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# Portraits of family farming in West Africa

Edited by  
**Su Fei Tan and  
Bara Gueye**

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**making  
decentralisation  
work**

# Portraits of family farming in West Africa

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# 1. Introduction

## 1.1 Background

Agriculture is central to the economies of West African countries.<sup>1</sup> It is the main source of livelihood for over 70% of the population. In most countries it accounts for between 30% and 50% of the gross national product. Although we are now witnessing some diversification of the economies in the region, for the foreseeable future agriculture will remain central to rural people's income and food supply.

We can expect to see some major changes in the agricultural sector in the next twenty years. The nature of these changes is still the subject of heated debate. Some believe that a fewer number of large commercial businesses will dominate the sector. These businesses will be able to invest heavily and compete effectively in the global market place. Alongside these modern enterprises, many small family farms will continue to exist but their productivity levels will not increase significantly. These farms, located for the most part in dry areas of limited potential, will survive by diversifying into non-agricultural activities, such as migration.

On the other hand, there are those who believe that the experience of growing cash crops in many countries has demonstrated the dynamism and flexibility of small family farms – whether in the cocoa-growing areas of Ghana or Côte d'Ivoire, in the cotton-growing area of Mali, or in irrigated areas such as those controlled by the Office du Niger. The same dynamism has been observed in the livestock sector. Despite the setbacks caused by several years of drought, this sector has always managed to supply the regional meat markets. Family farms have shown considerable capacity to adapt and innovate, despite the threats posed by international markets.

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1. The background information contained in this paper draws from the more comprehensive discussion on the role of family farms in West Africa contained in "Transformations in West African agriculture and the role of family farms" by Camilla Toulmin and Bara Gueye, December 2003, IIED Issue Paper 123. This paper is available from the IIED website [www.iied.org/drylands](http://www.iied.org/drylands).

In this situation, of opposing views and projections, the debate on the future of family farming raises the following questions:

- Is the transition to large farms inevitable? If so, what are the likely consequences – economic, social and political – for the distribution of land, poverty, vulnerability, the distribution of resources, etc.?
- Would it be politically and economically reasonable to promote a smaller number of large agricultural enterprises to the detriment of most farmers, who might be left landless? Would this option not conflict with promoting democracy, social justice, decentralisation and the alleviation of poverty?
- Have West African governments a clear vision of the type of agriculture they want to promote in the future? What is their perception of the role of agriculture and its contribution to rural development?

## **1.2 The future of family farming**

This paper is part of a broader programme of research looking at transformations in West African agriculture and the challenges faced by smallholder production systems. The purpose is to explore the future of family farms in West Africa, in light of the enormous changes that have taken place in agriculture over the last two decades and the likely changes to come.

To stimulate debate on these issues, IIED has undertaken a programme of action research and policy dialogue. The objectives are to:

- stimulate national and regional debate on agricultural policy and the role of family agriculture;
- highlight the key issues and compromises arising from governmental commitments to alleviate poverty, modernise agriculture, introduce new policies and approaches to land tenure reform, and improve access to inputs, equipment and credit in a context of liberalisation;
- conduct case studies of certain key crops in West Africa and thereby highlight the economic, social and environmental impacts of the agricultural subsidies practised by European Union countries and the United States;

- support partners in West Africa to enable them to contribute (through discussion and research) to the national and sub-regional debate on agricultural policy, devise supportive measures and strategies to assist lobbying, and establish partnerships with other institutions working at the national, regional and global levels;
- put organisations in the sub-region in touch with organisations based in the North which are concerned with similar issues, so as to develop critical mass and a joint information and communication strategy.

### 1.3 The debate

A detailed discussion of the future of family farms can be found in “Transformations in West African agriculture and the role of family farms” by Camilla Toulmin and Bara Gueye (2003). In brief, however, the current debate focuses on the choice between family farming and large-scale commercial agriculture. The first is presented as backward, inefficient and subsistence oriented with farmers unable to access credit to invest and increase productivity. The second is seen as modern and forward looking, efficient and market-oriented (Toulmin and Gueye, 2003).

