre/annum groups keen on pineapple cultivation preferred to lease in suitable lands. There was huge costs and hardships involved in converting a fallow land cultivable, whether it was wet (*padam*) or garden (*kara*) lands. Wet lands were leased out on yearly contracts, normally on a crop-share basis while garden lands were leased out between 12-42 months depending on crops cultivated and on the basis of cash, or mixed terms. The period was too short and many felt that the land owners were 'wary' of letting out to the same groups and therefore on the pretext of 'self/own' cultivation generally took back the land after a couple of seasons. The 'wariness' resulted from historical influences, particularly the KLRAA 1969 which had conferred 'ownership rights' to cultivating tenants. Only in cases where groups had developed 'strong personal connections' with land owners did

¹⁰⁶ Pineapple is extensively grown in Muvattupuzha area over the last three decades and it is a choice intercrop for natural rubber. About 85 per cent of farmers opt for the same in the region during the immature phase of rubber growth making available the land on lease terms (either cash/maintenance contract for three years) to small and marginal farmers wanting to grow pineapple crop. The JLG plant the pineapple as an intercrop in the spaces between rubber seedlings

they manage continuity in leasing the same piece of land for two or more¹⁰⁷ years. The short lease period of about a year was unfair as JLGs had to put in many weeks, and sometimes, months of 'back-breaking' labour for the initial land preparation, particularly if it was one that had been left uncultivated over years.

While overall returns was higher for those JLGs selling the produce after some form of processing, *mostly all produce was sold in unprocessed or raw form* except for turmeric which was sold by all sample JLGs as turmeric powder. But JLGs mostly sold all other crops, tapioca, banana, vegetables and paddy, as raw produce owing to limitation of space to store and process the produce as well as the inability to put in the required labour hours by members.

Many of the JLGs cited co-operation and trust among members, health of members, inputs such as seeds, water, manure and credit at the right time as critical for sustainability of the farming activity. *Number of JLGs were 'aging' or members were 'older'*, in the sense that when they began farming as collectives, most of the members were in the age group of 40 – 50 years, but now most groups had at least 1 or 2 members who were in their fifties. Many members felt it was important that younger women joined JLGs.

Jona JLG of Manjalloor GP was actively involved in lease land farming for about 3 years. But during 2015-16, though they had leased a paddy field (on crop share basis) they were unable to grow paddy or vegetables as one of the key members in the farming group had fallen ill.

Assets to meet or repay short term credit needs was crucial for those JLGs with higher loan amounts. It was observed that many JLG members who had gold had pawned it to raise sudden requirements for money. This arose when repayment was due but the crop was not yet ready for harvest, or when there has been some crop losses. Gold was willingly pawned by members in some of the sample JLGs.

For instance, in *Annana JLG*, personal gold ornaments was pawned twice during the past three years by one member for ensuring timely repayment of group (JLG) loan. In this particular four member JLG, co-operation and trust levels was extremely high, and the 'better-off'

¹⁰⁷ For pineapple the standard lease period was 36-42 months, for others 11 months to 1 crop season

member had no hesitation to pawn her gold jewellery to meet the immediate cash requirement of the group.

Natural disaster related losses are common in agriculture. These could involve pest and disease attacks, off season rains and flooding, wind related damages and so on. *Annana JLG* had experienced flooding once when their entire pineapple crop had remained submerged for more 36 hours (because of the severity of monsoons in 2013). The group had managed to save the crop only by sheer grit and hard work by pumping out water and thereafter removing the mud that was stuck within the leaf whorls (of 6000 plants, by individually spraying each node with water). Similarly, *Dhana JLG* realised just Rs.5/kg (instead of Rs.12-15/kg) for their tapioca produce as flooding had ruined the quality. In the same year, they had also lost most of their paddy crop due to submergence, harvesting just about 200kg/acre (normal yields are about 1500kg/acre).

Many of the sample JLGs had suffered both minor and major pest and disease attack in the case of crops and wind related losses in banana. The groups were financially (and otherwise) devastated if they lost the crop (due to natural causes like pest attack, flooding due to untimely rains) the loss being higher if it occurred during the final stages/ few weeks before harvest. Few JLGs had also experienced theft, particularly in case of banana crop, wherein they had to solicit help from family members for countering/preventing the problem. In case of groups that had suffered crop losses, the women had to struggle to pay back the loans, in spite of interest subsidy and support provided by the government.

