Gender and The Plantation Sector: Explorations into the World of Women’s Work in Coffee Plantations of Kodagu District

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GENDER AND THE PLANTATION SECTOR:
EXPLORATIONS INTO THE WORLD OF WOMEN’S WORK
IN COFFEE PLANTATIONS OF KODAGU DISTRICT

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ABSTRACT

This paper attempts to analyse the dynamics of the work of women coffee growers in Kodagu district of Karnataka. The study focuses on the circumstances in which women begin to manage plantations, especially among small holders, the increasing instances of them doing so and the implications on farm productivity of the constraints on their access to productivity enhancing tools and extension services. In the absence of formal initiation into work processes, the analysis shows that women greatly rely on informal learning and support mechanisms to gain knowledge and skills of plantation management. Their presence in marketing is minimal. The work processes involving women’s labour (many of these women are de facto growers as well) involve considerable drudgery and still rely on traditional hand tools - sickles and hoes. The ergonomics of their work needs to be understood in order to develop the means to balance the need for productivity enhancement without large scale displacement of female labour. Women growers also need more inclusive spaces to express their needs and aspirations and where women friendly methods and knowledge can be generated and disseminated. Key stakeholder organisations in the coffee sector including the Coffee Board, many Growers’ Associations and agencies that work on women’s empowerment need to be sensitised to the specific requirements of women growers so that the sector becomes more responsive to issues faced by women. The Coffee Board seems to be best placed to facilitate the multi stakeholder ecology for nurturing dialogue and interventions appropriate to women in the coffee sector that would go beyond doling out of set schemes and subsidies. The emerging trends suggest that women growers and workers are going to be pivotal if India’s coffee is positioned in the niche of artisanal, ecological and high quality.
1. Background and Context

The plantation sector is undergoing a demographic change with respect to the people who own and manage plantations and work on them. Previous studies under NRPPD have pointed out issues related to labour shortage, absence of new generation growers, and fragmentation of landholdings due to family partition, migration of younger generation planters and workers to cities which threatened the sustainability of plantations as an occupation both for labourers as well as the grower community.

The shift of men to off-farm livelihoods has led to the feminisation of work and made women increasingly visible as de-facto growers as well as the permanent workers on plantation sites in Kodagu. This shift has brought to the fore the numerous challenges women face in the form of pre-existing domestic responsibilities, and institutional participation in SHGs, PRI related activities, socio-cultural activities, etc. Additional responsibilities increase the burden on women’s time and the raise the issue of better management of time through better organization and technology. In this context, this paper explores the challenges that arise with the increasing entry of women into the plantation sector as growers (de facto and de jure) and workers. The focus is on the interface between women and technology, extension services, plantation management and marketing and we look at the strategies women adopt in order to combine responsibilities on plantations with their family and social responsibilities. Our concern is for ways to make women’s entry into the plantation sector sustainable in the context of the niche market for artisanal coffee while at the same time reducing the drudgery involved in the manual processes.

Objective of the Study

To identify supportive measures that will strengthen women’s position as owners, managers and workers in the coffee plantation sector and make it viable for women to continue in the sector by enhancing their access to knowledge, technology, training and other resources.

Specific Objectives

To probe the invisibility of women in coffee plantation and its implications by documenting the nature of women’s participation in plantation work, probing their work load and the drudgery involved in their work and exploring their access to formal sources of knowledge, training and state resources.
To advance the practical and strategic interests of women in the sector through a better understanding of the gender responsiveness of intermediate factors like technology (introduction, adaptation, transfer – if present), management and marketing.

To examine the challenges presented by the increasing entry of women into coffee cultivation in Kodagu as growers and workers for the sustainability of the sector.

To explore ways of creating favourable conditions to empower women as participants in the plantation economy with respect to in particular the gender responsiveness of stakeholders from community to policy level.

**Methodology**

The nature of women’s participation in the coffee plantation economy of Kodagu is dynamic; it has seen some constants and some change and needs exploration. Given the exploratory nature of this study, the above aspects were studied through qualitative and participatory data collection. Perceptions and views of a diverse group of women and other key individual and institutional stakeholders form major portion of the data. In-depth interviews, focus group discussions, PRA rating methods were used to generate data.

Purposive sampling method was used for identifying respondents using contacts in the plantation sector. The interviews were limited to a relatively small sample of growers and workers because the coffee harvesting season coincided almost exactly with the study period, i.e., December to February. Hence many potential respondents could not spare adequate time or were not available to participate in the study. Most were available for interviews and group discussions only in late March. The researcher being a coffee grower herself had to prioritise seasonal estate operations during this time and hence had to select those respondents who resided within convenient commuting distance.

The researcher interviewed a total of 44 women growers and workers who were ordinarily resident in the area and not seasonal migrants, i.e., who engaged in year-round plantation operations. 26 of these respondents were from different parts of Madikeri Taluk (Kalur, Galibeedu, K Nidugane, Mekeri, Maragodu Panchayats), while 18 were from Somwarpet Taluk (Madapur and Kodagarahalli). No one was interviewed from Virajpet Taluk due to longer distances for travel. Representatives of the Coffee Board, the Codagu Planters’ Association, Kodagu Jilla Belegarara Sangha – a member of the Karnataka Growers’ Federation, President of the Codagu Women’s Coffee Awareness Body shared their views with the researcher. But the researcher’s experience on a full time basis in coffee operations
including weeding, pruning, harvesting, drying and bagging cherry coffee on a 4 acre plot provides a valuable additional dimension to the material used in this paper. Desk research and secondary sources have been referred to where necessary and available.

Research Gaps
The initial trigger for this exploration was the personal experience of the researcher with coffee cultivation that made apparent the difficulties in availing technical guidance appropriate for organic coffee cultivation and the scarcity of appropriate tooling for women workers, i.e., tools that are ergonomic and affordable to smallholder women. Later it became apparent that women were barely represented in coffee related consultations, presentations and opinion forming. A literature review of the coffee sector in India and also internationally suggests that issues of women coffee growers/workers are not given the attention they warrant despite coffee being the second largest globally traded Third World commodity and women’s overwhelming presence in production. Coffee has assumed intangible qualities of the exotic brew in cafés and much work around the improvement of coffee revolves around quality betterment to suit the consuming markets, rather than considering the ways to enhance the wellbeing of the large number of workers/smallholders in the production process. Coffee grown by smallholders is still a hoe and sickle affair with very little evidence of change worldwide. There is a need to bridge the gap between the everyday life experiences of smallholder coffee growers and the measures commonly put forth for improving their lives by various institutions and agencies globally. There is a crying need to draw attention to the problems with the tools that women use in coffee production which have not seen any improvements using technological advancements or were made for male workers who previously dominated specific tasks in the sector that are now carried out by women.

2. Background of coffee plantation sector in Kodagu
Karnataka is the oldest and largest coffee producing region in India accounting for 55% of the total area under coffee and 69% of the total national production (Coffee Board, 2014). Kodagu alone produces 53% of the coffee in Karnataka or 37% of India’s coffee and accounts for 26% of the total land under coffee. Most of the coffee is grown on holdings smaller than 10 hectares and only 1.14% of holdings are larger. Varieties of Indian coffee have an unexploited niche in international markets. India is the only country where almost all
coffee is shade grown, handpicked and sun dried\(^1\) contributing to 0.06% of India’s GDP in 2011. At Independence coffee was a key export earner for the country but this share has significantly shrunk to 0.35% in 2011 (ICO, 2012) of total export value with the expansion of other exports as well as decreasing terms of trade for coffee exports globally (Gresser & Tickell, 2002; Charveriat, 2001). Squeezed between rising costs, crop diseases like berry and white stem borers and lower returns to coffee at the farm gate, the sustainability of the coffee sector in India as in many producing countries is at risk.

A major reason for the downward trend in prices is attributed to excess supply, especially with the spectacular rise of Vietnam from being a non-entity to the second largest coffee producer and exporter within the last three decades (Ibid). The coffee market is characterised by multiple and nested paradoxes; first - the coexistence of a ‘coffee boom’ in consuming countries and markets and a ‘coffee crisis’ among the producers and second a market awash with low quality coffee and a growth in demand for high quality coffee that is hard to come by (Daviron & Ponte, 2005). Today India contributes to 3.46% of global production and 4.52%\(^2\) of exports, clearly not a significant player by volume. India’s coffee is characterised by three features – its artisanal nature as the land is worked and the coffee picked by hand, its ecological positioning as shade grown, often under native trees and consequently its good cup quality (CAFNET, 2012)\(^3\). Those studying India’s position in the coffee market suggest that the way forward needs to include bettering production and marketing to ensure higher realisation for growers (Upendranadh & Subbaiah, 2012; European Coffee Federation, May 2007). Production improvements need to consider increased efficiency of operations and quality improvement to target niche markets and rising up the value chain; essentially, Indian coffee would then gain its competitiveness in the speciality and niche segments. Positioning Indian coffee in the niche segment, while beyond the abilities of the smallholders, is in the realm of the government and large private sector. In parallel, the entire production arena needs to gear up for the exacting standards of niche markets (ibid).

