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The Political Economy of Coffee in Kenya

A Case Study from Rumukia and Mathira North Cooperative Societies in the Mount Kenya Area

Wanjiku Chiuri

NCCR North-South Dialogue, no. 28

2011

dialogue

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Cover photo
Left: Focus group discussion with women from Rumukia Society. (Photo by Sarah Ogalleh). *Right:* Intensive farming including coffee in Mt Kenya area. (Photo by Eva Ludi)

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List of acronyms

AEA	Agricultural Extension Agent
AFC	Agricultural Finance Cooperation
ASAL	Arid and Semi-Arid Land
AWF	African Wildlife Foundation
CBD	Coffee Berry Disease
CBK	Coffee Board of Kenya
CDA	Coffee Development Authority
CDC	Commonwealth Development Cooperation
CDF	Coffee Development Fund
CETRAD	Centre for Training and Integrated Research in ASAL Development
CMB	Coffee Marketing Board
CRF	Coffee Research Foundation
FGD	Focus Group Discussion
FLO	Fair Trade Labelling Organization
GoK	Government of Kenya
ICA	International Coffee Agreement
ICO	International Coffee Organization
KCPTA	Kenya Coffee Producers and Traders Association
KFA	Kenya Farmers' Association
KPCU	Kenya Planters Cooperative Union
MDG	Millennium Development Goal
MoA	Ministry of Agriculture
MoCDM	Ministry of Cooperative Development and Marketing
MT	Metric Tonne
NCE	Nairobi Coffee Exchange
NCCR North-South	National Centre of Competence in Research North-South
ODI	Overseas Development Institute
SACCO	Savings and Credit Cooperative Organisation
SCIP	Smallholder Coffee Improvement Project
SDC	Swiss Agency for Development and Cooperation
SL	Scott Laboratories
SMS	Sustainable Management Services
SNSF	Swiss National Science Foundation
TCM	Thika Coffee Mills
TPP	Transversal Package Project
UBS	Cooperative Union Banking Section
UK	United Kingdom
US	United States
USDA	US Department of Agriculture

1 Introduction and Methodology

This study is part of the Transversal Package Project (TPP) on coffee value chains: The Political Economy of Coffee: Global Markets, Local Production: Options for Sustainable Development, which addresses actors and institutional environments related to the production and trade of agro-commodities at local and national scale and links this to questions of global markets and their determinants. The TPP is funded by the National Centre of Competence in Research North-South (NCCR North-South) and is taking place in three East African countries: Ethiopia, Kenya and Tanzania. The project focuses on coffee, as this is of vital importance in these countries, given both state revenues and the dependency of a considerable portion of the workforce on its production, processing and marketing.

The specific objectives were:

1. To examine the effects of coffee price changes on the livelihoods of producers;
2. To explore coffee value chains and the stakeholders involved at various levels of the chain;
3. To identify household responses and coping strategies to changes in the price of coffee;
4. To assess impacts on natural resources and the environment and implications for the future of coffee.

Research methods included a household questionnaire, focus group discussions (FGDs) and key informant interviews, as well as analysis of existing literature. Purposive sampling was carried out to locate two communities in the same locality that market their coffee through different channels. Rumukia uses Fair Trade marketing methods and Mathira North uses traditional auction methods. Time and budgetary constraints were also factors in site selection.

Farmers taking part in the household survey and FGDs were purposively selected with the help of cooperative society factory managers. In this way, 43 households were selected for interview in each study site. To ensure balanced results, we sampled both high- and low-yielding farmers in each location. Because the questionnaire was quite long, we chose literate farmers for this who would be able to spare the time required to respond without requiring compensation.

FGDs were held with members of the two management committees of the cooperative societies; factory managers; low-yielding female farmers; and low-yielding male farmers. Also taking part in key informant interviews and FGDs were senior officials in coffee marketing institutions and government officials in the coffee sector.

Most farmers selected from the respective areas were not really the targeted respondents. This is because the chairpersons of various factories selected their best farmers to attend the meetings, which jeopardised representation of the poorest farmers at the FGDs.

2 Coffee Production in Kenya

Coffee is one of the most traded commodities in the world, with the main consumers not being those who grow it. The origin of coffee is believed to be Kaffa province, Ethiopia, where it was used as a local beverage before the crop spread far and wide to become an important international drink, as well as an economic cash crop in many tropical countries. The beans were first exported to Yemen and other Middle Eastern countries, and then Arab traders took them across the Mediterranean to Venice and the rest of Europe. Eventually, France exported coffee from Europe to America, with the first plantations established in the West Indies.

Coffee has two main types, Arabica and Robusta, grown in tropical and subtropical climates. Arabica is grown primarily in tropical highlands; Robusta, less mild than Arabica, is produced mainly in the low humid areas of Africa, South America and Asia. Most coffee traded in world markets is produced in South and Central America. In 1970-1990, Brazil and Colombia were the largest coffee producers, accounting for about 50% of world green coffee production (ICO, 2001). t

2.1 History of coffee in Kenya

Coffee was introduced in Kenya from Ethiopia at the end of the 19th century. Around the turn of the century, commercial farming began in Kiambu district. Thereafter, coffee farming spread to other regions of colonial Kenya's 'white highlands,' but was grown only by white settlers. Given Kenyan objections to this situation, in 1923 the colonial government allowed controlled planting of coffee by Kenyan farmers outside European settled areas, particularly in Kisii and Meru.

To regulate the industry, the colonial government enacted the Coffee Act in 1933, establishing the Coffee Board of Kenya (CBK) to regulate, promote, inspect, license, process and market coffee. In 1933, the Kenya Coffee Association was established and the first coffee auction was held. In 1940, the CBK introduced the coffee pool, with an in-built policy framework of differential prices and classes to encourage production of high-quality coffee. By 1944, what was in 1964 to become today's Coffee Research Foundation (CRF) had been born[1]. In 1946, the Coffee Marketing Board (CMB) was set up for marketing, central warehousing, central auction, liquoring and financing. This was abolished in 1971, with marketing consolidated with the regulatory functions of the CBK.

Kenyan coffee production increased steadily. By 1952, there were 11,864 licensed African coffee planters with 3,038 acres under coffee. Marketing was handled through rudimentary institutions, still in the formative stages. There was no real statutory control in terms of good crop husbandry, processing or grading. Coffee was exported in parchment and mbuni[2] form, mainly to the UK.

1 In 1944, the government purchased the Jacaranda estate and converted it to a research station under the control of coffee planters. This was the foundation of the current CRF, initially funded by the government. Today, the foundation receives funding from the proceeds of coffee farmers (2% of national coffee sales).

2 Mbuni is unwashed coffee and comprises about 10% of the total crop. It is graded either as heavy or light, is sour in taste and generally fetches lower prices.

In 1954, the colonial government's Swynnerton Plan was introduced, with the main objectives of land adjudication and consolidation. The plan also facilitated African acquisition of land and so led to the expansion of coffee production. The first African coffee cooperatives were registered soon after implementation of the plan. Scattered coffee millers were amalgamated into one major miller: the Kenya Planters Cooperative Union (KPCU), although a few millers decided not to join in. The new land tenure system was used to control crop husbandry standards and cooperative member recruitment. Those without title to land could not be members of a cooperative and therefore could not plant coffee. Coffee planting was also restricted to a specific number of trees. In 1955, Kenya Coffee Auctions Ltd was set up and in 1960 the Coffee Ordinance was passed.

Between 1960 and 1970, the Kenyan government developed pragmatic policies to encourage formation of smallholder coffee production and marketing cooperatives, expansion of processing facilities within cooperatives and improvement of coffee payments to smallholders. For example, in 1968, the Coffee Development Authority (CDA) was established to improve the development of coffee among small-scale producers. As a result, between 1970 and 1980, the cooperative sector surpassed the estate sector in terms of total production of coffee (see Figure 1).

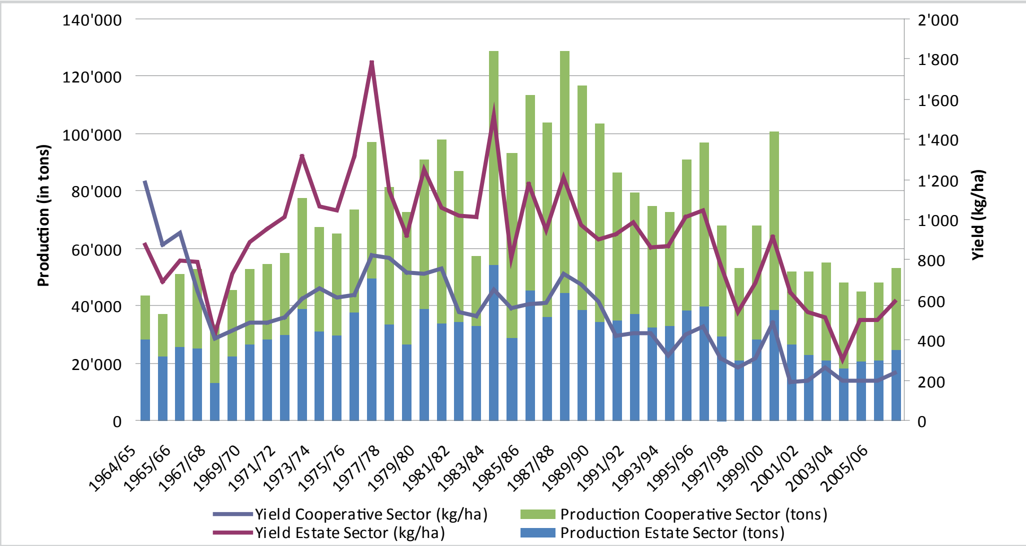

Figure 1: Coffee production and productivity, 1963/64-2006/07. (Source: CBK annual records).

In 1976-1977, as a result of increased area under coffee in the cooperative sector and high productivity per tree in the plantation sector, a coffee boom took place. During this period, heavy congestion at pulping factories adversely affected coffee quality. By 1988, coffee production had reached 128,000 MT (thanks also to the Smallholder Coffee Improvement Project (SCIP), see Box 1). This positive trend was halted as a result of declining world coffee prices, and by 1992 coffee production had dropped to below 71,000 MT. However, a recovery in world coffee prices, coupled with economic liberalisation measures, led to a rise in coffee production to 95,000 MT by 1994/95.

Box 1: Smallholder Coffee Improvement Project.

The Commonwealth Development Corporation (CDC) SCIP Phase 1 resulted in improved production in 1973-1980. The principal aim was to strengthen the capacity of cooperatives in terms of rehabilitation and construction of factories; water provision in pulping factories to reduce river pollution; provision of farm inputs/credit; training and extension services; and provision of electricity to factories to reduce pulping costs. At the close of SCIP 1 in 1985, the government negotiated for funding for SCIP 2, which aimed at enhancing operational and managerial efficiency of various institutions within the coffee industry. To meet the objectives of SCIP 2, the government formulated and released a paper on Economic Management for Renewed Growth, which outlined the desire to triple coffee production by the year 2000. According to this policy, 'for Kenyans to enjoy even modest improvements in their current standard of living, it will be imperative that ... agriculture remains the leading sector in stimulating economic growth and job creation' (GoK, 1986).

Meanwhile, the Cooperative Bank of Kenya and Cooperative Union Banking Sections (UBSs) expanded in terms of excess liquidity, which played a significant role in financing the sector. To monitor the increased production and regulate the industry, the CBK took full control of clean coffee warehousing. As global trade and marketing scenarios evolved, however, the government continued to adjust policies and laws governing the agriculture sector, and coffee in particular.

Against this background, small-scale cooperative societies grew into giant corporations. In Nyeri district, Mathira, Tetu and Mukurwe-ini marketed most of the cash crops, including milk, coffee and tea. Between 1987 and 2000, the sector saw open corruption and gross mismanagement, as well as serious, occasionally fatal, conflict among farmers. This led to the collapse of the cooperative movement and the giant agricultural societies. These splintered into individual factories or into several smaller societies of two to three factories, most of which were uneconomical. The Ministry of Cooperative Development and Marketing (MoCDM) stepped in with the Coffee Act of 2001, which dictated that a cooperative cannot have fewer than five factories. Hence, from Mukurwe-ini giant cooperative society there emerged several smaller cooperatives, including Rumukia, with eight factories. Mathira giant cooperative was also split into several cooperatives, including Mathira North, with five factories. The same act also removed coffee marketing tasks from the CBK, leaving the organisation with only its regulatory and licensing duties.