#### **Box 1. A New Framework Law for Senegal on Agro-Sylvo-Pastoral Development**

In May 2004 the government of Senegal introduced a new law on agro-sylvo-pastoral development. The main aim of the reform is to modernise agriculture, using the law to make family-run, industrial and commercial farms all switch to modern forms of production so that they are more competitive.

The law juxtaposes two visions of agriculture: family-run farms on the one hand, and industrial and commercial farming on the other. The first version of the law was geared towards supporting commercial agriculture. But for the first time ever, the government discussed its proposals for reform of the agricultural sector with stakeholder representatives. As a result the first version of the law was modified after consultations with the *Conseil National de Concertation et de Coopération* (CNCR).<sup>2</sup>

The most sensitive issue in this law, land reform, has not yet been addressed. Much of the uncertainty surrounding this law pertains to land. The future of family farms in Senegal will depend to a large extent on how land reform is implemented.

Source: Haramata 2004

2. An association of producer organisations in Senegal.



As a result a number of West African governments have opted for policies in favour of the “modernisation of agriculture”. They assert the need to do away with many small-scale farms, on the grounds that they can no longer cope with competition and technological change (*Observatoire Paalga*, 2001). One central element has been to promote more secure forms of land tenure for privately owned land as a means to encourage long-term investment in land improvement. Another element has comprised positive measures to encourage the establishment of agricultural entrepreneurs in rural areas, by ensuring access to land and preferential access to key inputs.

However in the West African context, there is no evidence for the superiority of large-scale commercial agriculture, which has performed very poorly over recent decades (Belieres et al, 2002). Furthermore studies carried out by Drylands Research<sup>3</sup> and its partners show that farmers, without government assistance do invest in their farms. For example, building farm structures, improving soil fertility and structure, introducing new technologies such as animal traction and fattening livestock by purchasing fodder and paying for drugs and health services (Haramata 2004). The global evidence on farm size and productivity also shows small farms generate higher yields than large-scale enterprises.

Of course, in reality the situation is complex with farming enterprises existing along a continuum ranging from small-scale subsistence to large-scale commercial farms. But the debate is generally polarised along these lines: small scale family farms growing food only for the needs of the family and local markets versus large scale commercial farms which produce for national, regional and international markets with the capacity to work more efficiently and productively.

What the family portraits in this paper demonstrate is that the view of family farms as backward and isolated is false and that in fact these farmers adapt to new technologies, are integrated into markets, carry out a diversity of activities and maintain important social networks to limit risk and reduce vulnerability. As such they should be central to rural poverty reduction efforts.

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3. Drylands Research carries out and co-ordinates policy-related research on rural livelihoods and environmental management in semi-arid African countries. [www.drylandsresearch.org.uk](http://www.drylandsresearch.org.uk)

## 1.4 Objective, scope and methodology

### Objective

This paper shows that the stereotyped image of family farming as archaic and hide-bound is false through presenting three family farms, in Ghana, Senegal and Mali. Like the case studies presented here, throughout West Africa there are many examples of small-scale producers who have established economically viable farms. And who are contributing to the sustainable management of local natural resources. As well as contributing to the debate on the future of family farming, we hope that this these portraits will:

- document the practices and strategies developed by family farms with a view to strengthening their long-term viability and safeguarding sustainable means of existence;
- identify the social, technical, organisational and institutional (i.e. agricultural policy) factors which explain the success and ensure the economic viability of family farming;
- contribute to the dissemination of good practice as a way of supporting lobbying activities and policy dialogue.

### Methodology: Family Portraits

A family portrait<sup>4</sup> is a description and analysis of how a given family collectively organises its labour and other productive assets, such as land and livestock but also access to credit or social relations, to make a living. The portrait provides detail on specific activities carried out by individual family members on a seasonal and historical basis, and highlights the major constraints they face.