This brings us to the role of women in the coffee plantation sector. Not only do women constitute the majority of the labour force on estates, there is enough anecdotal evidence that women from smallholder families are increasingly becoming the de facto growers with ageing of growers and a gradual outmigration of younger men seeking employment in other sectors of the economy. Many coffee growing regions in the world have also witnessed

\(^1\) Coffee Board [http://www.indiacoffee.org/IndexContent.html](http://www.indiacoffee.org/IndexContent.html)
\(^2\) Coffee Board: Database on Coffee March 2015
\(^3\) Cup quality of coffee was judged to be better when grown under the shade of native trees
similar feminisation (Gresser & Tickell, 2002), especially among small holders, more so since the coffee crisis in 2001. It is in this context that the paper explores the trends in Kodagu and examines whether the sector is appropriately responsive to the challenges in the current and emerging scenario?

3. Women in the coffee sector – an overview

Coffee is a major employer in Kodagu with a reported 2.58 lakh average daily workers employed in plantations in 2014 (Coffee Board, 2014); the district’s population was estimated at 5.55 lakh in the 2011 census. In the coffee plantation sector, majority of the workers are women with 53% in 2008-09 (GOI, 2008-09) and rising. The latest Labour Statistics reports female labour force engaged in coffee plantations in Karnataka at 62.72% of the total workers in 2011; coffee engages the largest proportion of women in the entire Indian plantation sector. According to the 2011 Census figures, about 7,379 women classified themselves as cultivators and close to 90,000 women were working as agricultural or other labour in Kodagu. Kodagu witnessed the least decadal drop in the number of women cultivators (0.31%) against a state average of 5.68%. Women are engaged in coffee plantation operations all year round and as in most farming operations in developing countries this includes unpaid family labour, which is invisible and underestimated (Krishnaraj & Kanchi, 2008).

The terrain of Indian coffee plantations as in Kodagu is hilly and with significant tree cover and multiple crops including pepper. 92% of landholdings are below 4 hectares in size (Coffee Board, 2014). The small holdings coupled with sloping terrain greatly constrains the large scale mechanisation of coffee plantations and with a gradual exit of male labour from coffee to other employment sectors, anecdotal evidence suggests that the requirement for women’s labour has increased further. A recent estimate by the Karnataka Growers’ Federation suggests that 75% of the labour in coffee production is provided by women (Vishwanath, 2015) even after factoring in some mechanisation.

With only certain cultural operations like heavy lifting, tree pruning and deep digging exclusively done by men, coffee cultivation practices are heavily dependent on the efforts of women throughout the year. The quality of these cultural operations greatly determines the final quality of the coffee bean. The assured presence of women on coffee plantations both as

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5 Table 2.10 in (GOI, 2013): data from reporting plantations only
workers and de facto managers\(^7\) enables the artisanal mode of production and the existence of small holdings with low capital investment in tooling and machinery. If this mode of production is rendered viable in the future, the pressure to clear-fell forests and enable large scale mechanisation will be minimal and the physical and cultural landscape\(^8\) of Kodagu can be maintained. This has implications for a more stable local economy, especially of small growers and landless labour, and in view of preserving the Western Ghats’ fragile ecosystem - a more ecologically sustainable mode of cropping. This in itself is a paradox; the declining viability of coffee may be resulting in greater feminisation of its workforce and daily management in family farms, yet this feminisation itself offers a pathway to producing specialised ‘sustainable’ and artisanal coffee, that could result in better returns to growers.

3.1 Women as growers and plantation managers

Women in family owned smallholder plantations of Kodagu are routinely involved in production while many with marginal holdings also work for wages on other plantations. Kodagu has several women who are de jure land owners, though not all may be involved in working or managing the plantation. More so several are now de facto growers on titled family land or encroached (paisari) land. These categories cannot be enumerated without primary surveys and the situation is dynamic with the continued exit of men seeking other employment at least on a part-time basis. Anecdotal evidence suggests that their numbers may be rising. The presence of these women is in the production of green coffee though some have also made some foray into value addition and retail marketing. Very few of these women are represented in member based organisations of coffee growers\(^9\). This section uses women’s narrative in an attempt to capture the pathways through which women become coffee growers or workers in Kodagu and documents the nature of their work, access and control over resources and the constraints they experience.

3.2 Women growers – some patterns

With high outmigration of men seeking employment in towns and cities within and beyond Kodagu, the number of women who become de facto managers of their plantations is increasing, though there are no available estimates of their numbers. The women who

\(^7\) These numbers can only be estimated through careful primary surveys

\(^8\) Valuable in itself, for ecological services, and aesthetics for the tourism sector

\(^9\) Out of 800 members in the Codagu Planters’ Association – 20 are women, CWCAB a women’s organisation had 420 members in March 2015
participated in the interviews and focus group discussions were initiated into coffee plantation operations at different points in time; when their families/employers opened up land for coffee, their employers shifted from cardamom to coffee (as in the Kalur area), relocation to a coffee growing area upon marriage or predominantly on the death of the spouse. The trajectories vary. Here we elaborate on some patterns that were evident in the data. The cases and women’s narratives indicate some of the nuances of their experiences.

3.2.1 From workers to growers:

Among some marginal landowning women, the association with coffee was not direct or immediate. In places like Kalur or Galibeedu in Madikeri Taluk, previously known for cardamom, the women arrived as workers on large plantations or married men who were workers in such plantations and learned the cultivation of the crop at work. For women who were originally from Dakshina Kannada district, cardamom was a new crop for them as their families had worked on areca and paddy lands before. Belonging to very poor families, they worked on low wages and wages in kind (payments in paddy or rice) and gradually occupied paisari or revenue lands nearby and began cultivating cardamom. However cardamom began to die out due to Katte roga (mosaic virus disease) and when no solution was found, the families slowly cleared more land for coffee and established their plantations. Not all the land so occupied have been regularised or pattas received. The RTCs may not mention coffee as a crop. Many families with marginal land holdings continue to work for wage labour in their neighbouring plantations and some are part of informal labour-sharing groups who work in each other’s lands on rotation. Women who participated in this study took on management of their plantation on being widowed or if the spouse became ill and adult offspring did not take on the responsibility, i.e., no adult male was available for work and management. Family members including young children were the main labour source for such holdings and the plantations were run with low external inputs, usually limited to the use of synthetic fertilisers. This category of women appears to be the most disadvantaged with respect to their basic needs, extension support and access to adequate finances. The Spices Board and the Horticulture Department were the more familiar entities than the Coffee Board because of families’ previous involvement in cardamom and paddy. With rising land prices, poor remuneration from coffee, and funds required to explore alternate livelihoods activities, they are most likely to sell and move out.

\[10\text{ Record of Rights, Tenancy and Crops: the key revenue record of land in Karnataka}\]
Case 1: Survival Coffee

Parvathi, 58 years: Kalappa’s father had owned a lot of land in Galibeedu and could not afford to pay revenue taxes. Retaining only 42 cents of it, he turned in the rest to the government which was then classified as paisari. When Kalappa’s half brothers denied him his share of land in Aravathoklu village, he bought the remaining 42 cents of land from his father for Rs. 2,000 and built a house on it. His first wife however had serious mental illness. Parvathi was born into a very poor family near Subrahmanya and had dropped out of school early to work alongside her parents on a large areca farm. 32 years ago a relative arranged her marriage to Kalappa as his second wife. When her co-wife refused to let her into the existing house, Kalappa and Parvathi built another house of their own.

It was after she arrived on the land that they planted cardamom in around 6.5 acres of paisari land. They also cleared about 1.5 acres of land around the house to plant coffee. The couple worked for wages with a forest contractor and in nearby plantations during the day, collected cow dung from the nearby baney where cattle grazed and used it on their plot. They would work until there was no more daylight and sometimes using torches during cardamom harvest. They cured their own cardamom in a wood fired dryer that they had built. Parvathi claims that other than tree lopping and ploughing she could do all other farm operations. She became better that her husband at cardamom and coffee cultivation.

Five years ago she began working in a nearby plantation as a permanent worker and two years ago had a bad fall, “I fell six levels down a steep slope, from the coffee area and was found unconscious in the cardamom block in the valley”. She broke her right arm in three places and cannot even comb her hair with that arm anymore. All her treatment costs were borne by her employer. Though an alternate job was offered, Parvathi did not take it up. The doctor in the government hospital refused to certify her disability; she cannot claim disability pension. Now her husband is ailing and they have difficulty buying food. Since she cannot lop the trees or work with hand tools, the coffee plot is completely shaded and is not yielding anymore. It used to yield about 6 bags of cherry coffee, this year it was less than 2 bags and she had to sell it in market to buy food and medicines for her husband.