Price Fluctuations and Price Fall at time of Harvest Marketable surplus for the JLGs varied depending on the area cultivated, yield and crops selected for cultivation (rice, banana, pineapple or vegetables). While earlier many JLG women had farmed small plots of own and leased lands for household subsistence, as members of JLGs they were farming larger areas of leased lands, investing both their labour and purchased inputs. They had made cash payments towards lease rents, manures and fertilizers, planting materials, hiring and even purchase of agricultural implements utilising JLG loans that had to be repaid within a year. If the prices crashed at the time of harvest or the crops were destroyed, the members had to raise money either with the help of family members or through other means to pay off loans.

In the case of paddy, most JLGs had only grown a single crop on limited land area¹⁰⁸. The crop produce was generally shared among group members for household consumption and in the event of surplus, it was sold to neighbours. Only when a JLG cultivated more than 2-3 acres and had sizable quantity for sale were there problems related to price fall.

Dhana JLG had not sold paddy grains from the previous harvest as the price the regular mill offered was only Rs.15/kg; The JLG had sold some of the grains to neighbours at Rs.19/kg but still had more than 20 quintals stored, and was worried about spoilage and impending arrival of monsoons. The JLG felt that if there was a rice mill in the locality owned by the CDS (and shared by blocks in the panchayat) the groups would be able sell processed paddy (rice) that would help to earn better prices.

Price fluctuations, particularly a steep fall at the time of harvest result in losses for a farmer who is in to commercial cultivation on expensive leased in land. The price of pineapple had fluctuated between Rs.10-30/kg in 2015-16; The JLGs reported having received a price of Rs.21 for grade A, Rs.11 for grade B, Rs.6 for grade C and about Rs.3 for grade D. Some of the sample JLGs reported losses due to low price realisation (at the time of their harvest market prices had crashed), and were planning to quit 'high-risk' pineapple cultivation all together.

Thus inherent risks in farming related to both production and price was borne by group members, and state support in case of crop failure was inadequate. In the case of crop failure, the support offered was very little, and the group had to raise the money to repay the loan on their own. Few JLGs had crop insurance cover but felt that the present levels of insurance money disbursed in the case of crop failure was not worthwhile as it did not even cover the land preparation costs. There were few instances of JLGs falling into debt because of their inability to repay the loans, and group members pawning gold ornaments to make timely repayments. In the case of multiple crop-failures, there was a possibility of losing gold or other assets all together.

Inability to command higher prices Despite the fact that bulk of the produce grown by sample JLGs were organic (grown without application of inorganic

¹⁰⁸ Most JLGs grew paddy on just about an acre of land

fertilisers, pesticides and chemicals), they were seldom able to earn premium prices, as it was sold mostly within the locality at prevailing market prices, or in few cases at about 10-15 per cent premium (as the general understanding was that they could not over charge neighbours). While they could have sold it at much higher prices in the nearby towns the members did not want to take the pains to transport the produce as it entailed costs in terms of transportation as well time. If JLGs in every panchayat or few panchayats was federated in to a marketing collective and jointly undertook sales activities the costs and labour requirement for accessing urban markets could have been shared, but no efforts was taken towards such collectivisation.

Incorrect Assessment and Wrong Choice of Land Some of the JLGs had wrongly assessed the quality of soil, including its depth and character, as prior to their leasing the land had been left fallow over many years, and thus was fully overgrown with weeds and plants at the time of negotiating lease terms. *Annana JLG* had suffered from one such mistake and had realised the problem only after the lease contract was signed and the NRI land owner had left the country. In this case, the group had to incur almost three times more expenses than normal for land preparation alone, and also irrigate more frequently as soil depth was inadequate due to rocky strata below. Quality of leased lands as well as availability of water for irrigation was a grave problem and groups tried their best to ensure that there was some assured water source available on the land or nearby.