Between 1998 and 2007, coffee production in Kenya experienced a reduction in both volume produced and yield per unit area. Production in 2007 was at 53,000 MT (see Annex 1). The main reasons for this decline are as follows:

- Poor proceeds leading to lower investment in the crop;
- Poor marketing processes
- Ageing coffee farmers, especially among small-scale farmers;
- Mismanagement of coffee cooperative societies;
- National-level economic mismanagement;
- Global changes, especially the collapse of International Coffee Agreement (ICA) in 1989;
- Increased global competition, in particular from Vietnam.

2.2 World coffee supply and demand and Kenya's status

World coffee consumption is large. According to the International Coffee Organization (ICO) (Daviron and Stefano, 2005), world coffee consumption in 2000/01 was 61.8 million bags, although this was down from the 90 million bags of 1996. The US consumed 19.4 million bags in 2000/01, Germany 9.5 million bags and Japan 6.8 million bags. As a result of this high demand, coffee is second only to oil in terms of the most traded export products.

Weather conditions, prevailing coffee prices, cultural practices, government policy and price support programmes, world export demand and management practices, among others, affect the supply of coffee. For example, a production increase after recovery from the 1953 Brazilian frost induced drastic price declines. Likewise, frost in Brazil in 1975 and a drought in 1985 caused a sharp drop in production and correspondingly dramatic increases in prices (CBK data). The collapse of the ICA in July 1989 was followed by a price decrease from $1.30 to $0.98 per pound in less than a month. Table 1 shows world supply of coffee and average prices in the past five years.

Table 1: Coffee production by exporting countries and average price, 2001/02-2006/07.

	Million MT	**Average price Ksh/ MT ($)**	**Average price Ksh/50 kg ($)**
2001/02	7.6	94,746 (1,230)	4737(62)
2002/03	6.6	98,869 (1,284)	4944 (64)
2003/04	7.3	123,918 (1,609)	6196 (80)
2004/05	6.7	176,881 (2,297)	8844 (115)
2005/06	8.1	176,177 (2,288)	8809 (114)
2006/07	7.4	190,259 (2,470)	9513 (125)

Note: $1=Ksh77.

Source: Foreign Agriculture Service/USDA, Office of Global Analsysis and ICO data.

Kenya's share in production of coffee for the world market is estimated at barely 2.3%. Most Kenyan coffee is consumed in Europe, but there appears also to be a huge demand in the US, especially in the gourmet coffee market. Kenya has been caught in a dilemma of targeting its coffee to the European blending market and at the same time addressing speciality demands in the US and elsewhere in the world. Kenya has been marketing and promoting its coffee proactively in various local and international fora for blending purposes. However, the country should consider further promotion of gourmet coffee in all potential markets, as market intelligence shows that the gourmet coffee market worldwide is growing quickly. In 2007, 96.3% of Kenya's coffee production was for the export market, with only 3.7% geared towards local consumption (CBK data).

3 The Kenyan Coffee Value Chain

Small-scale farmers all over the world make a substantial contribution in the coffee industry. Unfortunately, in Kenya, as elsewhere, their 'marketing' starts and ends when they deliver their cherries to the pulping factory. The reality in Kenya is that the appointed and licensed miller begins the coffee value chain, which starts in the producer country and ends up in consumer countries.

3.1 Coffee marketing chain

There are two types of producers in Kenya. The first are small-scale farmers, with an average farm size of 2 ha or below. When the coffee cherries are ripe, farmers pick them and deliver them to their respective cooperative factory for pulping. Middle- and large-scale farmers with larger areas under coffee are licensed to have their own pulping factories on their farms.

Pulping or processing factories (both cooperative and those on plantation farms) take in the coffee delivery, weigh it (in kilograms) and classify the cherries as Grade 1 or 2, with Grade 1 being the superior quality. In cooperative factories, the delivery is recorded and used to determine the payment a farmer will receive per kilogram of cherries. The factories sort, pulp, ferment and dry the cherries into parchment coffee, thereby adding value. The purpose of this is to ensure a better price than can be obtained from the raw cherry. Cooperative-run pulping factories then organise for the transportation of the coffee to the coffee miller, meeting the cost through levies. Plantation farmers have to meet their transportation costs directly.

A primary cooperative society is made up of a number of pulping factories. An elected committee manages the society and day-to-day operations are delegated to a team of employees, who include an administrator, a secretary manager and qualified coffee factory managers, to ensure that the cooperative produces quality coffee. Cooperative societies accumulate stocks of coffee in their factory stores. Stocks are held back until a sufficient and economical quantity is collected for delivery to a coffee miller appointed by the members.

The coffee miller removes the husks and grades the coffee beans. Parchment coffee, when milled, is classified into a number of grades based on the screen size of the bean. Clean coffee beans are sorted into specific grades using ultra-violet sorting machines. These machines remove beans that are visibly or invisibly defective, in order to raise the overall quality of the coffee. There are seven licensed millers in Kenya.

In most cases, but not all, the miller doubles up as the marketing agent. The Coffee Act of 2001 defines marketing of coffee as 'acquiring and offering coffee on behalf of the grower for purposes of trade.' In this respect, marketing in the coffee industry includes the process of preparing a coffee sales catalogue and preparing sales samples. Further, the act provides that 'no person other than a grower shall market clean coffee at the auction unless he is a holder of marketing agent's license.' A marketing agent is described as ‘any person licensed by the Board and appointed through a specific agreement by another person to market his coffee.’

At the marketing stage, the miller/marketer engages a liquorer to taste the coffee and evaluate the coffee’s aroma and flavour profile to grade it to be sold[3] and also those licensed for warehousing. The Coffee Act requires that all milled coffee be delivered to a warehouse for accountability purposes, to be prepared for cataloguing and presentation for sale at auction or direct sale. There are 24 licensed coffee warehouses in Kenya.

The miller/marketer registers the consignment for auction at the Nairobi Coffee Exchange (NCE) or for direct sale, popularly known as the ‘second window’.

Since the first coffee auction in the 1930s, most Kenyan coffee has been sold at the NCE, which is under the management of the Kenya Coffee Producers and Traders Association (KCPTA). This sales system is normally held every Tuesday throughout the year. The sale of coffee is carried out on the basis of documents, as marketing agents and buyers have already obtained and examined the coffee samples. Any bidder in the market should be a licensed coffee dealer and should buy coffee through competitive bidding.

The ‘second window’ is the term used to describe direct sales of coffee. Direct sale allows coffee growers to sell their coffee directly to buyers abroad or exporters without going through auction. The system was introduced in November 2006 as a result of lobbying by coffee farmers, who viewed the auction system as associated with price fixing and corruption. Direct sales require that a marketing agent directly negotiates with a buyer outside the country and a sales contract is duly signed and registered with the CBK. The CBK ratifies the contract after carrying out an inspection and analysing the coffee for quality and value as per the contract. The process is so lengthy that only a small fraction of Kenyan coffee is sold directly, with the vast majority still traded through the auction (Wahome, 2010). Direct sale currently accounts for less than 10% of coffee sold in Kenya.

In the ideal Fair Trade option, as with direct sale, the product does not go through auction but all other steps of the chain are followed. As such, the end price of the coffee sold through Fair Trade (or direct sale) is not significantly different. What makes the difference is that, through Fair Trade, the society receives the Fair Trade premium from the roaster/retailer for each pound of coffee consumed, which for normal direct sale does not apply.

After warehousing, a dealer/certifier, registered locally and/or internationally, negotiates with a buyer outside the country of origin of the coffee. Because the buyer and the producer of the coffee are miles apart, an assurance is necessary that each party will adhere to the trade terms. Certification involves auditing the coffee to ensure that the parties adhere to the set trade codes of conduct, especially in terms of delivering

3 A second liquoring is carried out later by the buyer to verify the grading and description by the miller/marketer.

the right coffee and prompt payment to the growers. It ensures that strategic alliances between importers and roasters are set up and that opportunities exist to diversify product offerings and penetrate higher margin markets, as well as assuring the buyer and consumer of the origin of the coffee. The sales contract is then registered with the CBK, which analyses the quality of the coffee on sale and assigns value in accordance with the contract.

Beyond these roles, the importers, roasters, retailers and consumers are the final links in the value chain, and these are located for the most part in the consumer country.

3.2 Coffee prices

The grade and class of a coffee bean describe its quality, which then dictates its price. As such, the price of coffee is determined by quality and not based on the cost of production. Coffee growers do not decide the price of their coffee but may assist a marketing agent to fix a reserve price for the coffee on sale. The coffee market, through use of 'cup coffee quality,' is therefore the main determinant of coffee prices. Cup coffee quality is determined by the liquorer, who classifies brewed coffees from various sources and grades them.

Table 2 shows the price of 50 kg of clean coffee at auction in Nairobi between 1998 and 2007.[4]

Table 2: Coffee auction prices (50 kg), 1998/99-2006/07 (Ksh and ($))t.

Year	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Ksh ($)	7,816 (102)	5,754 (75)	5,889 (76)	5,981 (78)	5,898 (77)	6,348 (82)	5,902 (77)	5,476 (71)	9,780 (127)

Source: CBK data.

After coffee dealers have received their payment from the market, a number of charges, levies or tariffs are effected before the final payment is credited to the producers/growers. The deductible charges as spelt out in the Coffee Act are:

- Marketing charges equivalent to $50 per MT of clean coffee;
- Milling tariffs ranging from $75-110 per MT of parchment;
- Auctioneer's fee of 0.02% of gross sale(s);
- Produce cess of 1% of the gross sale for road improvement;
- CBK levy of 1% of the gross sale(s); and
- CRF levy of 2% of the gross sale(s).

Cooperative societies deduct administrative costs, mainly for running expenses, and other costs, such as credit/loan repayments. These costs range between 20% and 79% of the payment received from a marketing agent, depending on the degree of efficiency of the cooperative, its transparency and the level of corruption in the management of the cooperative and the factories.

4 Coffee is packed in 60kg gunny bags but auctioned in 50 kg packages. No explanation for this could be found.

As such, the coffee payment chain is illustrated as: external coffee market – coffee dealer – marketing agent – coffee grower.

Receipts from the external market are channelled to the coffee dealers, since it is they who handle the coffee from either the auction or the second window. Marketing agents are either registered as growers or as commercial agents. They are viewed by the dealers as the owners of the coffee and therefore dealers credit their accounts. A grower marketing agent, e.g. a cooperative society, is therefore credited with all the receipts less the relevant deductions. A commercial marketing agent has to remit what s/he receives from a coffee dealer to the growers' account. As noted above, all proceeds from the market are subjected to charges. Therefore, the payment received by a grower selling coffee at auction or through the second window depends on the price fetched at the time less the statutory and administrative marketing charges.

4 Description of the Study Area

Former Nyeri district has been subdivided to form three new districts, Kieni, Nyeri North and Nyeri South. Rumukia Coffee Cooperative Society is in Mukurwe-ini division in Nyeri South and Mathira North Coffee Cooperative Society is in Nyeri North. Former Nyeri district lies between 3,076m and 5,188m above sea level, with a mean temperature ranging from 12.8-20.8˚c. The main physical features of the district are Mount Kenya (5,199m above sea level) to the east and the Aberdare Ranges (3,999m) to the west. The district has several rivers that are tributaries of River Tana, including Sagana, Chania and Gura Rivers, which provide the district with adequate water for domestic needs, agriculture and industrial development.

Former Nyeri district is in the highlands equatorial zone of Kenya and hence experiences equatorial rainfall for the most part. Most years have adequate precipitation for normal agricultural activities. The long rains come in March to May and the short rains are expected in October to December. However, this pattern is often disrupted by abrupt and adverse changes in global climatic conditions, leading to prolonged drought and/or intense rainfall (Metz et al., 2007). Rain and soil fertility have influenced settlement patterns in the district. Areas with low rainfall and poor soils have low population densities, whereas areas with good rains and rich soils are densely populated. The two study sites are among those densely populated areas in the district (Table 3). The study area is very hilly, with steep slopes, and most homes are erected on the top of hills.

Table 3: Population density by division, Nyeri district, 1999 and 2008 (estimated).

	Area (km2)	1999 census (persons per km2)	2008 estimate (persons per km2)
Tetu	279	287	294
Mukurwe-ini	180	459	470
Mathira	389	388	397
Municipality	167	606	621
Othaya	171	516	528
Kieni West	1230	56	57
Kieni East	850	98	100

Note: The 2008 estimated is based on a population growth rate of 2.4% on 1999.

Source: Nyery District (2002).