11 All names of profiled individuals have been changed to protect their identity
With no money, no employment and no children to help them out, the land was recently sold to someone in Madikeri for Rs. 22 lakh; the buyer has paid an advance of Rs. 3.4 lakh, which is for the 42 cents of land with clear titles. The rest of the encroached land, though it once belonged to Kalappa’s family is now classified as C&D land\(^{12}\) and with the uncertainty around land use once the Kasturirangan Report recommendations are implemented, there is some anxiety if the buyer can get the remaining land regularised. Parvathi and Kalappa have decided to migrate to Sullia in Dakshina Kannada district where her younger brother has offered to look after them.

Not all stories of women in this category seem as bleak. There are examples of better managed plantations by small holder women and stories of coping with vagaries of the plantation sector.

**Case 2: Amazons’ burden**

**Gangamma, 77 years.** Gangamma’s family had migrated to Kalur 50 years ago to work on a large cardamom plantation. They began cultivating cardamom on 7 acres of *paisari* land but within three years Gangamma’s husband passed away. The youngest of four daughters was only 10 years old then. The mother and daughters worked on the land on their own, very protective of their privacy and security; “We didn’t socialise much, there was too much work and too little time. Besides, we spoke to very few people and never let people come to our land; we did not feel safe”. The daughters had to walk long distances to school in Galibeedu; only the younger two managed to complete high school. The family subsisted on cardamom and the yield was good initially; 4.25 acres of land were also regularised. In time three daughters were married off. The fourth daughter Sumathi being very petite, stayed single for a long time and eventually married an auto rickshaw driver Suresh in 1999; he had agreed to become a *mane aliya*\(^{13}\). Cardamom was slowly dying out due to disease and the year Sumathi married they harvested 101 kg of it, down from a previous high of 300 kg.

Suresh didn’t like Kalur as it was remote and wild and he missed his life in town. Often he would want to run away. Besides he did not know any plantation work. But

\(^{12}\) Infertile, Degraded Forest land – which was transferred from the Revenue Dept to the Forest Dept for upkeep under the land bank agreement.

\(^{13}\) *Ghar Jamai*, a son-in-law who moves into his wife’s household
Gangamma and Sumathi were persistent and taught him the work and the three eventually converted their forested plot of cardamom into a coffee plantation. The land is extremely steep, so they were meticulous, making little terraces for each coffee plant. Gangamma’s family has access to banking services and have borrowed Rs. 4 lakh to build an RCC house. Suresh is also a part of an 11 member self-help group, which also engages in labour sharing. They access crop loans from the group for purchasing inputs annually and this year they borrowed Rs. 33,000. Sumathi’s 10 year old son studies at a well known private school in Madikeri.

Gangamma claims that hers is the best coffee plantation in the area; they harvest 80 bags of Robusta and Arabica cherry coffee from their 7 acres of land. The coffee is sold to traders in Madikeri. Hiring workers is an expensive proposition, so the three try to do all the work on the farm, even Gangamma at 77 years of age headloads materials on their steep land. They have bought a chain saw and would like to own a brush cutter; however their land is still classified as cardamom and hence Coffee Board’s subsidies are not available. There are indications that they will have to sell a part of the land and offer the share to Gangamma’s other three daughters.

Based on interviews and discussions with women and men in this category of growers, the pressure points for women growers come from insecure land tenure, lack of sufficient working age adults in the households, ageing, truancy and alcoholism among family members, poor access to formal credit, inputs and extension (sometimes linked to land tenure), and social security schemes. Remoteness of their habitations, poor connectivity, distances to health care facilities and human-wild animal conflict compound their challenges. Low population densities in some areas create challenges for collective action and building a critical mass of growers. The cultivation practices are reliant on manual labour, basic hand tools and there is little investment in productivity enhancing technologies. The greatest strength of this group lies in their physical skill levels and knowledge of coffee cultivation with low use of bought inputs.

### 3.2.2 From homemaker to grower:

This category of women transition into managing plantations usually when the spouse migrates for work on a full or part time basis or the spouse has an occupation more remunerative than coffee - making his opportunity costs of staying with coffee cultivation
very high. The women may have significant experience with labour operations on the plantation. Here the male head of the household is still involved in the plantation operations, but the day to day operations are largely taken care of by the women. In case the man is located far away from the district, such as in the armed forces, he may return to the plantation during crucial seasons like harvesting and sales. This category of women may not have titles over land and belong to the lower middle and middle income families. Also the level of involvement of these women may vary depending on their circumstances and how long the spouse is away during the year. The harvesting and drying operations is perhaps the most intensive and these women’s labour is increasingly seen in picking, weighing of coffee, overseeing the drying, winnowing/cleaning and bagging of coffee; very often they physically engage in the harvesting, drying and bagging operations. With the shortage of permanent workers on small plantations, ensuring proper drying and storage of coffee takes several hours of their time. They may not have control over the decisions to sell the coffee. The involvement of the extended family in labour, management and decision may also be high. Access to finances and extension may be reasonably good, but possibly mediated by the spouse.

**Case 3: Not worth the man’s time**

**Prabha, 47 years.** Prabha’s husband’s family owns 7.5 acres of land near Madikeri and her parents-in-law look after it. Prabha’s husband is a timber contractor and discovered a neglected plantation nearby when he went to buy trees from a cash-strapped grower in 2007. Instead of the trees he ended up buying small bits of this land and now owns 40 acres of it. Managing a coffee plantation was new to him as he had never involved himself in his parent’s estate. Reviving the neglected plantation was expensive and took more and more of his time till his timber business and main source of income started to suffer. Though the family has about 12 permanent workers on both their plantations, during harvest there is always a shortage of labour and Prabha was forced to take over the drying, cleaning and packing activities. This year, her husband decided that she must take over more of the management of the new estate, so that he could concentrate on his timber business.

Prabha has only recently become familiar with the various operations on the plantation. She has been spending the entire day at the plantation. She has to deal with the workers and ensure that deadlines are met, while balancing her domestic work and
involvement in several social and religious organisations. She notices some resistance from workers towards a ‘female boss’ and especially the women complain that she follows them around a lot when they work. She has not attended any formal coffee extension events and much of the advice the couple gets is from a private estate consultant. When asked if she had thought of any labour saving methods especially since she also harvests, dries, cleans and packs coffee, she said that she had never thought that operations that have long been in existence could be reviewed at all. Prabha gets paid a woman’s wage if she puts in a full day of hard labour.

The focus group discussion with a self-help group of Kodava women in Kodagarahalli brought forth the invisibility of women’s work on family farms. The 17 women who participated in a discussion (with family landholding sizes of 1.5-9 acres, and one with 26 acres) identified themselves strongly as growers and not labourers; they distinguished their SHG as being different from those promoted by the government of NGOs which were for labourers. They were initially reluctant to disclose that they engaged in plantation activities at all. They described their role in the family as ‘supporting coffee cultivation’, listing out their reproductive activities including household work of cooking, cleaning, gardening, overseeing children’s education, with occasional support to spouses by supervising labour, keeping accounts and stocks of material. On probing deeper, it was apparent that the pressures of labour shortages, high cost of hired labour, truancy among hired labour and the shrinking of landholding size had influenced increased participation of women in the work on family plantations. Some women reported their increased involvement in plantation activities, as a means to maintain seasonal schedules, supervise seasonal migrant labour and to cut costs. “But you have to work on your own land; when it’s time to weed, we weed. When it’s time to plant, we also join the workers to dig”. They then identified individuals in their SHG who engaged in manual work on their own land.

**Case 4: A grower, but not in name**

Kamalu, 55 years: Kamalu’s husband became paraplegic after a freak accident over a decade ago, and since then she has managed the plantation on her husband’s advice. She drives him around in a van and is familiar with government offices, schemes and even crop insurance. Kamalu is proficient in the paperwork for these schemes but her

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14 The dominant community in Kodagu
husband is the land title holder and signatory. Among all members of her SHG, she has the largest landholding of 22 acres of coffee and 4 acres of paddy.

Interestingly only two among the members (one a widow, another with a paraplegic spouse) had visited offices of government departments related to farming and as they had formed their SHG on their own, without the support of any intermediary, they had not participated in any capacity building programmes around coffee, though members had attended training on beekeeping and food value addition. Membership in the SHG had ensured that the women have access to small loans from their own funds to pay for children’s education and household needs. The Coffee Board had planned to conduct a vocational training programme for this SHG, but the event was deferred due to scheduling problems in March. The women were interested in learning more about processing coffee right through the value chain. They felt that coffee related extension programmes were attended mostly by men. In terms of their own learning, they felt they would learn best from workers, husband/family, neighbours and friends in that order. In particular their felt needs include – training in plant pruning, so that they could supervise workers better, better tools and methods for weeding, and better planting material. They were also interested to know what schemes of the Coffee Board they could benefit from. One member of the group was a coffee trader, an enterprise she took over after her spouse died.