The family portrait is a research tool, but one which presents an immediate human dimension to many of the issues surrounding sustainable development. Although the family portrait is a 'snapshot' of a given family who may not necessarily be representative of their community, it

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4. The family portrait was originally developed by Brigitte Thebaud as a participatory approach to analyse the elements of a family's livelihood. Further information on this research technique is documented in the IIED's *Power Tools*, series number 8, and can be downloaded from [www.iied.org/forestry/tools](http://www.iied.org/forestry/tools).

can be used to great effect to gain an in-depth understanding of broader livelihood issues and dynamics at community and higher levels.

The family portrait can be used in a pure research sense, allowing the researcher to gain an in-depth understanding of the family. However, it can also be used in a more participatory way to develop mutual understanding between family members (men-women, young-old), between families, and between families of different groups. It allows a participatory process of analysis by the family their immediate community and external people. Used in a participatory way the process of making and sharing the family portrait has the capacity to take individual perspectives to the level of policy change (Cochrane, 2003).

## Scope

This paper presents portraits from Ghana, Senegal and Mali. Those of families in Ghana and Senegal were developed using a traditional research approach of meeting and interviewing families. The one from Mali was done in a more participative way allowing the researchers, farmers and the community, to analyse the portrait together.

These portraits provide a first hand account of the experience of these families. They are descriptions of the strategies that three families adopt to secure their livelihoods and as such cannot be said to be representative of all family farms in the region. However these portraits are useful tools to illustrate the points of the debate on the family farming.

## 1.5 Structure of the paper

This paper begins with a brief outline introduction to the role of agriculture in West African development. We then explore the arguments in favour of support to family farms and to commercial enterprises. A brief discussion of family portraits as a tool is then presented. These provide the conceptual framework for the presentation of the family portraits from Ghana, Senegal and Mali. The last section of the paper looks at the key characteristics of family farms, the diversity of activities they undertake to secure livelihoods, their flexibility, their ability to invest in land, and their importance to social networks. We conclude by looking at ways to support these farmers so that they can succeed thereby contributing to poverty reduction.

## 2. The Ibrahim Yidana family: A portrait from Ghana

J BRUCE AND N KARBO

### 2.1 Background

In northern Ghana, as with much of West Africa, agriculture is a mixed, sedentary, smallholder crop-livestock production system. This portrait was done with a family in the East Mamprusi District in the Northern Region of Ghana. The East Mamprusi District is one of the 13 districts of the Northern Region. It has a population of 174,863 and only 18.1% of the inhabitants live in urban areas (GSS, 2002).



Road infrastructure within the East Mamprusi district is poor, with a second grade road linking Gambaga and Nalerigu, within Nakpanduri and extending towards but not reaching the Eastern border with Togo. All other roads are in poor state. The Baptist Hospital at Nalerigu provides health care to the district and is supported by a network of health centres. The District has several primary schools with most housed in buildings of a high standard. The only Senior Secondary School is housed at Nalerigu. No tertiary level institutions are found in the district.

The vegetation of the Northern Region is Guinea Savannah and the area is characterised by a short single-peak rainy season, beginning in April and coming to an abrupt end in October. Average annual rainfall is 1,111 mm and mean annual temperature ranges between 25 – 35.5° C. March is the hottest and December the coolest month in the district.

### **The Gbangu Community**

The community came into existence sometime in 1792 (PAS<sup>5</sup> Langbensi records). There are a total of 121 houses in Gbangu community, with 1 primary and 1 junior secondary school. The community has 2 boreholes (even though these had broken down at the time of the study), 2 streams and 2 wells. The streams are used both as a source of drinking water and also for dry season gardening.

With respect to economic and agricultural infrastructure, there are 10 corn mills owned by individuals (men) and 1 owned by a women's group. Two carpentry shops are also found in the community.

There is a daily market in Gbangu village and the nearest external markets are at Langbensi (24 kms away) going west and Gambaga market (30 kms) going east. Traders come to Gbangu to purchase charcoal and agricultural produce. Individual traders residing in Gbangu also transport goods into and out of the community. Other external markets are the Techiman market in the Brong Ahafo region and the Bawku market in the Upper East Region.

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5. PAS Langbensi is one of several church-based agricultural stations in northern Ghana. The station has among its aims and objectives to meet the agricultural needs of the people of the East Mamprusi district, to increase food production and provide agricultural extension services to farmers in the district.