Inability to claim incentives meant for cultivator To claim some of the incentives from the agriculture department, the JLG had to present documents related to tax receipts paid on the land. In the case of one JLG in the sample, the landowner had insisted on claiming the incentives¹⁰⁹ (from agricultural department

¹⁰⁹ Some incentives are provided by the agriculture department for cultivation. States such as Telengana from 2018 had committed Rs.4000/acre/season as support for working capital needs to farmers (close to 72 lakh farmers as identified by the revenue department). But tenant farmers on lease lands cannot claim this subsidy, as the beneficiary is identified based on 'Land Ownership Passbooks'. These passbooks will have the farmer's name, land survey number, holding size in acres, Aadhaar ID, mobile phone and other relevant details. It would serve as proof of land ownership, making the farmer eligible for any such subsidy/transfer scheme. The survey conducted by the revenue department indicate that out of the 72 lakh farmers, 98% own less than 10 acres, about 1.75% between 10 and 25 acres, and only the rest 0.25% more than 25 acres. But in spite of this it will not help the poorest of cultivators, as the scheme will bypass tenants who cultivate lands which are under various informal lease arrangements. They comprise 40% of the state's farmers and are the ones usually caught in the vicious cycle of debt. A senior official in the state's agriculture department argues they had little choice but to leave them out. He states 'it's a conscious decision we have taken to avoid litigation. Tenant farmers mostly cultivate based on informal lease arrangements, and they have no proof of cultivating such

meant for supporting cultivation expenses) as he was the 'owner' and had paid the tax. In this case, the JLG had felt it was unjust and had not renewed the lease for a second time. But cases such as this were few with no other JLG reporting such problems, may be owing to the presence of *kudumbashree* support and network in the locality. It is important to ensure all incentives towards supporting farming expenses reach the actual cultivator, who could be either the landowner or the tenant. Given the highly unequal land ownership structures as well as widespread prevalence of unofficial tenancy in the country, the government should address this issue and formulate suitable policies. Towards this it is important that land leasing is made legal and records related to both land ownership and land leasing are maintained and updated regularly.

VI. Summary & Conclusion

The specific measures undertaken by *Kudumbashree* towards supporting promotion of joint cultivation on leased lands by women's collectives also addressed other issues, from utilisation of productive land resources to enhancing food security of households and even the state. The qualitative and quantitative data gathered in this study from both primary and secondary data sources indicate that availability of locally grown food crops¹¹⁰ had improved and many of the JLG women were able to ensure sufficient supply of pesticide-free food grains and vegetables for home consumption. But as the State promotes and facilitates women collectives in agriculture, it is also important to bear in mind agrarian distress in the country which has witnessed in recent years, increasing farmer agitations over falling prices and rising indebtedness¹¹¹. As they turn from agricultural workers and housewives to farm producers women have to also bear risks inherent in agricultural production, that of crop loss and price fluctuations.

lands. The actual landowners may well go to court if their tenants are treated as farmers and entitled to the subsidy' (<https://www.thebetterindia.com/131259/telangana-farmers-rs-8000-subsidy/>)

¹¹⁰ Paddy, vegetables, banana and tuber crops such as tapioca and yams (Table 4)

¹¹¹ In one year crop failure (production risks) may happen resulting in inability to pay back the crop loan; To repay the debt, the farmer may sow a larger area (leasing in land in addition to own, investing even higher capital) the next season/year. If nature is kind and there is a good harvest, the debt may be paid off. But there is no guarantee as in the year of a bumper harvest, the probability of steep fall in market price (price risk) is high; the farmer therefore may not be able to repay the loan taken in both the years; this lead to debt-traps. Bankruptcy and rural indebtedness was cited as the main cause behind farmer suicides in 2014(GOI, 2015b). Out of the 5,650 farmers (of which, 472 were female farmers) who'd committed suicide in 2014, 4446 owned land while 701 had leased lands. Small and marginal farmers with less than 2 hectare of land accounted for 72.4 per cent of the 5,650 farmers.

The study primarily looked at economic returns earned by women's farming collectives under the *kudumbashree* programme, and identified challenges faced by them. Setting the historical context and background beginning with distribution of land and land holding size in the country and in the state, enactment of land reforms, the paper discussed in the context of the state, utilisation of land for agriculture, cropping patterns and issue of land leasing following tenancy reforms after KLRAA 1969. It also elaborated upon how support from *Kudumbashree* to rural women interested in farming opened up totally new livelihood options particularly for those landless engaged as agricultural workers and also to others with marginal landholdings. Further, factors that had motivated women to enter in to lease land farming, crops cultivated, lease terms agreed upon with landowners, loans availed, marketing and sale of crop produce, as well as group dynamics and changes in the JLG over time was discussed.