Rumukia Coffee Cooperative Society has eight factories (Kiawamururu, Kagunyu, Gatura, Thunguri, Tambaya, Ndia-ini, Maganjo and Gaikundo). Mathira North Coffee Cooperative Society has five (Rui-ruiru, Kabiru-ini, Kiamariga, Hiriga and Kahira-ini).

4.1 Household profile

In Rumukia, 38% of respondents had moved in to the area from another village. Another 21% had moved in from another region in Central province. The rest (41%) had been born in the area. In Mathira North, most households (44%) had been formed between 1960 and 1964, although this does not really represent a moving in from outside but more a slight shift, as many families were reallocated land or had their land consolidated under the Swynnerton Plan. All households interviewed in both locations were Christian.

In Rumukia, 83% of respondents were married, 14% widowed and 2% single. Although 98% of respondent households were male-headed, only 83% of actual respondents were male. In Mathira North, 77% of respondents were married, 7% were single and 16% were widowed. Of these, 77% were male and 72% were aged above 60 years.

In interviews and FGDs, respondents noted that they have not laid down any strategy to pass on coffee production interests to the younger generation, saying that young farmers do not want to engage in coffee production because it does not pay much. This is exacerbated by the fact that young coffee growers are often not the actual owners of the coffee but have been allotted coffee trees by their parents on the condition that they also tend to their parents' coffee and do not cut down or uproot coffee trees. Parents repossess the coffee crop if the child neglects it. Meanwhile, most coffee farmers are aged and may not be able to work efficiently on their coffee farms (or this may be the case in the future). All of this means that there are problems with regard to sustaining the crop over time and improving coffee production in the area.

4.2 Wealth ranking (according to respondents)

Table 4 shows wealth ranking according to male and female respondents in Rumukia.

Table 4: Wealth ranking according to male and female respondents in Rumukia.

	Absolute poor (10%)/(5%)	**Poor (30%)/(5%)**	**Middle (40%)/(30%)**	**Rich (20%)/(5%)**
Animals	No livestock at all	Calf, sheep and chicken. May have 1 cow, giving 4 litres a day	Own 1-3 cows producing 6 litres of milk per day	At least 2 cows giving over 10 litres a day (at least 5 cows – male respondents)
Clothes	Donations from neighbours, churches	Second-hand clothes	Well dressed (boutique and quality second-hand)	Well dressed in new clothes from boutiques
Coffee	Less than 100 kg per season; may rent out coffee land	About 300-1000 kg per season	2,000 kg per season	5,000-10,000 kg per season

Car	No car, no bicycle	No car, may have bicycle	May have old car or bicycle	Personal and business cars
Housing	Mud/timber house with slanted tin or plastic roof	Timber house (mud or cement floor)	Semi-permanent house (wood and cement)	Stone house
Children	Many children with jiggers.** Children attend free primary education occasionally***	4-5 children, free primary-level schooling	4-5 children, educated up to secondary school	4 children privately educated, even overseas
Food security	Highly food insecure. Erratic meals (sometimes neighbours donate food)	Food insecure, often only 1 meal a day	Adequate food but not necessarily balanced, well-fed children	Food security: balanced diet

Note: * The first number in brackets is the estimate given by female respondents; the second is that of the male respondents. ** A jigger is a flea parasote that mainly infects the feed and fingers. It is a sign of deep poverty. *** Even though primary education is free, the poor cannot afford to make other payments, so some children stay at home (tuition, extra teachers, uniforms, food, etc).

Table 5 shows wealth ranking according to male and female respondents in Mathira North.

Table 5: Wealth ranking by respondents in Mathira North.

	Absolute poor (10%)/(5%)	**Poor (30%)/(5%)**	**Middle (40%)/(30%)**	**Rich (20%)/(5%)**
Animals	No livestock at all including chicken, sheep and goats	Have 1 cow (average yield of 2 litres) or none, may have sheep	May have 1-2 cows that produce 8 litres per day; sheep, goats and chickens	At least 5 cows and 50 litres of milk per day (9-10 litres each a day – male respondents). May also have pigs
Clothes	Donated by neighbours	Dress in second hand clothes, occasionally new clothes	Well dressed, in both new and second-hand clothes	Well dressed in new clothes from boutiques
Coffee	Less than 100 kg per year	About 50-300 coffee trees yielding about 200-500 kg per year	On average 800 trees, with an average yield of 3,000 kg per season (average 100-300 trees yielding 1,500 kg – male respondents)	More than 10,000 trees and may have own pulping plant ad workers. Yield above 9,000 kg (800 trees yielding 3,000 kg – male respondents)

Car	No car or bicycle	No car, may have a bicycle	Bicycle	Personal and business cars
Housing	Un-cemented mud/timber house with slanted tin or plastic roof	Un-cemented timber house, may have mud or cement floor	Semi-permanent house (wood and cement)	Permanent stone house with electricity
Children	Many children, attending free primary education occasionally	Many children, free primary-level schooling	5-6 children, educated up to secondary school and go to school throughout the year	Average of 4 children, educated at private school
Food security	Highly food insecure. Erratic meals (sometimes neighbours donate food)	Food insecure, 1 meal a day	Adequate food throughout the year	Food security assured: adequate and balanced diet for their families throughout the year

Notes: * The first number in brackets is the estimate given by female respondents; the second is that of the male respondents.

4.3 Land and livelihoods

4.3.1 Land size

The average land size of respondents is 0.4ha in Rumukia and 1.3ha in Mathira North. All respondents in Rumukia own land and 98% of those in Mathira North. In both locations, about one-third of respondents both farmed their own land and rented land to farm (from landlords, relatives, the local council or poor farming households). Most farmers do not have fallow land, as this is seen as uneconomical and almost impossible on their small parcels of land.

In many cases, farmers do not have title deeds for their farms, although they have control, access and decision-making power over the crop, land and provision of labour. Inheritance is guided by Agikuyu customs that state that land should not be inherited while the original owners are still alive. Titles are usually still held by the parents, and it is a costly and bureaucratic procedure to swap them over to other people without the death certificate of the original owner. Even when the owner is already dead, people are scared to start a process they see as complicated and prone to corruption.

It is men who own the land, according to all respondents. Most women have no title to the land on which they work on, but they have some access and control rights to most of the crops grown. Women who are widowed are often still under the command of their fathers-in-law, who still hold the land title and may dictate what can be farmed and where.

4.3.2 Crops

The main crops farmed by the small-scale farmers in both areas include: coffee, maize, beans, Irish potatoes, sweet potatoes, bananas and various types of vegetables. Coffee and milk are the main cash earners in both localities. Most of the food crops are consumed at household level. Maize, beans, Irish potatoes, vegetables and coffee are all intercropped, given the small parcels of land owned by the farmers coupled with the high dependency burden within the household.

The area under coffee in both localities is less than 0.5ha on average, although coffee is seen as the major source of income. Farmers in Mathira North have larger holdings compared with Rumukia farmers. The remaining area is for subsistence crops, livestock rearing and housing.

All farmers engage in subsistence farming. In Mathira North, about 67% have a surplus for sale, especially when the weather has been favourable. The rest have nothing to spare for sale and are net buyers. Of those who sell, 90% do not get more than Ksh 20,000 ($260) from such sales in a year. Only 37% have fruit for sale and they do not earn more than Ksh 10,000 ($130) per year. Only two farmers have macadamia trees, one earning Ksh 3,000 ($39) and the other Ksh 5,000 ($64) from the sale of nuts the previous year. Of those households producing a surplus, a fifth receive an income of Ksh 9,000 ($117), 20% received Ksh 30,000 ($390), another 20% received Ksh 92,000 ($1,195), 20% earned Ksh 136,000 ($1,766) and 20% earned a total of Ksh 171,000 ($2,221).

4.3.3 Other sources of income

In Mathira North, 56% of respondents receive an income through sale of livestock, although 75% of these do not get more than Ksh 20,000 ($260) per year, limited by the numbers of livestock owned. Milk is sold by 49%, half of whom earn less than Ksh 20,000 ($260) per year from this.

Apart from coffee, in both areas renting out labour is a major source of income. Casual labour pays more than coffee production for many households, especially those farmers with low coffee yields or non-coffee farmers, including adult children of aged coffee farmers. Both young people and women hire out their labour.

Younger family members may also work in the military, domestic service, food/tea preparation for sale, embroidery, carpentry, blacksmith/metal work or hairdressing. Families may also have an income from small shops, renting out a house, sale of grass/fodder, sale of trees, posho milling or sale of scrap metal or charcoal.

Farmers agreed that they rely heavily on credit. Farmers take credit from a number of savings and credit cooperative organisations (SACCOs), at interest rates of between 10% and 24%. In Mathira North, 44% accessed credit facilities, both from formal and informal sources. Because they are not able to make timely repayments, they have to continue to borrow (see Section 4.8).

Meanwhile, a few households receive remittances, mostly going to elderly women or mothers (as coffee is considered a ‘male crop’ whose profits must go to the male head of the household). In some cases, remittances can be more in the form of loans repaid in farm products. In Mathira North, 47% of respondents receive remittances (from relatives and friends).

4.4 Labour

In both Mathira North and Rumukia, most agricultural labour is provided free of charge by family members. This often includes children and the elderly.

In Rumukia, although male and female labour contribution in coffee is equal (50% each), 67% of labour for subsistence farming and 71% of that for livestock rearing is provided by women, leading to an overall average of 63% of all labour in the households provided by women. Men use the time left to them to socialise.

Women have long working days, which include both reproductive and productive duties. Respondents in both sites reported 15- to 17-hour days, including eight hours on the farm as well as many domestic chores. It is also important to point out that all animals in the surveyed homes are zero grazed; ferrying fodder (as well as coffee and other crops) is mostly women’s work (the terrain limits most forms of mechanised transport). They also provide the bulk labour in domestic chores (fetching water, cleaning, milking and general household maintenance). In addition, women take part in basket making, embroidery/tailoring and hairdressing. Respondents did not include these duties under household labour or income sources, but said that they do them in between other chores. Most of the products are used at home or are given to friends and relatives. Vegetables and kitchen gardens are mostly tended to by the women too, as are poultry.

Coffee is mainly seen as a male pursuit, even though women do a great deal of the work. Women weed, harvest and carry the coffee crop. In FGDs with both men and women, it was suggested that men have ownership but women have access, and if women withdrew their labour from coffee the men in the household would leave the crop mostly untended, to be sold as mbuni in the end.

Those who do not have sufficient household labour (or the children are too young and the elderly too old) employ the services of casual labourers. In addition, most farmers reported that their children do not want to be involved in the production of coffee because of the lack of profit. In this case, farmers may also hire labour, taking out credit to do so. For the most part, it is young male adults who provide hired labour to other households, but women also take part in renting out their labour.

4.5 Livestock holding and access

Most farmers own cattle, sheep, goats and chicken, with fewer cows per household now (mostly one) compared with 10 years ago. Cattle are usually not sold for income but may be sold to deal with an emergency, such as a hospital bill or school fees. Calves are reared for not more than three years before being sold.

Animals are zero-grazed, tethered in any available public space or walked along the roads.

None of the respondents has access to draught power for ploughing, mostly because the land in question is too small or too hilly, therefore not suitable for ploughing. In both sites, farmers work their land by hand. This is one reason why hired labour is widespread in the area and a relatively good income earner.

4.6 Water access, sources and use

Rumukia Coffee Cooperative Society is in Nyeri South district where, according to the local engineer, irrigation potential has not been fully exploited. Of the 89 irrigation projects in former Nyeri district, only six of them are in Nyeri South.

Most farmers in the Rumukia area have access to piped water (66%), from a project established by Mukurwe-ini giant cooperative society in the 1980s. Another 21% rely on rain harvesting and a further 7% on wells for their primary source of water. Rivers are another source of water (mainly secondary). Water is relatively accessible: for over 90% of farmers in the rainy season and 57% in the dry season, water is about five minutes away. Only 21% of respondents mentioned a round trip of 30-35 minutes to fetch water during the dry season.

However, 88% of respondents do not use water for irrigation, mainly because of inadequate amounts, but also because they are not allowed by the government to use domestic water for irrigation purposes. The remaining 12% of respondents have only recently started to use water from a well or a river to irrigate vegetables for home consumption or fruit trees. The area under irrigation is very small and always below 25% of the total land. Those who do not use irrigation water mentioned as reasons inadequate supply of water, or that irrigation is prohibited by the government because of insufficient water or lacking infrastructure.

In Mathira North, 40% of respondents depend on river water, 33% on rain harvesting and 2% on springs, while 26% have tap water in their homes. The latter is metered and they are charged according to the quantity utilised.