3.2.3 The wealthy widows

Some of the women interviewed were forced into managing their estates upon death of the spouse, sometimes with no previous experience with either the physical work or management of plantations. Women from well off families who had not lived on a plantation in their childhood and youth appear to be most insulated from the technicalities of plantation management. Their learning curve is steep as they have to understand the technical aspects, labour management, financial planning and coordination of plantation operations on land holdings that are large and with significantly more use of inputs and operations. Large plantations may have strict and complex schedules for manuring, spraying, irrigation, weeding, liming, pulping coffee, equipment maintenance and purchases and require more skilled labour throughout the year. There may be large investment decisions to be taken and negotiations with banks for finances. The presence and advice of a ‘trusted’ maistry/writer/manager or friend or family member is important for picking up the knowledge and skills. While plantation consultants’ professional advice is sought by some, it
is the manager/writer who is key to ensuring the administration of operations. Very few women among the better off seemed to be directly involved in physical labour but have a reputation of maintaining close supervision of activities. Some women in this category are known to manage other women’s plantations (family or otherwise) on an informal basis. There is uncertainty in this group whether their children will ever return to look after the plantation or it will be sold off eventually. This category appears to enjoy good access to credit, extension and subsidised capital investment.

Case 5: Taking Charge

Poovamma, 55 years. Three years ago Poovamma’s husband passed away after a brief fight with cancer in the middle of the coffee harvest season. Poovamma was not prepared for the responsibilities that lay ahead. “I was always a homemaker and had never been involved in the estate. I didn’t know anything, had never spoken to the workers”. Her two daughters worked outside Kodagu and suddenly she found herself alone. “I didn’t have anything else to do anymore. So I decided to take charge of the estate”. Poovamma is an only child and her mother was widowed very early. Poovamma was sent off to boarding school when she was quite young and therefore had very little knowledge of plantations; during summer vacations there is little activity in the estate. Her mother had managed her 30 acre family estate single handedly for over 50 years and only recently sold it off and moved to Madikeri to be close to her daughter. Poovamma’s neighbour Dechi, a widow who manages her own plantation as well those of other women like her was the chief source of support and advice to Poovamma. The first year was very difficult as she was still in mourning and the complexities of managing 50 acres on two plantations simply overwhelmed her. When there were problems she was often in tears and it was the workers who would console her and give her courage. In three years, she feels she has come a long way. She visits both her plantations daily and is present during harvesting. She has her finances in control with the help of a Chartered Accountant and her Maistry who also doubles up as her driver has worked closely with her. She has not taken the help of a consultant. She now sells green coffee to more than one trader, as she felt that relying on a single trader did not get her a good deal.

Poovamma also does not want to borrow money for large investment without adequate thought. Her own finances are sufficient to manage the operations, but she
expects to invest in workers’ quarters, a larger drying yard and a new pulper in the future. She has bought some smaller equipment with subsidies from the Coffee Board. Her biggest challenge was to control White Stem Borers on her plantations. In three years she has been able to bring it under control, mostly because she considers herself to be a perfectionist and has focussed her energy into it. Her workers, who earlier doubted her ability to take charge now have greater faith in her abilities. Poovamma feels that if one has the interest any job can be learned well.

3.2.4 The Daughters, growers by choice

Defying the trend of widowhood or out-migration of men as the trigger for women taking over plantations, there are rare cases of women intentionally starting coffee plantations or taking one over. Their numbers are small and this category may remain an interesting outlier. The trend with respect to this category is not clear.

Case 6: Land as a daughter’s right

Sandhya, 58 years. Sandhya, a graduate and single, fought a legal battle with her father in the late 1980’s to seek her share of land and won it in 1996; this was before the Hindu Succession Act (1956) was amended in 2005 to treat daughters as coparceners with equal rights over parental property. She was offered 6.5 acres of uncultivated land, the worst on the entire property, 3 acres of paddy land and Rs. 20,000 in cash. She used her limited resources and opened up a new coffee plantation with the help of local tribal workers and is the only remaining rice farmer in the area. Twenty five years on, she continues to face the hostility of her immediate family and neighbours. She has not been able to take much support of the Coffee Board because her RTC does not mention coffee; she claims that women have difficulties getting their land records written up correctly. She feels that formal financial institutions also treat women farmers with disdain and had to file an RTI application to study why crop loan applications were not being moved in a nationalised bank. A cousin’s family and the local tribal workers support her with her cultivation. She owns a tiller and several cattle. She saw her future in doing better farming, take higher yields and proving something. But in the meantime, she may approach the Consumer Court over loan terms from a bank, where all her 9.5 acres of land (including coffee land) have been shown as mortgaged for the tiller loan, which she claims was done by the bank official’s sleight of hand.
Though Sandhya’s case and her challenges are extreme, it is possible that the respondent was presenting upfront the issues faced by women (and men). The case brings forth sharply the constraints on farmers’ lives and livelihoods and why technical solutions alone will not suffice to ensure growers and women growers in particular can thrive.

Whatever the pathways of women into growing coffee, discussions with various stakeholders of the coffee sector indicate that women remain invisible as a category of growers with special requirements. Like women farmers worldwide, their access to technology and extension is mediated by socio-cultural norms, institutionalised in the coffee value chain. This is what we will turn to in the following section.

4. Women’s access to and control over productive assets, knowledge and tools and technology

The untapped source for agricultural growth could lie in reducing the bias against women in agriculture\(^{15}\)

4.1 The Invisible Growers: The discussion on the pathways by which a woman becomes a coffee grower raises several issues. Chiefly, women are not generally recognised as growers (even by themselves) though they may contribute a substantial amount of time to plantation activities. Most interviewees perceived themselves as homemakers first and growers later, some even hesitating to take part in the interviews ‘as they did not know enough’. Many also expressed that they did not consciously seek to be the grower. According to one respondent: “Women don’t choose to become planters. You get widowed, that’s it. Suddenly you are a planter”. While trying to identify possible interviewees for this study, women who contributed significantly to plantation operations but were neither de facto nor de jure heads of the household were not considered by many to be growers. To summarise, women are not socialised from an early age to take on a grower’s role (Schwarz, 2004) while members of society are also not socialised to recognise women as growers. While many women took pride in their manual skills, there was also a strong reluctance among certain others to reveal their labour contribution in coffee cultivation. As most growers in Kodagu own very small holdings (92% of holdings are below 4 ha (Coffee Board, 2014)), hesitation to reveal the true extent of women’s participation in coffee cultivation can greatly hinder the nature or extent of support that women can seek and access as growers.

\(^{15}\) (Quisumbing, Brown, Feldstein, Haddad, & Pena, 1995)
Access to appropriate information and technology: Invisibility of women in coffee cultivation and the lack of recognition of the gender dimension influences the programming of several stakeholders involved in coffee. While the predominance of women workers in coffee plantations is well known and acknowledged, policy and programmes are gender blind. Social and informal networks and personal connections – co-workers, experienced maistries/ supervisors, friends and family, and private consultants remain the predominant source of access to information and support for women growers, even those with higher education levels and large landholdings.

Most of the small holders interviewed for the study had little contact with the Coffee Board, partly because in their case coffee crop was not recorded in RTCs and hence they were not eligible for subsidised benefits. Where men still hold titles to land, women do not often visit offices. There are, however, several groups that work closely with the Coffee Board under their nursery raising or value addition programme; in 2013-14, 994 women growers/workers across India were given vocation training (Coffee Board, 2013-14). The larger growers mentioned seeking the assistance of the Board by personally visiting the offices, in which case they mention being treated courteously and offered whatever assistance was possible. Some recalled that unlike in the past, extension agents no longer visited them. They knew that the staffing of the Board was very minimal to provide on-site services. However the Coffee Board organises melas in central locations where it has demonstrations of machinery, soil testing and conducts advisory and mass communication programmes. The utility of such programmes for different categories of women growers and workers needs to be better understood.

For example, the Coffee Board representative mentioned that the recent focus on working with women’s self-help groups did not emerge from the Board’s understanding of gender issues, but as an afterthought. Results from the field had shown that women’s groups had managed coffee nurseries much better than men’s groups had and consistently, so the Board now prefers to route the scheme only through women. The current engagement of the Coffee Board with women is limited to implementing schemes like nursery raising, vocational training (on livelihoods diversification and not related to coffee) and setting up post-harvest value addition units like pulpers and roasters. Training in cup tasting is also available in Bangalore. However, very little of the extension services is related to production aspects of coffee, where women’s intervention and labour use is highest. Most other activities of the
Board are related to subsidies for new planting, equipment and plantation infrastructure. These are mostly useful for larger holdings. As women are mostly small holders, they are not necessarily gender equitable, suited to the practical and strategic needs of women growers. The Board reports gender segregated subsidy related information, but has no estimate of de jure and de facto women growers.