There are government extension services in the East Mamprusi district. However, Gbangu is covered by the Presbyterian Agricultural Station (PAS) Langbensi as are many of the communities in the western part of the district.

Both men and women migrate to the south of Ghana in search of work. The migration is seasonal, beginning in the dry season and ending with the return of the rains. Since the beginning of the year, 30 men and 70 women have left Gbangu in search of work. The women often become head porters, popularly known as '*kayayoo*'.

## **2.2 The Ibrahim Yidana family farm**

### **Description of the farm**

Ibrahim Yidana is the head of his family and his estimated age is 45 years. He began to farm for himself 25 years ago. Traditionally, young men work on their fathers' farms until such a time as they marry and set up their own home. Ibrahim set up his own home and upon the death of his father inherited the land he currently farms. The family profile is shown in Table 2.1. All 17 family members are currently living under one roof, eating from the same pot.

None of Ibrahim's older children go to school. Ibrahim explained that the children were needed on the farm to contribute towards the family's livelihood. And more importantly, he said he was not as well informed then as he is now about the importance of education.

The family farm produces: maize, groundnuts, millet, sorghum, soybeans, cowpea, bambarra beans, pepper, vegetables such as okra and spices like 'bungu' (sesame). Livestock owned by the family are bullocks, sheep, goats, chickens and a donkey.

### **Farm labour**

Twelve out of the 17 family members labour on the farm. However, apart from the wives and eldest daughter, only 2 of his sons can do a full day's work, the rest being too young. Ibrahim therefore uses a lot of casual labour. He does not, however, have to pay for all of it in cash because the use of his bullocks to plough other farmers' fields is often done in exchange for labour. In an average year, Ibrahim requires 5 casual hands

<b>Table 2.1 Profile of Ibrahim Yidana's Household</b>					
	<b>Age<sup>a</sup></b>	<b>Sex</b>	<b>No. of children</b>	<b>Education</b>	<b>Activities</b>
Ibrahim Yidana	45		12	No	farmer, carpenter, drummer
<b>Wives:</b>					
Rahinatu	40		8	No	farmer, petty trader, porridge seller
Washilatu	38		4	No	farmer, petty trader
Victoria	35		-	No	farmer, gardener, trader
<b>Children:</b>					
Dinatu	23	F		No	sowing, weeding, selling porridge
Zacharia	14	M		No	farming, gardening, shepherding
Maria	13	F		No	fetching water, sowing, weeding
Amiyaw	12	M		No	shepherding
Razak	10	M		No	shepherding
Mahamadu	9	M		Yes	sowing, weeding
Iddrisu	7	M		Yes	sowing, weeding
Rafiatsu	6	F		No	sowing, bird scaring
Rufai	5	M		Yes	
Faiza	4	F		Yes	
Nuru	3	M		Yes	
Basiru	2	M		Yes	
<b>Others:</b>					
Mother					widow

a. Exact ages are not known these are estimated on the basis of known historical events and approximations. Source: IIED Study, 2004

to help in land preparation. Between 20 and 25 persons are needed to weed the fields and another 20 are engaged to help with the harvest. Access to labour was not perceived as a problem in itself. Rather, money to pay was the limiting factor.

## 2.3 Agriculture

### Land

The family has access to a total of 17 acres (5.9 ha) of land. Out of this, Ibrahim owns 15 acres (5.2 ha) which he inherited from his father. Land is not sold in northern Ghana. Rather rights of usufruct are given and such lands can be passed on from one generation to the other.

Ibrahim's holding is below the average of 8.2 ha for farmers in the East Mamprusi district (Karbo and Bruce, 2003). Soils on about 10 acres of Ibrahim's land are predominantly sandy (*tambegu*) and on these, yam, groundnuts, millet and sorghum are grown. The remaining 5 acres is gravely soil (*kugchasi*) on which millet, sorghum, beans and cotton are cropped. A patch of rocks are placed on one end of the farm rendering that portion of land untillable. Some sorghum and millet which survive almost any hardship are planted there.