Each JLG had entered into lease agreement following individual negotiations, and therefore lease terms varied with no definite guidelines or criteria. Short-lease period that land owners insisted upon was cited as a major issue by many groups engaged in cultivating garden lands. Lease agreement was generally renewed annually (except for pineapple), as most landowners were reluctant to give garden lands to the same JLG for more than one year/ duration of crop. It was not surprising to note that there was no such hesitation in case of wet lands, with many landowners rather being interested to lease out their paddy fields to the same JLG even for the fifth and sixth consecutive year. This may owe to the difference in value of wet and garden lands, the prohibition with respect to conversion of wet lands, and landowners interest in getting a share of 'pesticide-free' paddy for their own home consumption without incurring wage payments. Recognising short lease periods as a major limitation *kudumbashree* has now formalised a leasing scheme with gram panchayat concurrence¹¹², under which if the fallow land of a landowner has been brought into cultivation using MGNREGS funds, the period of lease has to be for a minimum period of three years. Imposing length of minimum lease period as a condition in normal circumstances may have led to greater wariness among land owners towards giving their lands on lease. But with panchayat and *Kudumbashree* functionaries being signatories to the lease contracts there is sanctity and trust from both sides. The state has to work towards

¹¹² Agarwal and Sharma (2012) had advocated for a 'land bank' concept with the local government institutions working as an intermediary in the leasing process.

establishing mechanisms to ensure stable and long term group based user rights through policy measures to legalise and institutionalise lease land farming, and could even go a step further, by imposing suitable legal measures or enacting a law¹¹³ against leaving productive agricultural lands fallow and also institutionalise land leasing conditions (terms of lease specifying period and rates).

There were few differences between groups opting for leasing wet lands/paddy fields and garden lands, with the former mostly comprising of women (some were also agricultural workers) from poor and lower income households. They were primarily motivated to lease wet lands for paddy and vegetable cultivation because of the perception of attractive lease terms (almost exclusively on crop share basis) and state support (including wage support from MGNREGS). As small and large landowners of paddy fields had abandoned cultivation altogether (because of unviability of paddy cultivation owing to rising input costs as elaborated upon in Section II) these women were now venturing into paddy farming as cultivators because of the enabling conditions created by the State. But of the seven JLGs that had grown paddy, only a single JLG cultivated larger area while the remaining had farmed limited area keeping in mind home consumption alone. These JLGs felt paddy prices offered by the market was very less and not commensurate with difficulties involved in its cultivation. It was also observed that for these JLGs, it was the vegetable crop (mostly sown after December –January) that had given cash income through crop sales. On the other hand, JLGs opting for pineapple/banana/other crops on garden lands were composed of women from poor, lower and middle income households. Some of these JLGs were earning comparatively better income particularly if they were growing a mix of crops and cultivating larger areas, and for few the net incomes were positive (Table 10) provided the group had managed to lease lands at reasonable terms.

The economic returns was estimated in terms of annual gross income and net income for the group and for individual members. While net income was estimated to get an idea about returns if imputed costs (particularly labour hours put in by JLG women) was taken into consideration, emphasis was on estimating gross income, which took into consideration only cash costs and returns, to reduce errors of approximation and subjectivity. The gross income earned by all JLGs in the sample was positive (except for one that had suffered crop damage), though the earnings varied depending on crops and area cultivated. While the sample was

¹¹³ Agriculture is a state subject and therefore state has the power to formulate state specific laws

too small to concretely conclude that certain crops gave better returns over others, it was quite clear that earnings would be negative for many JLGs particularly for those growing paddy (as illustrated in Table 9), if labour hours invested by members was taken into consideration in estimating total costs. Also among comparable groups, earnings were higher for JLGs that were growing a mix of banana and vegetables than paddy and vegetables, and for JLGs who sold part of the produce in processed form. While returns was higher for those JLGs selling crop produce in processed form over raw, mostly all produce was sold in unprocessed form due to limited space for storage and processing as well as groups' inability and willingness of all members to put in required labour hours. But to improve incomes, there need to be a movement up the value chain, and JLGs should strive to sell bulk of their crop produce in semi-processed or even fully processed form. This to an extent would also insulate farm incomes from price fluctuations, but will need higher state support in terms of investment towards setting up local level agro processing units.