Most technology being promoted by the Board and private players are meant for mechanisation of operations, especially for large plantations and involve high capital investment. Very small growers can afford some of them if they buy and use them collectively. However a large gap exists in finding alternatives to women’s manual work on coffee plantations. In order to understand currently available technologies for basic cultural operations on coffee plantations and their effect on women’s employment, a participatory exercise was conducted with a women’s Self Help Group consisting of small growers and plantation workers. The group listed out common cultural operations on estates, share of women’s and men’s labour, degree of work intensity/drudgery/difficulty and the tools used for the operation. The data was triangulated with interviews with other informants and compared with data from other sources (Upendranadh & Subbaiah, 2013; Vishwanath, 2015). The details follow.

**Why the emphasis on women’s labour use in production?**

The ‘coffee paradox’ touched upon earlier in this document describes the phenomenon where the growth in the market for high quality coffee is reaping high profits for roasters and retailers while the producers of ‘material’ coffee, the green coffee bean, are in deep and intractable crisis (Daviron & Ponte, 2005). Profits in the coffee value chain are being made at the level of the roaster and branding of retail coffee products, whether a packaged product or the café experience. Consequently, much literature suggests that the way forward is for growers to improve the quality of their ‘material’ coffee, the commodity that they grow and harvest, and especially to move up the value chain. The latter strategy would require not only collective action among growers, but also the removal of international trade barriers that exist in the coffee commodity chain. There is little discussion on the work condition of the coffee growers and workers themselves.

Growers who continue to farm coffee will face the following pressures in a regime of deteriorating returns from the commodity sale – a preference for using own labour to cut costs, greater feminisation due to lower costs of hiring women/using family labour. The year round operations that coffee cultivation requires of women, will increasingly crowd out
women’s other productive and reproductive activities, such as the cultivation of food crops. In the case of Kodagu, respondents mention their inability to grow seasonal vegetables, many of which are unique to Kodagu, or maintain flower gardens – which have great social and cultural significance for women and also preserve foods through pickles, juices, wine and jams. Crop diversification, which is often suggested as a solution to the coffee crisis (Upendranadh, 2010), also becomes a challenge due to scheduling conflicts between crops.

4.2 Women’s labour use in plantation operations

Women are present in plantation operations throughout the year, while men’s labour participation is more sporadic. During discussions it emerged that except for operations like tree pruning, deep digging, hauling of very heavy loads and operating large machinery which are considered men’s work, it is predominantly women who do all other operations. In small holdings there is greater flexibility of work roles, while in larger holdings with greater use of paid labour, women’s presence is greater. Women as growers may see labour saving options differently from wage workers. Growers, even those who work on their plantation may see labour saving methods as reducing drudgery, costs and freeing up time, while women wage workers may perceive them as leading to a loss of working days.

Operations requiring women’s labour are carried out with basic hand tools irrespective of the scale of the operations. Few of these operations have been mechanised and that too only on some estates. According to some respondents with declining labour availability and more erratic weather patterns, the scheduling of plantation operations like liming have become more flexible and some like additional rounds of weeding are being skipped altogether in certain years. According to the Codagu Planters’ Association (CPA), large landholders are reducing the number of culturing operations on their plantations. Neglect of horticultural operations can adversely affect the health of the plantation and the quality of coffee produced, further driving down returns from the land.

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16 See also (Upendranadh & Subbaiah, 2013)
<table>
<thead>
<tr>
<th>Plantation Operation</th>
<th>Month</th>
<th>Labour use W, M: higher w, m: lower</th>
<th>Degree of work severity</th>
<th>Details of the Operation</th>
<th>Tools, equipment, safety gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning around bushes</td>
<td>May</td>
<td>W</td>
<td>1</td>
<td>Light work</td>
<td>Sickle, dābbe (blade weeder), hook (wooden preferred and is lighter than metal)</td>
</tr>
<tr>
<td>Pesticide spray</td>
<td>May</td>
<td>w M</td>
<td>4</td>
<td>New sprayers are too large for women to use comfortably; back and neck pain on prolonged use of backpack sprayers, giddiness due to exposure to pesticide especially on the first day</td>
<td>Backpack sprayers if women’s labour is used; goggles are used while spraying pepper plants; no other significant safety gear. Gloves used for some pesticides.</td>
</tr>
<tr>
<td>Fertiliser application</td>
<td>June</td>
<td>W m</td>
<td>3</td>
<td>Men unload the bags at different spots in the plantation</td>
<td>Use bare hands, about 20 kg fertiliser carried around in sacks; raincoat made up of two plastic bags, plastic shoes with socks</td>
</tr>
<tr>
<td>(chemical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desuckering</td>
<td>July or August</td>
<td>W</td>
<td>2</td>
<td>Needs skill and presence of mind</td>
<td>Small sickle and bare hands for pulling down suckers; plastic-bag raincoat, plastic shoes with socks</td>
</tr>
<tr>
<td>Planting seedlings</td>
<td>August</td>
<td>W m</td>
<td>2</td>
<td>Men dig pits; women open up the dug pits, plant and pack the soil. Fewer men than women required (already said in column 3)</td>
<td>Sickle, wooden spatula to scoop soil, bare hands (narrow spade for men to dig pits); plastic-bag raincoat; plastic shoes with socks</td>
</tr>
<tr>
<td>Weeding</td>
<td>2 rounds August and September</td>
<td>W</td>
<td>4</td>
<td>Weeding with sickles is less tiring, dābbe results in very clean weeding and takes twice as long; quality of sickle/dābbe is sometimes poor and increases weeding time and drudgery Need to bend and work; leads to pain in upper body and lower back</td>
<td>Dābbe/sickle, hook, plastic-bag raincoat, plastic shoes with socks</td>
</tr>
<tr>
<td>Fertiliser application</td>
<td>September</td>
<td>W m</td>
<td>3</td>
<td>Men unload the bags at different spots in the plantation</td>
<td>Use bare hands, about 20 kg fertiliser carried around in sacks; raincoat, plastic shoes with socks</td>
</tr>
<tr>
<td>(chemical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shovel weeding/scraping</td>
<td>December</td>
<td>W M</td>
<td>5</td>
<td>Men are preferred for this job though more women are now involved. Men also sharpen the shovels during lunch breaks. Herthe needs physical strength; more difficult on flat areas; long handled shovels used so there is no need to bend</td>
<td>Long handled shovels (guddali); women prefer to use lighter shovels than men</td>
</tr>
<tr>
<td><em>(Herthe)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arabica – picking</td>
<td>December</td>
<td>W m</td>
<td>2</td>
<td>Predominantly female. Only seasonal migrant male labour and some men from smallholder households pick coffee. Women can pick 120kg/day</td>
<td>Both hands, basket/gunny sack tied around waist Head load picked coffee (30-45kg sacks) to yard or to pickup point if jeeps are used</td>
</tr>
<tr>
<td>Activity</td>
<td>Time Period</td>
<td>Gender</td>
<td>Hours</td>
<td>Description</td>
<td>Equipment/Tools</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------</td>
<td>--------</td>
<td>-------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Robusta – picking</td>
<td>January to February</td>
<td>W</td>
<td>3</td>
<td>Tougher than Arabicas – more coffee to be picked, fruit harder to pull out of plant, bigger/higher bushes; some pick up to 275kg/day. Easier if tarps tied up by two people; not possible in weight based payment system as each picker is responsible for her own gear.</td>
<td>Both hands, basket tied around waist or increasingly collected on tarpaulin tied to plants. Head load picked coffee (30-45kg sacks) to yard or to pickup point if jeeps are used. In case of weight based payment each picker will have one tarp.</td>
</tr>
<tr>
<td>Coffee drying, cleaning packing</td>
<td>During and beyond harvesting dates</td>
<td>w, m</td>
<td>4</td>
<td>Predominantly by men; women are busy in harvesting at this time. Lots of hauling involved; winnowing by throwing the coffee on the yard is physically demanding. Machines have greatly reduced drudgery, but require a large number of people to keep up with the speed of operations. Household women may be involved where paid male labour not available.</td>
<td>Footwork (kaalu aadisu) to turn the coffee and rakes, bamboo winnows, baskets. Mechanised winnowers.</td>
</tr>
<tr>
<td>Irrigation (optional)</td>
<td>Early March</td>
<td>w, m</td>
<td>3</td>
<td>Women haul pipes to the spot; hard to move pipes through coffee bushes. Men rig and operate the systems.</td>
<td>Plastic buckets/bags, bare hands or small plates to scoop up the lime and throw/broadcast.</td>
</tr>
<tr>
<td>Liming</td>
<td>March or April</td>
<td>W, m</td>
<td>3</td>
<td>Men haul big bags to the spot; women apply lime in 15-20 kg bags; only in early hours as lime starts to fly around in later hours, sticks to the face, eyes and breathing is difficult.</td>
<td>Pruning sickle (small with hook), sickle.</td>
</tr>
<tr>
<td>Pre-monsoon pruning (big kapaath)</td>
<td>April-May</td>
<td>W, m</td>
<td>4</td>
<td>Needs physical strength, very good pruning skills (mental ability) gained from long experience. Mostly done by men; now more women are involved.</td>
<td>Mande-kathi/machete, ropes. Chain saw.</td>
</tr>
<tr>
<td>Shade regulation/trimming</td>
<td>Feb to May</td>
<td>M</td>
<td>5</td>
<td>Requires tree climbing; even lower branches are dealt by men as they may have a per-tree contract.</td>
<td>Sickle.</td>
</tr>
</tbody>
</table>

Source: (Participatory exercise with 13 members of the Bhagyodaya (DHarmasthala) SHG Hebabetagi, K Nidugane Panchayat, Madikeri)
Note: plantation operations may vary across plantations, regions of Kodagu. Similarly gender division of work may also vary slightly.