Surplus grain is sold and invested in livestock and also to defray bills (e.g. school fees).

Ibrahim's wives have access to about 2.5 acres of the family land on which they grow groundnuts and millet. The children of farm-going age are also given small strips of land on which they grow a crop of their choice.

### Borrowed land

Ibrahim borrowed 2 acres of land. He acquired access to this land by asking the owner directly. He pays nothing for access to this land but the owner is free to take it back any day and Ibrahim's family cannot harvest the trees on this land. They belong to the landlord. Victoria, Ibrahim's third wife, also borrowed land for her tree nursery when she was living in Gbangu community but was unmarried. She also pays nothing for this access.



## Sources of equipment and farming inputs

Each household member of farm going age owns some farm equipment (cutlasses, hoes etc). The father gives children their equipment, whereas the wives purchase their own. Capital intensive equipment is owned by the family head. Decisions to purchase smaller equipment are made as and when necessary. With the exception of the donkey cart all equipment is purchased from the Gambaga market, one of the main markets in the district.

Ibrahim is a member of a farmers group called '*Tinyantaba*' (meaning 'we should be seeing each other'). The group is made up of six members who put their money together as savings. They often use this money to purchase grain which they store and sell at a time when prices are high. The group used savings from the accumulation of dues as collateral to obtain a loan. The loan was shared among the group members and Ibrahim used his share to purchase a donkey cart from PAS Langbensi. The group had initially also attempted to have a group farm but this did not work well and was eventually abandoned.

## Source of seed and fertilizers

Due to the high cost of fertilizer, this family does not always buy it. Fertilizers are available from local markets. Maize is usually the only crop

Crop	Source of seed	Remarks
Yam	Own seed. Inherited from fathers	
Maize	PAS Langbesi + Own seed.	2 different varieties
Millet	Own seed	
Sorghum	Own seed	
Soya	PAS Langbensi	
Beans	Purchase from Langbensi market	
Groundnuts	Own seed. Also buys from market	Sometimes forced to sell seed to meet other needs. Buys seed in such years
Cotton	INCOF Cotton Company	

Source: IIED Study, 2004

for which fertilizer is purchased. Last year, however, Ibrahim used only compost on the maize field in order to avoid this high expenditure. The cotton company provides inputs such as fertilizer and seed. The cost of inputs are deducted before any profit is paid to the farmer.

Apart from the donkey, bullocks, compost, labour and local varieties of seeds obtained in the community, the Yidana farm enterprise appears also to depend on external sources for inputs. The community lacks these input dealers. There is no blacksmith in Gbangu community to service their agricultural machinery. What happens to the Yidana family if for example, PAS Langbensi is taken away?

## 2.4 Livestock

Each member of the household owns livestock. As with equipment, fowls owned and cared for by the children were given to them by their father. The women acquire the animals from the proceeds of various enterprises. According to the wives, the livestock are purchased because of their ability to multiply over time, indicating that livestock purchasing is also an investment and a sign of wealth accumulation.

Species	Owner					Total
	Father	1st Wife	2nd Wife	3rd Wife	Children	
Cattle	3					3
Sheep	15	2	7	2		26
Goats	3					3
Fowls	15	11	5	2	7	40
Donkey	1					1

Source: IIED Study, 2004

## 2.5 Other resources

The family has access to other resources. Chief among these are the access to economic trees. There are a total of 403 shea and 138 dawadawa trees on the family's land. The family has also planted 112 cashew, 6 teak and 3 ebony trees on the land.

The youngest wife who joined the family a year ago also owns a tree nursery which she set up with help from ADRA.<sup>6</sup> Mango, cashew, *Albezia* (fodder spp), Neem, moringa seedlings are produced in the nursery. Most of the seedlings are purchased by ADRA for distribution to other farmers. She has since repaid the loan of equipment and cash in full.

## 2.6 Sources of income

Ibrahim and each of his three wives are the main income earners in the household, each contributing income from several sources. Each one will be discussed in turn.