Working out individual income earned on monthly basis, the average individual earnings of JLGs cultivating about 1.5-3 acres was found to be in the range of Rs.2, 000 to Rs.3, 500. The study had also noted that the JLGs did not really do well in marketing their produce, particularly the organic vegetables and paddy which would have fetched premium price in urban localities. Bulk of it was sold within the locality at prevailing market prices or at slight premium as groups could not bear the costs of accessing urban markets on a regular basis. Improved earnings can accrue for organically farmed crop produce (grains, fruit or vegetables) only if they are sold in urban markets for which JLGs in every panchayat or even blocks may be federated. The federations could jointly undertake transportation and marketing of produce in urban areas either through fixed or mobile sales outlets in specific locations.

Without such measures cash earnings from farming would remain comparatively way below other available employment options¹¹⁴ an important causal reason for members dropping out. It was also noted that majority of JLG women were older women and a common concern was that group members were

¹¹⁴ For women willing to work in low level employment opportunities such as Part time domestic work, the average monthly earnings were approximately around Rs.5, 000 in 2015-16, while full time care work ensured earnings of about Rs.12,000. Young girls working as sales girls in the Moovattupuzha town were earning Rs.8,000/month

aging and younger women in the locality were not keen to join in, primarily owing to low earnings, drudgery and risks involved.

To conclude, it will not be incorrect to state that the institutionalisation of JLG farming has contributed to the transformation of identity of rural women, from just being 'agricultural workers' and 'helpers on family farms' to food producers. As members of collectives there has been a change and greater recognition as farmers, with some being recognised as 'master farmers', and their farms selected as 'model farms'. In addition, there has been empowerment with respect to formal farming knowledge through trainings and exposure visits, access to inputs and channels of access like the *krishi bhavans* for seeds, fertilisers, and other inputs, and access to credit from formal sources, including nationalised banks. The paper advocate for institutionalisation of stable lease land rights, processing and marketing support which could further improve farming incomes of women organised in to producer collectives in agriculture.

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The Case of Thennala Gram Panchayat

Lease land farming in Thennala GP of Malappuram district received a new thrust in group farming in 2011 after Yasmin Aribra became its chairperson. She along with 10 other CDS members started off collective farming by leasing in 13 acres of wet land. Few members dropped off initially but the group was able to demonstrate that farming could be a winning proposition to other women in the panchayat. Today there are about 106 JLGs farming 670 acres of paddy lands, in addition to vegetable and banana cultivation. Most of the groups grow paddy, tapioca, banana and vegetables. Yasmin, a member of 'thanima JLG' along with Nafeesu, Maimuna and Sulaikha has been cultivating paddy and vegetables on about 13 acres of lease lands over the last 5 years. Sale of vegetables alone had given the group net earnings of Rs.1, 35,000(after deducting cash expenses), while paddy cultivation gave them net earnings of Rs. 26,000/acre/year.

A new initiative to link the women JLGs to the market was through the formation of *Thennala* producer company. The Company in 2016 had more than 500 women farmers as members, and had procured 562 tons of paddy from them at Rs.16/kg. The raw paddy was further processed to rice and other value added products. The rice products sold by the company were medicinal 'njavara' rice (Rs.100/kg), unpolished rice with bran (Rs.70/kg), rice, flattened rice, rice powder and broken rice (Rs.50/kg). As members of the producer company, each member was expected to get a share of the profit that the company may eventually make.