W, w: Women; M, m: Men
4.3 Analysis of women’s labour use in plantation operations

This section is based on the results of the participatory exercise conducted with SHGs, views of individual respondents and triangulated with the help of a plantation consultant who is also a small grower. The nature of women’s labour on plantations does not vary significantly across the size of plantation unless any of the operations are mechanised; in contrast men’s work may be more mechanised in very large plantations. Trends suggest that women are taking on more manual operations that were previously exclusively done by men, such as shovel weeding and plant pruning. There are several women who operate brush cutters on estates with landscape conducive to such equipment use. It can be partly explained by the shortage of assured male labour and the lower cost of female labour. In cases where machines are used by women, at least in one instance, they were reportedly paid higher than normal wages (15% higher). Women with higher skills, such as plant pruning command higher wages – such as in Galibeedu where they may be paid up to Rs. 300 per day, Rs. 50-70 over normal wages in 2015 season. Such highly skilled women have long years of experience on coffee plantations.

In some areas like Kalur, where there can be a shortage of labour during some periods, small growers are now finding it difficult to do several rounds of weeding, as other local workers demand the same high wages that are paid by the more well-off growers in the area. There is a system of shared labour in several villages (koodaalu) and is still functioning in some places; however, if the grower is old and no longer capable of hard labour, they are excluded from such groups and have to depend on paid labour. In case such elderly/infirm growers do not have sufficient family labour resident nearby, this results in a gradual neglect of the plantation.

The women who engaged in labour did not seem to perceive any serious challenges with the nature of their work and tooling; they were confident of their skills. Even after prolonged discussion women workers and growers felt that women’s work has evolved to its optimum given the circumstances, i.e., small holdings, sloping terrain, shade grown coffee. One clear issue that was articulated by women labour was that the quality of hand tools like sickles, dabbes and shovels have deteriorated and this reduces their productivity. There is a shortage of quality ironsmiths and a scramble on market days to buy good quality sickles which are sold out early in the day. Projects elsewhere to improve women’s farm tools have tended to work with blacksmiths and other tool manufacturers to improve quality and make available gender specific tools, such as lighter hand tools with smaller grip handles, etc (IFAD, 1998) and may need to be explored here.

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17 SG Aravind of Agrimart, personal communication
18 KK Vishwanath, personal communication
It must however be recognised that activities like weeding and wood lopping are intense and ergonomic studies prove high risk of musculo-skeletal stress with prolonged activity (Nag & Nag, 2004). Upon exploring whether there can be any improvements in the scheduling, work process or tooling, only women with their own plantations expressed the need for some alternatives, mostly labour savings methods. One relatively new grower (with three years of involvement and only one season of intensive participation) said that she never thought that it was be possible to rethink how women’s labour could be better applied. Another, oft neglected area of risk is the presence of venomous snakes, wasps and leeches and women are vulnerable to bites and stings as they grab weeds and branches and shuffle around under the coffee canopy. Pit vipers, which are fairly common on coffee bushes cause several bites and scares during weeding, pruning and coffee picking, but no antivenin is available for pit viper bites. These bites and stings result in life threatening injuries, loss of working days and morale. Simple preventive measures like the use of gum boots and hand gloves are still not popular.

A common labour saving requirement was for brush cutters or the use of herbicides, as they would reduce the time for weeding and consequently the need for hired labour. There is a perception among growers that workers prefer to do several rounds of weeding, including the difficult shovel weeding, as it increases the demand for their labour. Naturally, labour saving mechanisms that displace labour will be seen negatively by wage workers. Additionally, available options may not be suitable or relevant for women growers and workers. For example, the commonly available brushcutters are not very heavy, but are designed for physically larger operators (European anthropometrics) and the harness and control levers are therefore not ergonomic for women. A woman farm equipment dealer who has a special interest in promoting women friendly tools and equipment surmised that Japanese equipment were more compact and handy for women; and being small, they would cost much lesser than the larger European-made equipment. But sellers earn more from more expensive (namely larger) equipment, which may not suit the ergonomic and financial requirements of women. Hence small, low cost tools and equipment are not promoted. To sum up, any retooling or changed farming practices needs to consider their suitability and differential impacts on various categories of women and men. Table 2 studies the effect of available mechanisation options on female employment and work productivity.

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19 Assuming 12 days of weeding per acre/year, Kodagu alone generates 3.143 million weeding days for women annually on its 104,780 ha of land
20 CR Shivakumar, planter, personal communication
21 Based on personal experience of the researcher in using brush cutters.
22 Vindhya Kubanooraya of Vindhya Associates, Mangaluru. Personal communication.
4.4 Analysis of available productivity enhancement methods and mechanisation and impact on women’s labour

The socio-economic status of women growers influences their choice of plantation operations, capitalisation, mechanisation and also their personal involvement in the labour component of plantation work. Women’s role in plantation operations differed between landless workers and women from landowning families even if they were not de jure heads of households. Very small holdings managed by poorer women were characterised by low external input methods of cropping with basic hand tools, low or no access to extension services, inconsistent access to financial services (mostly through self-help groups), land titles and RTCs that did not mention coffee as the crop. They were the main workers on their land. The better off growers had inherited or had greater access to mechanisation, water and irrigation, professional advice, networks, financial services and subsidised inputs. They also had access to permanent and hired labour. Mechanisms to support these categories of women have to be different.

The Coffee Board of India and private sector input and equipment manufacturers offer a range of solutions for mechanisation of coffee plantations. Several of these alternatives are subsidised by the Coffee Board. A quick overview of Table 3 suggests that currently available alternatives for the production of clean coffee are heavily loaded towards large equipment to be operated by men on intensively cultivated plantations. Only three items out of 19 were somewhat suitable for the use of women – rocker type sprayers, brush cutters, pole pruners. No information was available with the Coffee Board on any innovations or recommendations on tools and equipment routinely used by women labour.

Another area of exploration was whether growers had considered redesigning their plantations to reduce drudgery. One respondent\textsuperscript{23} reported that building a network of jeepable internal roads and wider paths was a priority in new plantations as hauling produce and inputs was a real constraint and head-loaders were not often available. This option was more difficult to exercise in old plantations, especially in very steep terrain and would need investment funds. But it is important to begin discussion around labour saving and drudgery reduction beyond tooling to plantation design. The Coffee Board has begun some work on it using experiences from Japanese citrus groves (Coffee Board). MNREGA funds can be potentially used to create major and minor access roads within smallholder plantations to facilitate the use of motorised or manual material handling equipment and wheelbarrows.

\textsuperscript{23} BK Eerappa, personal communication
<table>
<thead>
<tr>
<th>Operation</th>
<th>Current Labour use</th>
<th>W</th>
<th>M</th>
<th>Available Alternative</th>
<th>New pattern of labour use</th>
<th>W</th>
<th>M</th>
<th>Effect on female labour(^2) and reasons</th>
</tr>
</thead>
</table>
| Cleaning around bushes/weeding                 | Manual with sickle | W |   | Brush cutter with some hand weeding           | Male for operating brush cutter, some women for manual weeding | w | M | **Negative**: 75% reduction; women retained for manual weeding for hard to reach areas  
Poor ergonomics of brushcutter harness and control levers not suitable for women; suitable models may need to be identified |
| Pesticide, herbicide spray                     | Backpack spray     | W | M | Herbicide                                     | Male labour                                                      | M |   | **Negative**                                                                                       |
| Fertiliser application (chemical)              | Manual             | W | M | No significant change                         | -                                                               |    |   |                                                                                                         |
| Desuckering                                    | Manual             |   | M | No change                                     | -                                                               |    |   |                                                                                                         |
| Planting seedlings                             | Manual             |   | M | No change                                     | -                                                               |    |   |                                                                                                         |
| Arabica – picking                             | Manual             | W | M | No change                                     | -                                                               |    |   |                                                                                                         |
| Robusta – picking                             | Manual             | W | M | Harvester (e.g., Gulliver)                    | Preferably male for ergonomic reasons                            | M |   | Feedback on results are poor; unlikely to be taken up in small holdings                                 |
| Coffee drying, cleaning packing               | Manual             | M |   | Mechanised heaping and raking with some manual work (e.g., Redbee) | Male operators                                                  | M |   | Expensive equipment suitable for large holdings; unlikely to affect current methods in small holdings |
| Irrigation (optional)                          | Manual             | W | M | No change                                     |                                                                  |    |   |                                                                                                         |
| Liming                                         | Manual             | W | M | No change                                     |                                                                  |    |   |                                                                                                         |
| Pre-monsoon coffee pruning (big kusaath)       | Manual             | W | M | No change in methods.                         | More women are involved nowadays.                                |    |   | No change or greater opportunities for skilled women labour                                                  |
| Shade regulation/trimming                     | Manual             | M |   | Pole pruner                                   | Male or female to some extent                                   | w | M | Not yet popular; but with scope for use by women for smaller trees within 20 feet; **Positive**: if women willing to use pole pruners  
May be expensive for individual small holder to buy despite available subsidies                                   |
|                                                |                    |   |   | Chain saw                                     | For larger logs                                                 |    | M | Cutting larger felled branches with chainsaws would reduce drudgery for women (who have to drag branches before further lopping them). |