Mathira North Coffee Cooperative Society is in Nyeri North district, where there is more access to water for irrigation. Of sampled respondents, 21% have access to water for irrigation to grow horticultural crops for local and export markets. Of these, 56%

irrigate less than a quarter of their land and 44% irrigate between a quarter and a half. Respondents who do not access irrigation water cite a variety of reasons, in particular inadequate amounts of water for irrigation but also lack of nearby water sources and high expenses associated with irrigation.

4.7 Agricultural extension and access to information

Farmers were asked how many times in the past three years they had received support from the Ministry of Agriculture (MoA) or an agricultural extension agent (AEA). In response, 55% in Rumukia and 51% in Mathira North said that they have received no support at all and 31% in Rumukia and 37% in Mathira North said that AEAs have addressed farmers at factory level but not at their homes. When they assemble for meetings at the factory, the kind of support provided is usually information on how to manage coffee (e.g. manuring, composting, soil management, thinning, pruning, etc), on other crops (vegetables, fruits, nuts, etc) and on alternative farm activities (bee-keeping and poultry). Those farmers who have been visited (at most three times in as many years) said that they had to go looking for the agents.

However, in Rumukia, 91% of respondents said they had received support from a third party that was not the government. In Mathira North, of the 49% who received extension services in one form or other, over half received these from sources other than the MoA. In both cases, most of this support comes from Sustainable Management Services (SMS), a subsidiary of Starbucks, and from locally organised self-help farmers' groups, churches or research institutions.

SMS offers skills training, tools such as knapsacks sprays, aprons, pruning scissors and coffee pruning saws and information relating to farm management and soil testing for pH levels. Most of the tools from SMS stay with promoter farmers, who are those who deliver over 1,000 kg of coffee a year, picked to tutor others on good coffee husbandry. Each is given 50 farmers to take care of in the neighbourhood. They receive all the farm tools required to manage coffee and a small payment as a compensation for the time spent supporting other farmers. In theory, the 50 farmers should be able to access the tools but in practice this does not happen. When they are available, it is often too late in the season.

4.8 Access to credit

Farmers seek credit to pay for inputs aimed at increasing coffee yields, but this often does not work out because the crop fails to increase. Credit borrowed to improve coffee crops often ends up paying for other very pressing household needs. Thus, a very small proportion of the credit is directed towards coffee production, yet the coffee crop is given as a guarantee. Loan facilities are challenging, considering that most farmers are expected to repay the loans using proceeds from their coffee, in small payments over two or three years.

In Rumukia, 55% of society members (or their household members) had borrowed money from a SACCO, 36% had not borrowed at all and 5% had borrowed from a coffee union/cooperative. Most farmers had received loans from Taifa SACCO, formerly Nyeri District Cooperative Union. Other financiers mentioned include Mkulima SACCO and the Agricultural Finance Cooperation (AFC). These institutions charge an interest rate of 14% and the average amount borrowed was KSh 36,000 ($468), with the minimum KSh 12,000 ($156) and the maximum KSh 120,000 ($1558). Only 5% of respondents in Rumukia had fully repaid their loans as of the time of the interview. Of those who had not borrowed, 19% were not eligible and 43% did not need credit, did not want debt or did not like the terms and conditions of the credit.

In Mathira North, 31% of respondents had accessed credit from informal sources and 26% accessed credit from formal sources, i.e. from SACCOs such as Taifa. A small number – 9% – had accessed loans from the Coffee Development Fund (CDF). The remaining 44% shy away from credit facilities, put off by high interest rates of 10-24%, which they consider unfavourable.

4.9 Income and expenditure

4.9.1 Income

Most respondents in Rumukia (62%) and nearly half in Mathira (49%) said that the income raised is not sufficient for their household. When asked about the shortfall, 26% in Rumukia and 19% in Mathira North said they need KSh 240,000 annually ($3,117) to make it through the year, 14% in Rumukia and 17% in Mathira North said KSh 120,000 ($1,558) and a further 14% in Rumukia and 19% in Mathira North said KSh 360,000 ($4,675). This is more than coffee generates even in good years.

Only 10% of households in Rumukia and 5% in Mathira North felt they are doing well in financial terms, meaning they are able to meet their household needs and save money to invest in purchase of livestock or other assets, improve their land or improve housing. A further 83% in Rumukia and 74% in Mathira North said that they are doing just okay, which meant they are able to meet basic household needs but with nothing extra to save or invest. And 7% in Rumukia and 21% in Mathira North said that they are struggling to make ends meet, and can do so only by depleting productive assets and/or receiving support from other sources, such as relatives and the government (free primary education and subsidised secondary tuition).

Meanwhile, given high interest rates on credit, many farmers are receiving zero from their production, especially as coffee prices have been poor. A lucky farmer is seen as one with no profit but also no accrued debt. The unlucky ones are those with uncleared debts, which continue to accrue interest until the next harvest’s sales. Some farmers are only able to service the accumulated interest to a certain degree without affecting the principle borrowed.

4.9.2 Expenditure

Table 6 below shows the expenditure of those in Rumukia who participated in the household survey. Most respondents spend a great deal on health (86%) and transport (83%), followed by food (67%). Coffee farmers are an ageing group whose health bill is inevitably higher. Since most medical services are sourced outside the community, the transport bill also becomes high. Other notable expenses are on clothing (57%), farming (52%) and education (50%).

Table 6: Annual expenditure in Rumukia and Mathira North.

Item	% of respondents Rumukia	% of respondents Mathira North	Average amount spent per year in Ksh ($) across the two villages
Food	67	20	4,460 (58)
Energy	43	72	5,617(73)
Health	86	93	8,345 (108)
Clothes	57	87	3,425 (44)
Education	50	58	10,667 (139)
Transport	83	91	7,142 (93)
Law enforcement	2	2	1,000 (13)
Festivities	38	38	3,977 (52)
Investments*	16	14	14,850 (193)
Farming	52	40	4,001 (52)
Miscellaneous	10	10	7,150 (93)

Note: * Investments include house maintenance, house improvement, house construction, purchase of cooking utensils, furniture, bicycles, cattle, transport animals and small animals like sheep, goats and poultry.

In Mathira North, only about 20% of respondents had bought various food items in the previous 12 months to supplement what they harvested (including pulses, fruit and vegetables and milk and other animal products). Most respondents (72%) had purchased one or more energy sources. These included kerosene for lighting, firewood for cooking and batteries for torches. Electricity is connected in 35% of houses and torches supplement kerosene in many homes as a source of lighting. Meanwhile, 93% of respondents in Mathira North had had health expenditures and 58% had paid for schools and school materials, including uniforms. Another high expenditure area is transport, as in Rumukia: 91% of respondents spend some of their income on this. In addition, 14% of respondents had spent part of their income on various investments, 40% on farming and 38% on festivities.

Although farmers are ageing, most are still paying school fees. Factory managers interviewed attributed this to the irresponsible behaviour of young parents in coffee growing areas, who leave coffee farmers with the burden of educating their grandchildren. Most young parents have no land, no coffee and no job, thus their parents have to take care of their children. In Mathira North, farmers report that it is more difficult for them to pay for education now, because coffee is no longer as profitable as it used to be.

4.10 Food security

Most farmers in Rumukia confirmed occasional food shortages, so other food crops apart from coffee need to be enhanced to increase household food security. Very few families are food secure from their own production because farm holdings are too small and the area under food crops is even smaller. Hence, food expenditure is high.

Nevertheless, there are no acute food shortages. Of Rumukia farmers, 40% experience food shortages in some month of the year, with the hardest months being those between January and July, sometimes up to September. In January, June and July, when coffee crops require spraying, weeding and manuring, all income has to be directed towards food purchases rather than coffee crops. Coping strategies include casual work (10%), credit (7%) and sale of animals, borrowing money or using remittances to buy food (remainder of respondents).

Food security is not a major problem in Mathira North either. Most farmers are able to grow enough to last the family through the seasons. During shortages, families are able to purchase food to meet basic food requirements. The only food items purchased by a majority of respondents (67%) are fruit and vegetables. FGDs also indicated that only the absolute poor, about 10% of the population, are food insecure, owing to their relatively small landholdings and lack of space for kitchen gardening. Respondents also reported having been told by extension workers not to intercrop coffee crop with any other crop,[5] which limits food security capacity. Most households with occasional food insecurity attribute this to having planted coffee on their small parcels of land, leaving little space for other subsistence crops.

5 This is the gospel according to coffee extension agents and, prior to 1987, coffee was a protected crop; it was a crime under the older coffee acts to intercrop coffee. www.fao.org/docrep/u8995e/u8995e06.htm, accessed 27 May 2010.

5 Coffee Production and Marketing in the Two Study Sites

5.1 Changes in importance of coffee over time

In Rumukia, coffee was ranked as the most important income earner (55%) for local farmers, who cited the one-time large sum of money that comes with the coffee sale as the reason for ranking it so. Another 29% ranked coffee as the second most important source of income. In Mathira North, coffee was ranked the most important source of income by 56% of respondents, despite low proceeds, again because of the large cash injection in comparison with other sources of income, and also because they hope that coffee will go back to providing high returns in the future.

In Rumukia, the maximum yield of a well-managed coffee tree is 15 kg of cherry. Currently, the highest average yield per tree in Rumukia is reported to be 10 kg of cherry per tree. In 2007, the average coffee yield for farmers in the cooperative society was 1693.43 kg. The lowest yield among those sampled was 408 kg and the highest 7,000 kg. Of all respondents, 23% had no coffee yield at all in 2007. Among respondents, 45% said that coffee yields 10 years ago were double those of today. The reasons given for this were: doubling of the price of farm inputs (seeds, fertilisers and implements); poorer soils as a result of routine yearly cultivation; and decrease in land sizes as sons grow up and more land for housing and cropping for new families is carved out. In Mathira North, in 2007 the average yield was 357.2 kg, according to factory managers. Farmers with the lowest yields generated 2 kg and farmers with the most 7,494 kg. As of the time of the field research, respondents were concerned about the impact of frost on the 2008 crop.

Most respondents in Rumukia felt that coffee income is the same as or less than it was 10 years ago (43%), although 38% felt that it has increased. The latter stated as a reason the training of promoter farmers by various multinational marketing representatives (SMS, Starbucks, Dormans and Socfinaf), who then disseminated their new knowledge and skills to other farmers. These companies have also liaised with local input companies to help farmers with farm chemicals (including Twiga Chemicals and FarmChem).

Meanwhile, there are many farmers who, given high interest rates on credit, are receiving zero return on their production. For example, one farmer in Rumukia borrowed Ksh 39,000 ($506) in 2002 and ended up paying KSh 83,700 ($1087) in 2007. When she finished paying, she uprooted her coffee and planted fodder crops, which are fetching better money for her with less labour than coffee requires.

In Mathira North, 32% of respondents were of the opinion that coffee income has doubled over time. Nevertheless, they were quick to recount that, even though this is the case, the cost of living has almost tripled. Therefore, although income from coffee has increased, this is not commensurate with high and rising living costs. Furthermore, respondents reported that farm inputs and implements have also increased in price, thereby negating any positive impacts from increased incomes from coffee. Most respondents reported reinvesting the proceeds from coffee in coffee production and even supplementing it with their own savings so as to produce more coffee.

Mathira North respondents also stated that, before 1987, coffee crop quality was good and quantities were high compared with subsequent years, because of better credit facilities (mostly inputs from coffee societies), which allowed the purchase of fertilisers and chemicals, and adequate household labour (it was considered natural to work on a parent's coffee crop). As in Rumukia, Mathira North farmers indicated that prices for coffee received are much higher today than 10 years ago, but that living expenses have also increased tremendously, making the gains redundant. They particularly pointed out the very high prices of consumables, such as food, compared with 10 years ago.

Nevertheless, coffee farmers are optimistic about the future of coffee. They feel that quality and quantity are going to improve, especially if current trends of management and payment continue to be upward. Rumukia farmers in particular are happy with the Fair Trade marketing system (although they know very little about it) and to receive education from SMS.

5.2 Coffee productions trends

5.2.1 Changes in land under coffee

In Rumukia, 60% of respondents said the area under coffee has not changed at all in the past 10 years and 40% said they have less land under coffee, owing to land fragmentation as children grow and begin new families that require land for housing and farming. When interviewers went to observe farms that said they had increased land under coffee, they realised that, rather than increasing the acreage, the farmers had changed the type of coffee to improved varieties of Ruiru 11, for which the same piece of land can accommodate more coffee bushes. Farmers who have decreased land under coffee admitted they have done so to make room to plant fodder for their cattle as the dairy market provides quick money paid on a monthly basis.