Reference: *Keralathinte Kudumbashree* published by Kudumbashree, Government of Kerala (2017)

Table 1: Area under Paddy in Kerala and Production - Consumption Gap in the State

	2011-12	2012-13	2013-14
Area under Paddy ('000 Ha)	208.2	197.3	199.6
Production ('000 tonnes)	569	508.3	499.7
Consumption ('000 tonnes)	3009	3038	3067
Production- Consumption Gap ('000 tonnes)	2440	2529.7	2567.3

Note: Consumption of rice is based on per capita consumption during 2009-10 as per consumer expenditure survey of NSSO and mid-year population as projected by Office of Registrar General of India (RGI) which conducts decennial Population Census **Source: India stat Database**

Table -2: Paddy and vegetable crop by a JLG in the sample on 1 acre wet land

Cost Heads Operation-wise	Quantity	Unit cost	Total cost (in rupees)
First Paddy Crop (Chingam)			
1. Labour (land preparation)	20 man days	Rs.600/day	# (I) 12000
2. Machine	4 hours	Rs.800/hr	3200
3. Seeds (own)	30 kg	Rs.20/kg	(I) 800
4. Weed-killers, pesticides	3 application		1600
5. Labour for application of weed killer, pesticide	4 man days	Rs.600/day	1800
6. Sprayer hire charges	4	Rs.50/unit	200
7. Two weeding of 3 days (3 JLG women & 2 on wage)	30	Rs.300	(I) 5400
	women days	(for 6 hours)	3600
8. Cost of Fertilizers, manures	2 doses	Rs.2000/dose	4000* (2200 subsidy)
9. Labour for fertilizer application	1 man day (as 2 half day)	Rs.400/half day	(I) 800
10. Manual Harvesting and threshing	6 man days	Rs.500/day	3000
	12 man days	Rs.350/day	(I) 4200
11. Transportation charges-vehicle & labour (field to home and then to mill)			400
			(I) 900
12. Winnowing & storing	4 man days	Rs.350/day	(I) 1400
Total Cost			43,300

Note: First Paddy Crop (*chingam* harvest in Aug-September); Second Paddy Crop (*makaram* harvest in Mid February); vegetables - mainly cowpea (harvest synchronised with Vishu festival, around mid-April). # for all imputed costs, including own labour, own seeds. I do not include own capital as the JLG had received Rs.1,00,000 loan for one year which was paid back within 365 days and the net interest paid was Rs.2,000 on the loan which is considered under cash costs for overall economic analysis. **Source:** Field Study, 2016

Table -3: JLGs across wards in the Selected GPs in 2015-16

No. of Wards	No of JLG in Manjalloor	Name of the JLGs	No. of JLG in Avoli	Name of the JLGs
1	0		6	Suparma, Meghasandra, Rose, Chaithram, Sreelakshmi, Athira
2	5	Anashwara, Anjali, Prateeksha, Ammu, Ushas	2	Aiswarya, Eeswari
3	5	Vijay, Aiswarya, Joby, Gurudeva, Kripa	5	Swapna, Rehana, Amma, Nausia, Sushama
4	2	Harita, Gladys	4	Bismi, Arya, Karuna, Kavyanjali
5	4	Jayalakshmi, Theertham, Surya, Nandanam	17	Pournami, Mangalam, Lakshmi, Jeeva, Harita, Kerashri, Shivapriya, Polima, Kingini, Anashwaram, Priyam, Deepm, Ushas, Daya, Ragam, Kripa, Matha
6	1	Harita	2	Golden Valley, Arunima
7	0		8	Janani, Udayam, Srilakshmi, Mitra, Nanma, Purnima, Aradhana, Manasa
8	1	Mulla	9	Mariyan, Prarthana, Strawberry, Carmel, Kirtana, Aradhana, Green garden, Rose garden, Lily
9	2	Harita, Arati	13	Ragam, Arunima, Ashish, Minnoo, Rose, Lovely, Jyoti, Karunya, Chandra, Vinayak, Akshaya, Akshara, Melam
10	5	Aparna, Harita, Rohini, Chittira, Shivaganga	6	Pratyasa, Suprabhatam, Alphonsa, Bhagya, Krishna, Pavana
11	1	Jasmine	2	Appoose, Vijayam
12	4	Rose, Sneha, Daliya, Snehadeepam	6	Apple, Vijayashri, Thanima, Snehagatha, Pavithram, Dhanashri
13	5	Abhi, Dhanya, Kunjatta, Harita, Jishma	0	
14	-		1	Mariyan
Total	35		81	

Note: In Kerala, every panchayat is divided into wards. The number of neighbourhood groups or NHG (or SHG) in Manjalloor panchayat was 113, while in Avoli panchayat there were 131 NHGs

Source: Manjalloor & Avoli CDS office, *Kudumbashree*