\(^2\) Calculations by KK Vishwanath
Table 3: Men’s tools, women’s tools

<table>
<thead>
<tr>
<th>Tools and equipment and suitability to different groups (Excluding item 1, all equipment as listed in the Coffee Board’s list of Empanelled Machinery 2014)</th>
<th>Operable by Women workers</th>
<th>Affordable to Tiny/Small holders</th>
<th>Operated by Men and affordable to Large holdings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hand tools: Sickles, shovels</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. Weed cutters/brush cutters, Gator/Rocking sprayers</td>
<td>✓</td>
<td>✓ (as rental and trade tool)</td>
<td>✓</td>
</tr>
<tr>
<td>3. Telescopic pruner</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Gator/Rocking sprayer</td>
<td>✓</td>
<td>✓*</td>
<td>✓</td>
</tr>
<tr>
<td>5. Hand held battery operated coffee harvesters</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>6. Power chain saw, Battery operated backpack sprayers</td>
<td>✓ (as rental and trade tool)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>7. (14 categories) Engine operated knapsack power sprayers, Pit diggers/Post Hole diggers (auger), Engine operated knapsack mist blower cum duster, Engine operated portable power sprayer without tank, HTP Pump Sprayers (Horizontal Triple Piston), HDP Pump Sprayers (Horizontal Double Piston), HSP Pump Sprayers (Horizontal Single Piston), High pressure Diaphragm Pump Sprayers, Power tiller/Tractor mounted HTP Sprayers without engines, Mini tractor, Mini tractor – FWD with/without trailer, Power tillers and trailers, Rubberised track carriers/Mini transporters (walk behind for steep slopes)</td>
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5. Ways forward

Labour shortages and the drudgery of women’s work in coffee cultivation are recognised by stakeholders but discussions on how to mitigate the twin problems is not apparent from the perspective of small holder women. The current conversations veer around mechanisation suitable to large landholdings. Making women visible as growers and workers on coffee plantation, as a stakeholder group that needs to be consulted and included in the discussion around long term sustainability of coffee is an important step. Interventions must also enhance the sustainability of coffee as a crop, coffee growing as a way of life and must go beyond technical fixes. This is where larger institutional issues arise.

5.1 Institutional mechanisms to support women in coffee

Women growers and workers are not incidental to coffee cultivation, they are the bulk of workers. Gender mainstreaming in the Coffee Board, in growers’ collectives, in state-led or NGO-led extension, poverty and women’s empowerment programmes is needed to provide
space for women as growers and as workers, so that their diverse needs and aspirations are articulated and appropriate solutions put in place. Additionally, in key programmes such as collectives of women like SHGs, it is issues of coffee that need to be mainstreamed in Kodagu; in particular extension, inputs and technologies that are often disseminated through agencies like the Sri Kshetra Dharmasthala Rural Development Programme need to include crops specific to Kodagu.

Closer networking needs to be developed between the Coffee Board, Coffee Research Institutes, Growers’ Collectives (that have a coffee focus) and NGOs, microfinance institutions and technology and technical services providers (that have a gender, equity and technology focus). Also closer collaboration between Coffee Board, Spices Board and state departments of agriculture, horticulture and Krishi Vigyan Kendras could help synergise and harmonise the extension and technology services that growers receive.

5.1.1 Make women in coffee visible: A major problem that weakens the claim for support to women coffee growers in Kodagu is the lack of gender disaggregated data on coffee growers in different categories of land holding and workers. It is important to enumerate women’s participation in coffee cultivation. Enumeration strategies must recognise that several of them are hidden growers contributing greatly to cultivation but having no recognition as owner or manager. These women need to be counted to establish their extent through primary surveys and time allocation surveys.

A core strategy to forward women’s strategic interests in agriculture - regarding rights to productive assets, more responsive behaviour of service providers, easier access to knowledge and inputs is to provide exclusive organisational spaces for women (i.e., women’s member organisations) and develop greater gender sensitivity among the other stakeholders. There is a need to clearly articulate the needs and aspirations of women coffee growers and workers. The Coffee Board would need to use a gender lens in the design of its strategies, policies and programmes and recognise and strive to remove the invisibility of women growers and workers. Additionally, it could support the institutional strengthening of women’s organisations as well as to build gender equitable attitudes within other large growers’ associations. Existing women’s groups offer a very useful platform to provide extension, exchange of ideas and to develop and field test tools. Solutions to challenges in women’s work in coffee may remain small scale and low-technology, but that could be India’s contribution to improving smallholder coffee. The false dichotomy between the
grower and worker needs to be addressed, as most small and medium landholders (i.e., less than 4ha holdings) would probably also be workers on their own land and their needs for knowledge, technologies and tools would be different from those with larger holdings.

**Case 7: Farmer led extension and value addition**

**Moving up the Value Chain:** Currently, most respondents to the study (like most growers) produce coffee as a bulk commodity with little understanding of quality parameters. With labour and capital shortages, several operations that contribute to quality (like harvesting of ripened cherries, optimal shade maintenance, proper drying processes) may be compromised. One initiative to bridge the gap in extension is undertaken by the Codagu Women’s Coffee Awareness Body (CWCAB) with over 400 women members. The members themselves train women in better plantation management and also promote Coorg coffee elsewhere. They have started their own coffee roasting and grinding facility in Somwarpet and sell three brands of coffee in various markets including Delhi. In New Delhi’s Pragati Maidan, the Coffee Board offered them free exhibition space and the group promoted coffee drinking through demonstration of coffee making. Every member and staff of CWCAB is a woman, “even the ‘watchman’ at our coffee roasting unit is a woman!” says Chitra Subbaiah, the founder and current President of the cooperative.

Women are present in coffee cultivation but invisible as category with special needs of knowledge, extension and technology. However, their presence is miniscule once the bag of green coffee reaches the local buying agent. Though not covered by this study, there have been small but interesting supportive interventions by the Coffee Board to enable women’s presence in coffee retailing. Similarly the CWCAB’s work is also significant as a start. Kodagu with its bustling and decentralised tourist economy has opportunities that women’s groups can tap to build a market for quality and fairly traded coffee. This needs capacity building around bean quality, roasting and brewing aspects and various certification programmes. Basic courses or exposure to coffee cup tasting where smallholder women (and men) can participate to understand niche customer requirements must be developed.

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24 This is about participating in the entire coffee value chain in local markets and not necessarily the labelled and global ‘FairTrade’ initiatives where the producer is rarely a part of coffee retailing.
5.2 Appropriate technology for women in coffee cultivation

The range of technical solutions available for coffee cultivation indicate that service providers operate with an assumption of scale and gender neutrality for their products and services; the options are wider for better off growers and hardly any for the marginal grower cum wage worker who is most often a woman. This appears to be true of the coffee sector worldwide. Small holder coffee farmers use similar manual methods, hand tools and make-do solutions for their work across countries. It is only recently that an ergonomic coffee harvesting basket was designed in Nicaragua as a project of the International Ergonomics Association (Bao, Silverstein, & Steward, 2013). Similarly a basket for tea pickers has been designed in Assam (Borah, 2015). This is an area for local innovations to be catalysed as is happening in the coastal districts of Karnataka around the areca crop. Gender sensitisation on design and deployment of technology is essential for policy bodies, growers’ associations, equipment manufacturers, individual innovators and artisans.

Continuous interactions between users and collaboration with service providers, local blacksmiths, large and small equipment manufacturers, input suppliers is crucial for improved and sustained availability of tools, processes and equipment. The ecology in coffee growing districts needs to be developed for local technical innovation, vetting of new technologies, supporting innovators and entrepreneurs to bring innovations to the market. The work of areca producers’ collectives is a useful model to study and emulate; the Krishi Yanthra Melas\(^\text{25}\) held regularly in Puttur had an impressive portfolio of technologies for areca. Several stakeholders of the areca sector collaborate to organise the Melas. Coffee growing areas of Karnataka also have several technical education institutions that can invest in appropriate technology development for coffee.