Because of problems with yields and income from coffee in recent years, some farmers in Rumukia have started to intercrop coffee with other crops as a coping strategy. According to factory managers, intercropped coffee produces poor quality cherry. This has made it difficult for farmers to produce top grade coffee. Of all respondents, 41% grow their coffee as monoculture and use manure, mainly because they cannot afford artificial fertilisers. A further 35% grow their coffee as monoculture and in accordance with Fair Trade regulations, which allows limited use of fertilisers, and 10% produce coffee for the Fair Trade market but intercrop their coffee, mostly with bananas.

5.2.2 Coffee varieties planted

When farmers in Rumukia were asked to identify the type of coffee they cultivate, 29% did not know; 10% knew that their coffee is a certain SL type but did not know whether or not there are several types; and 24% knew that they have SL28 or both SL28 and SL34 in equal proportions. The rest did not respond to the question. In Mathira North, most farmers (63%) know of SL and Ruiru 11, but 37% do not know which type of coffee they are growing. Most farmers in Mathira North are still tending the old SL28 and SL34 type coffee.

Ruiru 11 is a local hybrid from Ruiru Coffee Research Station in Thika. It has good production and is resistant to coffee berry disease (CBD). However, it needs more rain compared with SL coffee. Some farmers have changed the type of coffee they cultivate to improved varieties of Ruiru 11, which is planted closer and requires less maintenance and yet yields better.

5.2.3 Labour

Most respondents are old. Many indicated that the younger generation is less interested in coffee farming, and would prefer to find paid work or to crop something else, saying that coffee does not give good returns. Meanwhile, elderly farmers do not want to give their coffee trees to their children for fear that they will cut them down to make way for something else. They say that, once their sons are given the coffee trees, they will take everything and not assist their parents in any way, so they hold on to them as a source of income.

According to coffee factory managers, who are younger, the situation is slightly different: it is that the old farmers have no intention of letting the young ones take charge of coffee farming. Factory managers acknowledge the fact that fathers cannot give the land to their children because it is against Agikuyu inheritance customs. They also use their coffee crops to ensure labour from grown-up children, especially daughters-in law, by allowing the latter to plant vegetables within the coffee in return for weeding or other crucial services. Women farmers confirmed that they do not want to share their trees with their children until the last son is married, so that the trees can be given to daughters-in-law equally to ensure care in their old age.

This has made it almost impossible to ensure new blood in coffee production. Production skills are not being passed on, and the lack of young farmers means that poor quality coffee is produced because elderly farmers lack the labour to properly maintain coffee trees. Factory managers noted that the coffee from the few younger farmers participating in coffee farming is of higher quality.

5.3 History of cooperative societies in the study site

Farmers feel that the services provided by the cooperative societies have reduced in quality. They stated that, in the 1960s, credit was readily available from the societies, as well as loans to pay school fees. Food was also provided in times of shortage. Farmers could access tools, fertiliser and seeds from KFA and demonstration tools from the MoA, using their coffee society numbers. These benefits were available to all members without discrimination.

This situation continued into the 1970s. In Rumukia, Mukurwe-ini water development project and Mukurwe-ini Hospital, both still in operation today, were constructed using farmers' proceeds. Some farmers' shares' allowed them to become co-owners of properties. Production of coffee was said to be high because farmers felt they had all the right inputs and the right farming methods.

However, farmers in Rumukia noted that corruption was beginning to creep into factory management and deductions started to increase without explanation. Meanwhile, when Mukurwe-ini collapsed, properties such as those mentioned above had to be sold to recover debts. Unfortunately, individual farmers' debts were not included and some farmers are still paying these back today.

Mismanagement and government interference were evident in the 1980s, and confusion erupted in the industry. After the giant Mukurwe-ini collapsed, many millers were licensed, leading to total chaos and serious conflict. Some people even died in the conflict. Access to inputs reduced and society services started to deteriorate. Provision of credit, school fees and food through the society became limited and was finally abandoned altogether in the 1980s.

Once cooperative societies reduced their support and subsidies, stopping altogether in 1987, the cost of inputs became too high for farmers to afford. The price of coffee dropped and climatic conditions were uncertain, so overall things were difficult for coffee farmers in the mid-1980s. Farmers at this time began to practise intercropping to maximise production. Many farmers slipped down from being middle-income to poor and absolute poor. Meanwhile, confusion continued to reign in the factories, with mismanagement, non-payment for coffee and conflict all rife.

In the past decade, although the average coffee price has gone up, so have the cost of living and the cost of production, meaning that any gains here are being negated. However, smaller societies have been formed and these have brought a small measure of sanity back to the sector. Farmers noted improvements with regard to overall society management, in terms of transparency, wages, education and information flows. FGDs with male farmers in Mathira North were less optimistic and predicted the death of the coffee sub-sector in their area as there will be no replacement stock of farmers after they die.

5.4 Different channels: Fair Trade and auction

Rumukia has been part of the Fair Trade marketing chain since the 2006/07 coffee crop. However, in 2008, an inspection team found that Rumukia Coffee Cooperative Society was violating a number of requirements that needed to be met in order to be eligible for Fair Trade status. Their certificate was suspended for several reasons, including poor information flow from the factory and society level down to farmers. For example, some management decisions were not being made at the annual general meeting, which is the ultimate authority according to the Cooperative Act: Fair Trade requires that all decisions be made at this meeting, in which all registered farmers participate and where elections take place. However, the inspection team provided Rumukia Coffee Cooperative Society with a list of recommendations on how to improve internal management and information flows in order to lift the ban and reinstate Fair Trade status.

Factory managers in Rumukia do not have a clear idea of where the coffee goes. They vaguely knew that Dormans (a coffee trading company in Kenya) buys and sells coffee to the roasters, who then process the coffee for onward sales to their clients abroad. Coffee producers in Rumukia do not know what Fair Trade is, do not know where their coffee goes and also do not know the benefits of producing for the Fair Trade market, such as premium payments.

Although the society's coffee is finally exported to the Fair Trade market by Dormans, it is sold at auction by Thika Mills, Central Kenya and Socfinaf, with Rumukia's 2007/08 crop bought by two coffee companies in the UK: Volcafe (7,029 kg) and Taylors of Harrogate (6,960 kg). Nonetheless, the management committee at Rumukia seems not to be aware of this – members assume that their coffee is not auctioned but is sold to the Fair Trade market directly. The Kenyan coffee system seems to differ considerably in this respect from that of other countries, where coffee produced as Fair Trade or Organic is usually exempt from having to be sold at auction. In Kenya, however, particularities of the auction system have for many years prevented Kenyan coffee growers from accessing the lucrative Fair Trade market. Only after several years of cooperation with two of Kenya's auction processors and millers, Socfinaf and Thika Mills, were the Fair Trade Labelling Organization (FLO) and TransFair in the US able to introduce the Fair Trade system to the Kenyan auction structure, creating a link between international markets and Kenyan coffee cooperatives. Although this so-called 'second window' does exist that would allow speciality coffee to be sold directly to foreign buyers, only very little coffee is sold directly, mainly because of logistical and funding problems.

Mathira North Coffee Cooperative Society coffee is auctioned as commodity coffee. The society is not certified under Fair Trade and hence would find it very difficult to market the coffee otherwise. In Mathira North, the management committee, the secretary manager, factory managers and farmers have not heard of Fair Trade. Most of the managers do not know the consumer of their coffee, although they do know that Kiamariga factory coffee was once purchased by Starbucks, which did not take the entire crop. Most managers also do not know the grade of the coffee they produce from the moment it leaves their factories.

The management committee reported that, when they meet outsiders interested in their coffee and the community, there is poor communication owing to the locals' limited command of English and the use of technical and complicated terms during the discussions. They spoke of the African Wildlife Foundation (AWF), which in 2007 approached the management committee and promised to link them with a direct market through Starbucks. And, sure enough, the 2006/07 crop from Kiamariga factory was bought directly by Starbucks, at Ksh 34 ($0.44) per kilogram. But this was not the case for the 2007/08 crop, so they are not sure of AWF's commitment. As a result of this communication breakdown, the 2007/08 crop was sold at auction, where it fetched a lower price of Ksh 27 ($0.35) per kilogram. The chairman of the society reported that the coffee fetched poor prices because it was not auctioned early on in the season when the prices were good. They had asked the millers to hold it, expecting that Starbucks would buy it through the 'second window', as it had the previous year. By the time Starbucks had declined, and their coffee had to go to auction, the prices had dropped drastically.

5.5 Inputs provided by societies to farmers

In terms of agricultural inputs, besides fertilisers, manure, herbicides and pesticides, coffee farming requires pangas,[6] wheelbarrows, folk-jembes, hoes, knapsack sprayers, scissors, handsaws, buckets, sacks, dustcoats, gumboots and gloves.

Most farmers have not used artificial fertilisers for their coffee crops, especially those who are poor, since 1987, when the giant cooperative societies stopped spending on inputs.

Meanwhile, most farmers do not have all the tools and implements needed. Usually, they hire those they lack from farmers who have these implements. This is rather expensive. Furthermore, as most coffee farmers are working on the same activities at the same time, hiring of the necessary tools is difficult and possible only after those who own the equipments have completed their work, which means that the coffee crop for poorer members remains untended to for a period of time. This delay may lead to the crop being attacked by pests or a general decline of quality.

Rumukia Coffee Cooperative Society has promoter farmers as part of its Fair Trade certification process. Each promoter farmer has 50 other farmers to educate through regular visits. They also have all the tools needed in coffee production, which are supposed to be accessible by the 50 farmers under their care. However, according to respondents in FGDs, these tools are not as accessible as they should be, for the reasons given above.

With regard to credit, Rumukia Coffee Cooperative Society has started a revolving fund, giving some farmers inputs on credit. Unfortunately, the deductions are made at once and not spread over two or three crop years, and therefore costs for poorer farmers become prohibitive.

6 A panga is a sharp farming implement used by coffee farmers to cut coffee bushes.

Generally, the Kenyan coffee sector is plagued with severe shortages as regards farming information and management skills training, delivered by agricultural extension agents, factories or other relevant stakeholders. Information flows from the society management to farmers are limited and there is a serious lack of extension services from the MoA. Despite these general shortcomings, information and skills improvement activities are now increasingly being provided by factories or other actors. For example, in Rumukia Coffee Cooperative Society, factory managers are currently educating farmers on proper management of the crop to reduce wastage and loss.

In Rumukia, 91% of farmers said they have received support from a third party that is not the government. In addition to inputs by SMS and other agencies, the MoCDM has assisted in planning field days and education days. Factory managers in Rumukia lamented the fact that the MoA goes to the factory only to collect reports and rarely comes in to provide the required extension services.

In Mathira North, of the 49% who have received extension services in one form or other, over half have received these from sources other than the MoA. In both cases, most of this support comes from SMS, a subsidiary of Starbucks, and from locally organised self-help farmers' groups, churches or research institutions.

However, for the most part, farmer training programmes are severely lacking in the area, especially in Mathira North. This is compounded by poor communication between societies and farmers. As a result of all of this, farmers lack basic information. In particular, most farmers, especially low yielders, have very limited knowledge on improved varieties, Fair Trade and its requirements and society audits, as well as fertilisers and production techniques. For example, farmers in Rumukia are not aware of certain banned pesticides, although FLO-CERT GmbH, an independent international certification company offering Fair Trade, circulated a list of banned substances a year ago. In addition, farmers have not signed a contract with the society on the pesticides that they are not allowed to use, as required under Fair Trade certification.

This is also particularly visible in the lack of records kept by farmers on their production and deliveries to the societies. Rumukia Coffee Cooperative Society has produced a book to help farmers keep records of their coffee activities and their costs. This is a major step in the right direction, given that small-scale farmers in Kenya rarely generate production costs for their own information. However, the booklet leaves out costs for buying or renting farm tools (scissors, folk-jembes, wheelbarrows, saws, pangas, spades, bags, knapsack sprayers and harvesting buckets) and land rent, among others.

Despite all of the above, study respondents felt a general optimism about the future with regard to both increased prices and more credit and inputs. Some respondents in Rumukia felt that the future of coffee is promising: farmers have started getting more education and training through the society as well as some inputs, such as fertilisers and chemicals.

5.6 Adding value: factories

Farmers do not add value in any way to their coffee cherries. Once cherries are harvested, they are delivered directly to the factory for pulping. Most coffee is delivered to the factory between October and December, although some deliveries are made in May-July, often referred to as the minor season. In Mathira North each factory is run by a factory manager, who has a few permanent employees (one to five, depending on the size of the factory), as well as temporary workers, whose number depends on the season's activities relating to the coffee crop.

Although all coffee is supposed to end up in the factory, a black market exists, by means of which some farmers sell their coffee to their fellow farmers instead of delivering it directly to the factory, so as to avoid direct deductions going towards debts accrued at the factory. Farmers who owe money (sometimes from back in the mid-1970s and 1980s) may also deliver coffee to factories under a second registration, e.g. under the name of the wife rather than the husband in order to avoid having to pay back debts. Sometimes, banned farmers sell their mbuni to other member farmers.

When selling to other farmers, i.e. to the black market, farmers fetch very low prices in comparison with what is paid by the society. Such sales are also practised by casual labourers who have been sent to deliver coffee to the factories on behalf of the coffee owner, especially those who are sick and/or aged. There are no stringent bylaws in place to hold coffee farmers accountable for their coffee and to ensure they all deliver all of their produce to the factories.

In FGDs, factory workers raised issues related to factory-level practices and factory managers' behaviour. First, some factories lack a register for illness and work-related accidents. Second, there are no emergency response procedures in case of accidents or fire. Marked fire exits in the factories do not mean anything to many factory workers. Third, water consumption at factory level is not known, which is leading to serious mismanagement of the resource. Fourth, protective clothing for workers is given only to permanent employees, despite the fact that Fair Trade in Rumukia requires all workers to have protective clothing and for all information on the risks of working in a coffee factory to be communicated to them. Finally, not all seasonal workers in Rumukia have contracts, although this is a requirement for Fair Trade certification.

None of the factories has a permanent solution with regard to the management and disposal of wastewater in the ponds, although factories do have some temporary strategies to deal with waste. Waste water was initially a problem in Rumukia as it ended up in the river, but the problem has been solved for the time being by channelling waste water into fenced ponds as a temporary measure.

Meanwhile, in terms of other environmental matters, coffee husks are collected by farmers for use in organic manure (see below). A hole is dug for plastic waste and the waste is buried.

In addition, the prevalence of power shortages and outages can lead to major losses. Managers in Mathira North reported that all pulping is done by electricity-powered machines, and power failure can be a huge challenge, even when only a few kilograms of coffee are being pulped.

Another area of loss is in theft: coffee theft occurs as a result of collusion between farmers and recording clerks. Recording clerks write down non-existent kilograms in the society's books. This was reported particularly for Kabiru-ini factory under Mathira North Coffee Cooperative Society, where the ringleaders add extra non-existent kilograms to their delivery, with the help of recording clerks.

Finally, when factory managers sort their coffee into different grades, the millers mix them all and this compromises the quality of coffee from the farmers. Factory managers reported that there is no system to verify the quality of coffee and that they are not sure about what happens to their coffee when it reaches the millers. None of the managers has ever been to an auction, and the management committee does not follow up on this either. This means that the miller is left to make critical decisions concerning coffee quality and how much is being paid to the factory. This also depicts high levels of ignorance in the management of coffee factories and the society itself.

Meanwhile, factory managers claimed that sweepings are no longer seen in factories. Sweepings are made up of the coffee that is left over after kilogram bags of farmers' coffee are weighed. If there is an amount that does not make up a kilogram, this is not included in the total amount. However, according to farmers, and observation, sweepings are still common in factories, and farmers lose out because this extra coffee is not acknowledged.

5.7 Cooperative society practices

Each factory in the two research sites has a factory management committee. The coffee cooperative society management committee is then made up of all the chairpersons of the factories under their aegis. In Rumukia Coffee Cooperative Society, there are nine members: the eight factory chairpersons and one extra member from Tambaya, present because he had delivered the most kilograms of cherry the year before the elections (2006/07).

As for Mathira North, according to the Cooperative Act of 2005 Clause 28(1), 'Every Cooperative Society shall have a committee consisting of not less than five and not more than nine members.' As it is in charge of five factories, Mathira North Coffee Cooperative Society should have five members, selected from factory committees. At the time of the research, however, Kabiru-ini factory was not represented because, according to the chairman of the coffee cooperative society, the Kabiru-ini factory committee had forwarded 'unacceptable members' (Cooperative Act Clause 28 (k)). Two members in the factory committee had 'been adversely named by the Commissioner in an inquiry report adopted by a general meeting for mismanagement (and corruption) during their tenure as members of the Committee.' Thus, the society was experiencing challenging times.

Meanwhile, women's representation in the management structures is poor in Rumukia. There is not a single woman in the society management committee or in the factory committees. There are only two female promoter farmers. This is not acceptable under Fair Trade policy, which dictates reasonable gender representation in all the levels of management.

In Mathira North also, there are no female members of the management committee, and only one female factory manager (whom the research team was unfortunately unable to meet).[7] Women coffee farmers in Mathira North reported that they elect women for the committee but that women end up being overshadowed by their male counterparts and not delivering. They therefore prefer not to elect women to the management committee the next time.

5.7.1 Levies on farmers

According to managers in both Rumukia and Mathira North, all levies are charged at the society level and not at the factory level. However, managers are not aware of the statutory charges that coffee farmers have to pay and only really know about the coffee produce cess, which is a tax by the local government on all agricultural products. The following table comes from the MoA.

Table 7: Statutory deductions at source.

Presumptive income tax	2%
Coffee produce cess	1%
Marketing costs	3%
Milling charges	$59-110 per MT of parchment or 1-3%
Ad valorem levy	3%
Commission agency fee	1.5%
Auctioneers' fees	0.13-0.2%
Cooperative society operating expenses	10-76%

Source: MoA (2001).

The massive spread in the proportion of cooperative societies' operating expenses is caused by laxity among cooperative officers, who have the responsibility of ensuring that farmers are not charged more than 20% by their cooperatives, which is the recommended operational cost charges stipulated in the Coffee Act of 2001 and which should be adhered to.

7 The research team visited her office many times and left several messages but she was never there.

5.7.2 Capacity and awareness of cooperative society management committees

According to Rumukia Coffee Cooperative Society management committee members, before the society was certified for Fair Trade in 2006/07, they received a great deal of training on society management. Both management and office teams at factory level received training on management skills and bookkeeping. SMS has trained permanent staff in the use of computers and has donated computers to each factory and to society headquarters. Society office staff are all computer literate. The office is connected to the internet and can download weekly sales figures and post them on the factory notice board, as required by Fair Trade.

However, some weaknesses remain. For example, farmers are not aware of coffee product specifications, grading and the market price per sale or season. In addition, committee members in some cases have limited capacity with regard to administration and internal controls. The society does not negotiate directly with buyers such as Volcafe and Taylors of Harrogate, as is supposed to be the case in the Fair Trade marketing chain, and therefore members do not know how much their coffee is sold for and how high/low the export costs are. For example, the Kenyan coffee company, Dormans, is registered at the auction house as an exporter and exports Rumukia coffee to the Fair Trade market but Rumukia Coffee Cooperative Society does not have a contract with it. Unfortunately, the research team was unable to find out more details on this issue.

Mathira North Coffee Cooperative Society management committee has limited knowledge on coffee processing and marketing. For example, respondents were not sure about the percentages deducted from farmers for society and factory operations and hence could not justify the expenditure easily.

Neither the management committee members nor the factory managers have ever given thought to finding out the production cost of a kilogram of cherries in terms cost of production at farm level, including hired labour and family labour, opportunity cost of land, inputs, tools and transport, etc. or in terms of cost of pulping 1 kg of cherry at the factory level. This is a major challenge as, without a baseline cost per unit, it is impossible to determine profit lines at either level (farmers or factory).

Meanwhile, there is a serious problem with planning and documentation. The society management committee has no strategic plan, despite the fact that this is a requirement of the MoCDM under the Cooperative Act of 2005.

In addition, the management committee had limited knowledge on the stages that their coffee goes through after delivery to the miller. They were not able to differentiate between the milling and marketing stages. Meanwhile, only one committee member had visited an auction (the previous year).

5.7.3 Efficiency and effectiveness of cooperative societies

Rumukia Coffee Cooperative Society managers agreed that farmers are not getting the best price for their coffee. They were optimistic that they will be able to receive a better price for their coffee crops soon, especially if the society stays within the Fair Trade marketing chain. They predicted a 10% profit when all production costs are taken care of.

In Mathira North, managers also feel that farmers are not receiving a good price to make a good profit from the coffee at current prices. However, they mentioned that, as most farmers do not spray their coffee with artificial fertilisers, the production costs are low, so the price is not so bad.

In addition, Mathira North committee respondents felt that the former Mathira giant cooperative society, before its collapse and sub-division into smaller societies, had had the capacity to negotiate good prices for coffee as well as offering credit facilities to coffee farmers at affordable interest rates. They felt that the current situation, whereby several coffee cooperative societies present high competition in the coffee trade, is detrimental to the farmers and to those involved in the societies. They stated that, too many small cooperatives do not have the competitive edge that the old giants had in terms of negotiating prices for their coffee or the inputs.

Meanwhile, respondents from both sites said that payments for coffee often come in late, and are sometimes thought to be too low.

5.7.4 Transparency and openness of cooperative societies

Transparency and openness are expected throughout the whole coffee process in Rumukia. The research team found it possible to access any information they needed. For example, the team saw the yearly farmer schedules, farmers' rules, production yield and cost records for each individual farmer, payment rates, email communications with buyers abroad, premium invoices, audit reports, strategic plan, the FLO-CERT inspection report and corrective action plan, the Fair Trade suspension document and corrective action plan. Some members of the management committee have visited millers and some have been to the auction. They are more conversant with issues to do with sales of coffee and statutory deductions.

However, as we will see in the next section, there is still a lack of participation of farmer members in certain decision making, and hence a lack of complete openness. Audited accounts are also not displayed as required by the Cooperative Act of 2005 Clause 15 (Kopke, 2007).

RUMUKIA FARMERS CO-OPERATIVE SOCIETY

P.O.BOX 61, MUKURWE-INI

27TH May 2008

RE: 2ND PAYMENT 1ST DIFFRENTIAL P.C.R

The management committee members of Rumukia F.C.S Ltd. has today announced the payment rate of its 8 (eight) factories as follows:-

FACTORY	ACCU. RATE KSHS	THIS RATE KSHS
01. KAGUNYU	44.40	34.40
02. GATURA	41.95	31.95
03. THUNGURI	42.40	32.40
04. MAGANJO	46.60	36.60
05. KIAWAMURURU	42.65	32.65
06. TAMBAYA	40.70	30.70
07. GAIKUNDO	42.65	32.65
08. NDIA-INI	40.05	30.05

NB:

1. Store debts will be deducted at 100%
2. Ksh 200/- will be deducted to increase your shares contribution
3. Ksh 300/- will be deducted towards revolving fund

CHAIRMAN
RUMUKIA FARMERS CO-OPERATIVE SOCIETY

Figure 2: Payment rate for factories under Rumukia Coffee Cooperative Society, 2008.

Things are very different in Mathira North. Mathira North Coffee Cooperative Society was not willing to share such information, and members were suspicious when asked. Transparency and openness are not good and information flow is poor between management and farmers, and within management itself.

In addition, the Mathira management committee does not negotiate prices at all with the miller, who doubles up as the marketer. Coffee farmers, factory managers and the management committee rely on the miller to dictate the price of coffee, and nobody follows up on the miller to check grading. The committee does not sign any contract with the miller/marketer. Everything is done on the basis of a gentleman's agreement between the miller/marketer and the cooperative management committee. This shows a lack of openness and transparency as well as professionalism. Unlike in Mathira North, the miller in Rumukia is recruited and accepted by the coffee farmers in a factory annual general meeting, to handle the milling and marketing of the farmers' coffee.

5.7.5 Information flows in Mathira North

In Mathira North, the current management committee was in its second year at the time of the study. Prior to this, the society had a new management committee every year, leading to poor management and weak information flow across the board. This hinders the dissemination and communication of correct information to all relevant stakeholders and means that many decisions by committee members are based on poor or incorrect information. In this regard, management committee members complained of too much politics and too many players involved in the coffee marketing chain, confusing the process.

Committee members also reported a lack of any planning document or process for their factories. They also confirmed that they never have meetings with factory managers. Despite the fact that the management committee is in its second year of management, members have not met the factory managers.