There is a need for ergonomic evaluations of different tools and such information should be available in the public domain to support the work of individual innovators and entrepreneurs. An objective study of ergonomics and financial viability of exogenous tools and technologies (e.g., different brush cutters, sickles and hoes) is needed for users to make informed decisions on alternatives, instead of the current option of having to make do with options easily available in the market and included in the Coffee Board’s approved list of technologies. The Coffee Board and growers’ collectives need to then have a responsive method to identify, test and approve technologies that are worth deploying and subsidising.

The lens of appropriateness to women workers and very small growers need to be applied every time, so that solutions can be differentiated to suit different customer segments.

Keeping with Coffee Board’s recent interventions in farm redesign, more collaboration between growers and technical institutions is needed to explore designing coffee plantations for the future. Crop diversification, ease of material handling and movement, scope for partial mechanisation where the landscape permits, practices that incorporate emerging attitudes towards farm work need to be incorporated.

Concurrently, innovative financing mechanisms must be developed to make economically poor growers, especially women able to invest in their farm productivity. A rich untapped source of finance to individuals is the existing self-help groups. Coffee growers in SHGs do access loans for investing in their plantations, but the existing pool of SHGs and their federations have not been leveraged for extension services and input provision adequately. The Sri Kshetra Dharmasthala Rural Development Project (SKDRDP) which has nearly 2,500 SHGs covering 26,000 men and women in Madikeri and Virajpet taluks has actively provided agriculture extension to its members – in paddy cultivation, fruit orchards, food processing, etc. but never around coffee. The SKDRDP regularly conducts extremely well attended Krishi Melas and seminars. The Taluk coordinator of the Project was of the opinion that since the organisation and its staff came from Dakshina Kannada (not a coffee growing region) they were not the best to offer extension in coffee production, but would be open to linking up with the Coffee Board. It was a similar response from the Department of Women and Child Development which oversees the Sthreeshakti SHG programme of the Government of Karnataka. It is claimed that SHGs had relatively easy access to finance from public sector banks and Microfinance institutions in Kodagu. This should enable small growers and their collectives and even plantation workers to finance investment in plantations.

6. Conclusion

Coffee in Kodagu can be characterised as a woman’s crop when one studies the gendered nature of its cultivation. But that is where women’s participation effectively ends. They are not the key players in the market where coffee generates value, on global supermarket shelves and upmarket cafés; as a matter of fact no producer of coffee in the world barring a few with links to the roaster and final consumer of a branded coffee is. The lot of the coffee producer needs to improve worldwide, and it is important to recognise the experiences of women in coffee – workers and growers – as distinct from that of men because their social
circumstances differ creating barriers to access to knowledge and training through the same channels as men. This paper traces the experience of diverse women growers in Kodagu mainly as an initial exploration. To sum up, women in coffee (growers and workers) need to be enumerated, recognised and included in the search for solutions. Organisations and institutions for coffee growers in India need to mainstream gender and resource equity in their programming and there is an urgent need to locate and popularise productivity enhancement tools for women and resource poor coffee growers who will continue to farm steep slopes with low capital investment. In a world awash with poor quality commodity coffee, India can pitch for better paying markets by positioning its coffee as artisanal and sustainable with good cup quality. If, indeed, India wishes to gain a competitive edge in coffee markets using the niche or sustainable coffee route, it must recognise the value of the meticulous work of women on its small holder plantations.

**Policy implications**

To recapitulate the policy implications from the study findings

1. **Making women in coffee visible:** The Coffee Board needs to map out the roles women play in coffee production, value addition and marketing, and enumerate women’s contribution to coffee production, especially in the smallholder plantations. The extent of women’s contribution to India’s coffee production would support designing of appropriate programmes and tools to suit women workers and small holders.

2. **Gender mainstreaming in coffee institutions:** Coffee institutions need to create spaces for women’s membership and participation (especially women from small holdings), so that women gain the visibility that their numbers deserve, and can constructively influence the programming of these institutions to be more gender sensitive and equitable. While the Coffee Board has representatives from women and smallholders among its Directors, member based organisation do not yet have mandated presence of women in their governance. Women from grower families, though not de jure land owners, need to be considered as potential stakeholders.

3. **Gender mainstreaming in extension:** Extension services of the Coffee Board and other technical institutions can be better designed to suit women – in terms of topic selection, mode of delivery, scheduling and location of training and advisory and the use of existing women’s collectives, like SHGs, to deliver extension services. The
participation of both men and women from grower households in extension services could greatly support smallholder coffee cultivation.

4. **Collaborative development of appropriate technology for women in coffee**: Since most of coffee production is by women workers, appropriate technologies to reduce women’s drudgery and improving productivity need to be developed in collaboration with individual entrepreneurs, artisans, equipment manufacturers, technical institutions/engineering colleges, coffee institutions and women workers and growers – either individually or through their collectives. Appropriate technology would include tooling, cultivation methods and even farm redesign to suit small scale mechanisation.

5. **Mainstreaming coffee in women’s empowerment programmes** – Civil society and state led programmes for women’s empowerment (SHGs and their federations) need to include access to extension, technology and finance to support smallholder coffee sector, in the coffee growing regions. This customisation of services needs the technical support of the Coffee Board, coffee research institutions and Coffee collectives.

6. **Leveraging women’s collectives to promote quality coffee**: Small holder women can play an important part in promoting Indian coffee locally and globally once they are aware of the quality parameters of niche coffee and those production processes that produce quality coffee. This requires exposure to certification mechanisms, coffee grading, roasting, brewing and cup tasting in local language, simplified to suit the category of participants. Existing and new collectives of women can be effective platforms for this purpose. The Coffee Board can also support the strengthening of governance and executive functions in women’s collectives so that they can participate along the coffee value chain.
Annexe 1: List of Interviewees

1. BM Thimmakka, UG Leelavathi and U Ganesh – Kalur, Madikeri Taluk
2. KK Vimalakshi – Kemmandi, Galibedu, Madikeri Taluk
3. CK Revathi and Kuttappa – Kemmandi, Galibedu, Madikeri Taluk
4. Namitha Rai, Mekeri, Madikeri Taluk
5. PA Kaveramma, K Nidugane, Madikeri Taluk
6. Bollu Medappa, Madikeri
7. Shantha Kumari, Hulithala and Aparna Hulithala, Maragodu, Madikeri Taluk
8. BK Erappa, Kalur, Madikeri Taluk
9. Chithra Subbaiah, Hattihole, Somwarpet Taluk
10. Veena Nanjappa, Hakathur, Madikeri Taluk
13. Vindhya Kubanoraya, Proprietrix of Vindhya Associates, Mangaluru; a dealer for various farm tools and machinery, who is trying to build a female clientele.
14. Damodar, Supervisor, SKDRDP, Madikeri Taluk, dealing with 900 SHGs with around 7,000 members
15. KC Sudarshan, Secretary, Codagu Planters Association, Madikeri and coffee grower
16. Vishwanath KK, Madikeri; small grower, plantation consultant to large plantation operations, member of the Karnataka Growers Federation
17. AP Ananth Kumar, Deputy Director (Extension), Coffee Board, Madikeri
### Glossary and Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Baney</td>
<td>Grasslands and grazing land</td>
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<tr>
<td>CAFNET</td>
<td>Coffee Agroforestry Network</td>
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<td>CPA</td>
<td>Codagu Planters’ Association, Madikeri</td>
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<td>CWCAB</td>
<td>Codagu Women’s Coffee Awareness Body</td>
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<tr>
<td>Dabbe</td>
<td>Thin blade weeder</td>
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<td>Herthe</td>
<td>Shovel or scrape weeding</td>
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<td>Kapaath</td>
<td>Pruning</td>
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<td>KJBS</td>
<td>Kodagu Jilla Belegarara Sangha</td>
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<td>KGF</td>
<td>Karnataka Growers’ Federation</td>
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<tr>
<td>Koodaalu</td>
<td>Work team, a system of shared labour</td>
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<td>Maistry</td>
<td>Farm supervisor</td>
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<td>NGO</td>
<td>Non Governmental Organisation</td>
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<td>Paisari</td>
<td>Revenue land</td>
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<td>PRA</td>
<td>Participatory Rural Appraisal</td>
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<td>PRI</td>
<td>Panchayat Raj Institutions</td>
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<td>RTC</td>
<td>Record of Rights, Tenancy and Crops</td>
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<td>SHG</td>
<td>Self-help Group</td>
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<tr>
<td>SKDRDP</td>
<td>Sri Kshetra Dharmasthala Rural Development Project</td>
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Acknowledgements

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About the Author: Saleela Patkar is an independent consultant specialising in organising and training of rural people especially women. She is a researcher associated with Sustainable Initiatives, Maldare and also a small coffee and spices grower based in Kodagu.
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This research programme, established with the support of the Ministry of Commerce and Industry, Government of India, envisages to help transforming the plantation sector in India to be internationally competitive and sustainable – economically, environmentally and socially by;

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Promoting Policy advocacy – at the regional national and international level - to influence particularly the National and State level policies

Facilitating Networking – of all relevant stakeholders and

Help Capacity building - of all concerned at the regional and national levels.

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