As such, factory managers are found to be lacking critical information that would be useful in their day-to-day management. They seemed to be unaware of their responsibilities as managers and as such are unable to feed back to society management. For example, none of the factory managers knew the annual budgets for their factory. They did not know their factory's monthly electricity bills, running costs or wage amounts. Factory managers did not have terms of service or contracts, and were not even receiving their pay slips at the time of the research, thus did not know anything about their own basic pay or deductions.

Factory managers admitted that there was poor communication between the two groups. Their lack of basic information embarrasses them because they are not able to respond to issues raised by farmers and at the same time cannot represent the farmers' sentiments to the management committee. For example, they are not able to explain why there are differing payments for coffee produced in the five different factories even though they are all under one cooperative society. They are not able to give the overhead and running costs for their factories because they do not know. All the budgeting and costing is done by the secretary manager and the overall management committee of the society, with no involvement of the factory managers.

Information flow to farmers is also a serious problem in Mathira North. Farmers receive very little information on what the management does. For example, few farmers in Mathira North knew about the current coffee policy and its contents. Women and/or low yielders did not know that the Cooperative Act does not allow any discrimination on the basis of gender, age or the number of shares one has and that they have every right to be elected and to elect leaders in their cooperative, as well as to participate in the annual general meeting.

Farmers also feel confused about the price their coffee actually makes and claim that there is a lack of transparency in dealings in this respect. They cite corruption within the coffee cooperative societies and inadequate information flow to coffee farmers, as well as interference in the market chain by the government.

Another example of a communication problem is in Kabiru-ini where, as we have seen, corruption has been found among factory committee members. Farmers in FGDs in Mathira North mentioned that, at the time of study, some farmers from Kabiru-ini factory were in a police cell for inciting others to uproot their crops and demonstrate on the Kiamariga-Karatina road. The Kabiru-ini farmers were demonstrating in support of their elected leaders. They did not know that those who are part of a pending corruption case in the MoCDM, the Kenya Anti-Corruption Commission or a regular court are not eligible for election.

5.8 Farmers' voice and involvement in the marketing chain

In both societies, farmers' role in coffee production and marketing ends at the annual general meeting. The rest of the work (transportation of coffee beans to the miller, grading, auctioneering, deductions and payments) is left to the miller and the society's management committee.

In Rumukia, farmers are invited to meetings by means of letters of invitation read in out in churches and announcements in various local fora. This may not be the most efficient means of communication, particularly because it may not reach all the targeted coffee farmers, who may be absent at the time of announcement.

Farmers in Rumukia said that not all business is dealt with at the annual general meetings and that they are not a party to certain discussions and decisions. For example, the discussion on the allocation and expenditure of premium proceeds from Fair Trade was not participatory and was not approved through the annual general meeting. Not all management board meeting deliberations are shared with them and decisions are not always posted on factory notice boards (as required under Fair Trade).

Also under Rumukia Coffee Cooperative Society, through Gatura factory, the people who prune the coffee are selected by the factory chairman. Thus, he (the chairman) controls whom a coffee farmer has to employ to prune their coffee. This gesture is considered intimidating and dictatorial by the coffee farmers.

Farmers in both societies, in Mathira North in particular, feel that they have no voice in their society and that this has impacted negatively on the coffee crop as well as on household wellbeing. Farmers mentioned that poor people are intimidated in meetings and feel that they are 'booed' if they speak up. The meetings are said to be chaotic, and poor farmers (often low-yielding young men) and particularly women are shouted at by 'drunken young men,' which is culturally very embarrassing. As such, women and poor (young) farmers do not participate in any decision making. Poor farmers as a result often do not attend meetings. Managers also lamented the fact that many farmers do not attend the meetings when invited.

In both societies, those with a low yield have no voice: bylaws in both societies state that only those who deliver more than a certain amount per season can qualify for a factory position. This ensures that smallholder coffee farmers are excluded from critical decision making concerning the coffee crop. It also means that farmers' sentiments at grassroots levels are not represented effectively at higher management levels. Farmers in Mathira North confirm this, saying that their representatives at higher levels are not people who even farm the coffee crop and thus are likely not to represent the needs of the coffee farmers. They propose the reopening of organisations such as the Kenya Farmers' Association (KFA) to manage their crop marketing at higher levels.

5.9 Summary of issues listed by male and female farmers in each site

This section sums up the major issues in coffee production as given in FGDs with male and female farmers in each of the research sites. In some cases, recommendations were given.

5.9.1 Rumukia Female farmers' issues

- Coffee does not take care of all farmers' needs as it did before, such as loans for school fees, food, farm inputs and tools.
- There is a lack of and/or inadequate tools needed in coffee production, e.g. saws, scissors, wheelbarrows, spray pumps and folk-jembes, buckets, protective gear (aprons, gumboots and gloves, etc). Most low yielders have few tools, which stops them tending to their coffee well.
- If farm tools are provided, farmers will be able to engage the very poor in casual labour services and the latter will receive an income to put their children through school.
- If inputs and implements for coffee production can be provided on a loan basis, farmers will have a bright future for their coffee.
- There is poor access to credit facilities, and it is harder for female farmers to access credit because of their low coffee production.
- The government should intervene in the pricing of the coffee crop in order to attract younger farmers to coffee crop farming.
- Provision and availability of water for irrigation is a real issue, especially in dry years, which are becoming more frequent.
- A great deal more needs to be done to include those with low yields, including women and young male coffee farmers. Women often have low yields (an average of 58 kg in 2007).
- Many of the low coffee yielders also have chronic food shortages.
- Female farmers have increased responsibilities as well, such as taking care of their grandchildren.
- Women have no voice and political space in their cooperative society. They cannot speak out at meetings.
- The cooperative society bylaws bar anyone with less than 500 kg from holding office. This has translated into total non-participation, including in terms of making contributions during annual general meetings. As a consequence, most low yielders do not attend their society's meetings. This was one factor behind the suspen-

sion of Rumukia Coffee Cooperative Society's certification to trade its coffee in the Fair Trade chain (poor information flow to members).

In spite of all the above challenges, women farmers live in hope that one day the coffee crop will fetch good prices, from which they will benefit. Thus, many have kept the crop and, instead of uprooting it, have intercropped it with a variety of food crops (beans, pumpkins, potatoes, cabbages, bananas) in order to meet part of their household food needs.

5.9.2 Rumukia Male farmers' issues

- Coffee is suffering because other crops suffer. This needs an integrated response
- Farmers believe that the cost of production from coffee is far higher than the proceeds (cost of inputs, implements, labour, etc), but have no proof to support this claim since they do not keep any records (although a record book has recently been introduced).
- Heavy borrowing is common to pay casual labour in coffee production and delivery to the factory, and to buy consumables at home.
- Farmers borrow in anticipation of payments from coffee but coffee payments often come too late and are a little too low. So farmers pay old debts and start new ones immediately.
- Interest rates for loans are high and the farmers feel that they are being taken for a ride, although they were not sure on this. None of the discussants was aware of hidden charges from financial institutions.
- Loans are deducted at once in the society – when a payment is made – instead of being spread out over two or three years. This is very frustrating and discouraging to most farmers.
- Farmers who have less than 500 kg of coffee are not allowed to take a factory position. If a low yielder dares speak up in a meeting, he or she is booed down. Most farmers keep away from coffee meetings to avoid being embarrassed.
- There is a need for more women and young people on management committees.
- Management is dictatorial, dividing farmers into the 'big' and 'small' farmers. For example, those who produce less coffee (referred to as 'small farmers') are intimidated and forced to support the farmers who produce a lot of coffee (referred to as 'big farmers'). Small farmers are not even allowed to access fertiliser on loan like the big farmers, and are encouraged to pair up in order to share the costs. Farmers propose that fertiliser distribution be based on the number of coffee trees owned by farmers.
- Farmers have to redirect coffee inputs to other uses, such as subsistence crops and other household consumables. Some farmers even sell the Fair Trade fertiliser they are issued with, at times at a lower than market price. The farmers proposed follow-up once fertiliser is issued in order to ensure that farmers use it on coffee crops.
- After their coffee is weighed, if there is an extra amount that does not reach a kilogram, this is ignored, whereas the weight of the bag is still deducted from the total weight. To the discussants, the accumulated balance adds up to a substantial

amount of coffee that should be accounted for (sweepings). In earlier days, this income, which accrues from excess kilograms, used to be shared among farmers. Of late, it is not mentioned at all, even at factory level.

- Because they are old and sometimes unable to do the work themselves, aged farmers sometimes hire labour from younger coffee farmers, who occasionally steal the coffee when they deliver it to the factory, especially if they are also members of the same factory, or sell it on the black market to other farmers before it is delivered to the factory.[8]
- There is little knowledge about the policy and legal systems governing coffee production (only one respondent had heard of the Coffee Act and the Cooperative Act – he used to work for MoCDM).
- There is limited information on marketing chains and proceeds from coffee. Most farmers do not know their buyers or the consumers of their coffee (even though this is a requirement of the Fair Trade marketing chain).

5.9.3 Mathira North Female farmers' issues

- Women discussants reported that they give coffee trees to their children but children do not take care of them, and thus elderly farmers are forced to repossess the crop and tend it themselves. Female discussants also complained that young people are not keen to get married. The men stay as bachelors for too long under the care of the mothers while their sisters have children as single mothers and leave their children with their grandparents. Irresponsible youths have consequently increased the responsibilities of female farmers.
- Although female farmers know they are not making a good profit from their coffee crop, they are hopeful that the crop will improve in the future because it once helped them to educate their children and improve their family's wellbeing. In addition, if they uproot the coffee trees, they are likely to be charged or arrested (the current Coffee Act does not state that uprooting coffee is an offence, but farmers are still scared because the situation was different before and they do not know of the changes in the law).
- Most farmers lament that the coffee crop does not give them any commendable proceeds. They attribute this to poor marketing of coffee and they propose that the government intervenes and assists in marketing of coffee, for the crop to fetch better prices.
- There is corruption within the society in terms of weighing of their coffee during delivery to the factory. Such deductions include the weight of the coffee bags, which is normally exaggerated. Furthermore, female farmers say that the committee members they elect are corrupt and often swindle them, ending up with them making very little from their crops.
- Farmers are unable to account for the costs of production of the coffee crop (in terms of hired labour, household labour, land, etc). This impedes farmers from having a base price for their coffee and reduces their negotiating power.

8 At the time of research, 1 kg of cherry cost Ksh 10 on the black market, compared with about Ksh 20-40 from the factory.

- Farmers lack inputs (manure, fertiliser, pesticides, herbicides) and tools (scissors, panga, folk-jembes, knapsacks, wheelbarrows, harvesting buckets, sacks, saws, spades, etc).
- Coffee is often lost as it is delivered to the factory by children and hired labourers, with some of it sold illegally before it reaches the factory.
- Female farmers revealed that there is a great deal of illegal marketing of coffee between farmers on the black market, at lower prices than those of the factory. Sometimes, this is the only way to get instant cash (rather than waiting for the factory to pay). Others have no choice, especially those in debt to the factory, as their debts are all deducted from payments to the farmers, who end up getting nothing.

5.9.4 Mathira North Male farmers' issues

- Farmers borrow money to pay for casual labour for coffee production activities such as weeding and harvesting and for needed consumables at home.
- Incomes from coffee are lower than the costs of production, although farmers cannot calculate these owing to a lack of proper records.
- Households with food insecurity attribute this to having planted coffee on their small parcels of land, leaving little space for other subsistence crops.
- There is a lack of inputs and tools (manure, fertiliser, chemicals, scissors, folk-jembes, saws, spraying machines, slashers, wheelbarrows, buckets, ropes, pangas, bags, spades, labour, land, transport and food and tea for those working on the coffee).
- There is a lack of transparency among society management, factory managers and farmers.
- There is a lack of knowledge concerning the coffee crop, compounded by a lack of transparency and proper information flow from management to farmers.
- Farmers do not know about the marketing chain for their coffee. This limits their bargaining power.
- The lack of educated representatives in the management committee (young and energetic) is also a challenge. Youths who are supposed to attend the meetings normally dismiss them. In situations where such youths are available to attend meetings, they demand payment. Furthermore, freely available and willing youths are not trustworthy, and this situation results in the elderly being elected to hold management positions. This has generally resulted in a tug of war between the old and the young farmers, from the household level to the cooperative level.
- Bylaws bar those with less than 1,000 kg of cherry per year from holding a position in the cooperative society.
- Farmers prefer the older system of management, which allowed most farmers to access credit and school fee loans for their children, as well as food during drought and famine.
- Farmers recommend reviving firms that will give them credit facilities cheaply and on easy terms so as to increase coffee production in the area.

6 Conclusions

6.1 Production

Kenyan coffee used to be the main foreign exchange earner in the 1970s and 1980s, before losing out to tourism and tea in subsequent decades, mainly because of poor coffee prices. However, many coffee farmers are still psychologically dependent on the crop. They have therefore degenerated into a cycle of poverty: they hang on to coffee which is no longer paying for its production costs.

Most current coffee farmers are aged. In both sites, the majority are over 55 years of age. Young farmers are few. Young people in coffee growing regions are no longer interested in the crop, owing to mismanagement and poor prices. However, elderly farmers also appear to be uninterested in handing over their crops and their expertise to their children, preferring to keep the coffee to protect themselves. There seems to be a disconnect between young and old in the study sites: young people are also blamed for disrupting coffee cooperative society meetings and intimidating elderly farmers there, and for being irresponsible, drunken and lazy.

Those young male farmers who do work are often low yielders, because they have no land from their parents. Women are also often low yielders because they lack basic coffee production requirements like tool and inputs.

Most labour for coffee comes from male household heads assisted by their spouse and other members of the family. Hired labour for coffee production and subsistence farming is also common in both sites. Men spend most of their labour and time on coffee whereas women spend substantial time and labour on both coffee and subsistence crops, especially because coffee payments can no longer be relied on to meet the family's daily needs. Both men and women work long hours, although men seem to have more time off than women to socialise, as women also have to take care of domestic chores and care work.

Landholdings in both sites are minimal, with most used for coffee and the rest for mixed subsistence farming. Inheritance customs of the area forbid land from being passed on until its owner is dead, and even at that point it is difficult to register the title under a new name. Women do not often hold land. Water is available for domestic consumption, but more irrigation is needed for crops. There are some irrigation projects in Mathira North and there is irrigation potential in Rumukia.

Even though respondents feel that coffee is their main source of income, statistical analysis shows that credit actually ranks higher: by virtue of owning coffee trees, farmers become creditworthy. Farmers then borrow by using coffee as collateral, even when coffee cannot pay back the credit. One of the legacies of the giant cooperative societies that were present in both sites in the 1980s (before collapsing through mismanagement) is a credit-dependent culture among farmers.

Extension services from the Kenyan government are very poor. In Rumukia, the proponents of Fair Trade have brought their own extension, cooperative and basic management services. Farmers have insufficient knowledge on production methods and marketing methods (such as how to use organic farming to their best advantage).

6.2 Societies

Rumukia Coffee Cooperative Society is more informed and more transparent, and communication channels are clearer. A healthier relationship is in place between the society's management committee and factory managers. However, there are still problems of participation and communication with farmers, and there is some lack of openness, which led to the suspension of the society's Fair Trade certification.

In Mathira North, information/knowledge on coffee marketing is poor among society management, factory managers and farmers. There are almost no communication channels among the cooperative management committee, the factory managers and the farmers. Knowledge on coffee marketing is inadequate in Rumukia but non-existent in Mathira North. Meanwhile, there are problems of corruption, mismanagement and lack of transparency.

Both societies claim that too much competition, too many actors in the marketing chain, general mismanagement and poor coffee prices, as well as other issues, mean that the prices given to farmers for their coffee are too low. It is interesting to note that most farmers hark back to the past, to when the giant coffee corporations were in place, as a better time for them. These are the corporations that went under through mismanagement – but the farmers remember them as allowing farmers better access to credit, food, inputs and sufficient remuneration for their coffee.

In both sites, poor farmers and women lack voice and access to decision-making positions.

6.3 Summary of main issues and coping strategies

Overall, problems affecting farmers of coffee in the research sites include the following:

- Poor payments from coffee (partly for the reasons given below);
- Poor information and knowledge flow and poor communication processes across all partners participating in the chain;
- Too many players in the chain sharing the proceeds before they reach the farmers;
- Lack of teamwork between factory management and those at society level, especially in Mathira North;
- Dispossession of poorer farmers, the majority of whom are women and young men with fewer trees.

Unfortunately, current crops and marketing systems are preventing coffee from providing for farmers as it did several years ago. Farmers have watched their livelihood standards deteriorate over the years and have devised a number of coping strategies to deal with these new challenges:

- Intercropping coffee with other crops and vegetables for survival (good for food security but compromises the quality of the coffee);
- Abandoning the crop altogether (not weeded, manured or pruned);
- Illegal coffee sales: farmers who are indebted sell their coffee to other farmers at very poor prices to get the needed cash. Young workers do the same if they are working for a very old farmer or a sickly one;
- Two registrations at the factory, one by the husband and one by the wife, to ensure that coffee payments are made to the wife with no money deducted as repayment of a loan taken out by the husband;
- High dependence on credit: although they know coffee will never be able to pay off their loans, residents in both sites have learnt to use coffee and their cooperative membership to access credit facilities from cooperatives, microfinance institutions in the area and banks;
- Remittances and grandchildren's support: most aged coffee farmers have taken it on themselves to educate their grandchildren as a coping mechanism. The parents of these children then give them remittances for day-to-day needs or provide labour in growing coffee and in subsistence farming.

6.4 Conclusion

Coffee production and trading will not create wealth for these small-scale farmers. Fair Trade will give better returns, especially in terms of good governance and management and more pay, but these will not be enough to move a small-scale farmer out of poverty or to empower women, who provide the bulk of the labour in coffee production. This is because there are too many players in the industry who live off of coffee farmers' efforts. Although some of the value addition stages in coffee processing could be done at factory level, cutting down on costs and human parasites in the chain, this is prohibited in Kenyan law. These stages could include milling, warehousing, packaging and liquoring: doing these locally could cut down on costs as well as providing much-needed jobs for youth at local level. In addition, roasting and packaging of processed coffee at the country level would generate better foreign exchange for a finished product and also mean lower prices of coffee products and thus encourage domestic consumption. (Currently, processed coffee, when it finally comes back to Kenya in tins, costs about $32 a kilogram. Compare this with what the farmer gets – Ksh 25 ($0.32) for a kilogram of cherry.)

Coffee is a sentimental crop, a 'tree of hope,' for most farmers in the study areas. They look forward and hope that coffee prices will be as high as they were in 'the golden days of the 1970s and 1980s,' when being a coffee farmer meant that their children went to school, credit was easily accessible, food was available during lean years and managers of factories were there to help farmers.

However, the reality is that both research locations will be stuck in a poverty cycle as long as they depend on coffee production as the main source of income. A substantial number of farmer respondents (37%) live on less than $2 a day. Given that the sample in this study was made up of well-off farmers, this means that many coffee farmers in the area live below the poverty line. As such, coffee may not be the crop to get farmers out of poverty by 2015, as per the Millennium Development Goals (MDGs). This is unless the crop is managed differently, by ensuring that the market chain is shorter and that more money ends up in the coffee farmers' pockets (which seems unlikely). In particular, Mathira North is completely mired in a marketing chain that is not helpful to small-scale farmer in terms of incomes.

Coffee farming in the localities under study can be said to be draining the local economy. At the end of the day, coffee brings in no profits for most and only small profits for others. In fact, it ends up putting the farmers in more debt than is necessary. Coffee farmers often do not even know about their profit levels (or lack of), as they never sell their coffee based on production costs. During the FGDs, respondents said that, if they counted the cost of production, they would uproot their crops. In spite of its poor pay, though, it is the only source of money available to them in a lump sum, which they badly need.

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Appendix

Appendix 1: Coffee production and productivity, 1963/64-2006/07

	Estate sector		**Cooperative sector**		**Total**	
	MT	**Yield (kg/ ha)**	**MT**	**Yield (kg/ ha)**	**MT**	**Yield (kg/ ha)**
1964/65	28,405	873	15,373	1,183	43,778	961
1964/65	22,393	691	14,774	874	37,167	754
1965/66	25,683	796	25,523	931	51,206	858
1966/67	25,231	789	27,558	642	52,789	705
1967/68	13,246	425	20,515	411	33,761	416
1968/69	22,342	728	23,264	445	45,606	550
1969/70	26,521	887	26,275	486	52,796	629
1970/71	28,600	957	26,302	487	45,902	654
1971/72	29,984	1,015	28,362	511	58,346	686
1972/73	38,968	1,319	38,783	608	72,739	855
1973/74	31,152	1,069	36,767	661	67,919	822
1074/75	29,985	1,048	35,464	614	65,449	758
1975/76	37,675	1,317	36,135	625	73,610	854
1976/77	49,685	1,786	47,660	825	97,345	1,137
1977/78	33,685	1,146	47,744	806	81,429	919
1978/79	26,809	921	46,079	736	72,883	795
1979/80	39,109	1,252	51,900	729	91,009	889
1980/81	34,044	1,057	64,007	756	98,751	840
1981/82	34,392	1,023	52,531	539	86,923	663
1982/83	32,981	1,015	24,699	520	85,450	635
1983/84	54,258	1,519	74,683	654	128,941	860
1984/85	28,922	810	64,717	556	93,639	616
1985/86	45,542	1,179	68,384	581	113,926	729
1986/87	36,381	950	67,907	586	104,288	675
1987/88	44,506	1,213	84,420	730	128,926	842
1988/89	38,632	976	78,337	675	116,969	751
1989/90	34,358	902	69,483	592	103,839	668
1990/91	35,160	930	51,411	423	86,571	543
1991/92	37,520	987	41,977	432	79,497	565
1992/93	32,781	860	42,426	432	75,207	474
1993/94	33,037	866	39,747	324	71,787	446
1994/95	38,735	1,015	52,264	426	90,999	565
1995/96	40,100	1,045	56,900	464	97,000	754
1996/97	29.700	774	38,300	312	68,000	543
1997/98	21,300	537	32,100	262	53,400	400
1998/99	28,700	683	39,400	308	68,100	495
1999/00	38,500	916	62,200	485	108,700	700

2000/01	26,900	641	25,000	194	51,900	417
2001/02	23,100	537	28,800	199	51,900	317
2002/03	21,400	510	34,000	266	55,400	398
2003/04	18,500	300	29,900	200	48,400	250
2004/05	20,700	500	24,500	200	45,200	250
2005/06	21,300	500	27,000	200	48,300	250
2006/07	25,000	595	28,400	235	53,400	365

Source: CBK annual records.

Appendix 2: List of key informants and FGD participants

Name	**Agency**	**Job title**
H.M. Mwangi	MoA	Director of Agriculture
Justus Kiago	MoCDM	Assistance Commissioner for Cooperatives Development
Nyaga Kaenga	CRF	Principal, Kenya Coffee College, Member of Coffee Reforms Secretariat
K'Okoth Sylvester	KPCU	Public Relations and Marketing Manager
Mwangi Waweru	TCM	Branch Manager, Procurement (Murang'a South, Thika Kiambu Gatundu)
Bernard Gichovi	CBK	Field Services Manager
Joseoh Kiio		Retired Deputy Commissioner of Co-operatives, Central Province

Rumukia Coffee Cooperative Society FGDs

- 9 June 2008: FGD with nine members of the management committee
- Factory managers
- 11 June 2008: FGD with 11 female farmers/coffee producers
- 12 June 2008: FGD with nine male farmers/coffee producers

Mathira North Coffee Cooperative Society FGDs

- 16 June 2008: FGD with five members of the factory management committee
- 17 June 2008: FGD with seven low-yielding male farmers/coffee producers

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Kenyan coffee used to be the main foreign exchange earner in the 1970s and 1980s, before losing out to tourism and tea in subsequent decades. However, many coffee farmers are still dependent on the crop and are trapped in a cycle of poverty: they hang on to coffee, which is no longer paying for its production costs. The present paper presents an analysis of coffee producers in two coffee cooperative societies in the Mt Kenya area: Rumukia Coffee Cooperative Society in Nyeri South and Mathira North Coffee Cooperative Society in Nyeri North.

Coffee production in both sites is characterised by low income from coffee, poor information and knowledge flow, and poor communication processes across all partners participating in the coffee value chain. Moreover, there are too many players in the chain sharing the proceeds before they reach the farmers.

Rumukia is one of the few Kenyan farmers' cooperative societies certified by Fairtrade Labelling Organizations International (FLO). In 2007/2008, on average coffee producers from Rumukia received almost 60% more for their coffee than farmers from Mathira, whose coffee was sold at auction. Despite this positive achievement, because of small landholdings income from coffee in Rumukia is too small to lift households out of poverty.

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