<b>Name</b>	<b>Source of income</b>	<b>Comments</b>
Ibrahim	cotton, groundnuts, soybeans	<p>Ibrahim indicated that cotton was no longer lucrative. For three consecutive years he has not made any meaningful profit from cotton.</p> <p>A lot of what goes on within the cotton industry was unknown to him as he did not know the price of one bale of cotton. According to him the cotton company was not willing to give them the price of a bale of cotton, citing poor world market prices for cotton as a reason.</p> <p>Ibrahim's plan is to substitute soybean with cotton as a cash crop even though his wives indicate that the groundnut market price is better.</p>
	carpentry	At times Ibrahim travels as far as Bolgatanga (Upper East Region) to take up carpentry jobs.

6. Adventist Development and Relief Agency – Church-based NGO in northern Ghana utilizing an integrated approach to agriculture and natural resource management. The organization is most known for the provision of fertiliser, seed and tree seedlings in parts of Northern Ghana.

Name	Source of income	Comments
Memunatu (1st wife)	livestock, sale of firewood	Memunatu was unable to assess the importance of the income from livestock and sale of firewood as it was money she tended to raise only as and when needed.
	dawadawa seeds	This was most important to her. Last year she sold a large maxi bag of seeds for ₺ 300,000 (approx. US\$ 33).
		Memunatu's savings show that she has only two sheep. This indicates that she does not have much 'spare' income and can be explained by the fact that she has as many as 8 children. When the father is unable to meet some of the expenses of his children it is common for the wife to do so.
Washilatu (2nd wife)		It was not possible to obtain figures of income from Washilatu as she had to leave to make the evening meal. However, she did indicate that dawadawa was by far the most important source of income. Farming used to be lucrative but with declining soil fertility it was no longer so.
Victoria (3rd wife)	trading and groundnuts	Victoria's income is above the average for women in Gbangu. She has a trading background and is not limited to the type of trading that goes on within the community. At times she travels to larger markets.
	tree nursery	Victoria's greatest source of income. In the first year of her enterprise, she earned ₺ 2 million (\$220), Last year she earned ₺ 7 million (\$769). This year she has 4,000 mango seedlings for sale at ₺ 3,000 per seedling. Her expected income from the mangoes is ₺ 12 million (\$1,319).
Other income sources	chickens	A steady flow of income is raised through the sale of chickens.
	bullocks	Ibrahim's bullocks ploughed a total of 11 acres for other farmers. The price for ploughing 1 acre is ₺ 70,000, indicating an income of ₺770,000 from bullock ploughing last year. This income is paid in kind, usually as a saving on labour expenditure rather than cash payment.

### 3. The Abdoulaye Racine Anne family: A portrait from Senegal

BABACAR NDAO, FONGS

#### 3.1 Background

Like all the *communauté rurale*<sup>7</sup> in the region of Saint-Louis, northern Sénégal, Guédé was created in 1980. With nearly 29,700 inhabitants, it is one of the most densely populated *communautés rurales* in the department of Podor. The population is relatively young (49% under 15, 43% between 15 and 59, and 8% over 59). There is a significant amount of emigration, towards Dakar and other regions of Senegal, as well as other African countries and France, Italy and the USA.

Economic activities are predominantly agricultural (53% – mostly irrigated crops like rice and market gardening), but also include rearing livestock (38%), fishing (6%) and crafts (3%).

There is no lack of land for agriculture- in fact available land tends to be under-utilised. Nevertheless, farmers have to contend with constraints to inputs and outputs (supplies of seeds and other inputs; problems marketing produce and no processing of produce). Agriculture is declining, and extensive livestock rearing is also in a critical situation, mainly due to the restriction of livestock corridors limiting herd access to the river and pastures. The previously prosperous fishing sector has been hardest hit by the modification of the river system, as this has affected the reproduction of certain types of fish. The craft sector does not appear to be very dynamic.



7. Administrative grouping of the population: rural community.

The profound ecological effects of development and deforestation can be seen here and in the rest of the valley, with increased erosion, the disappearance of certain species of wildlife and imbalances in the water system (certain villages are now liable to flooding). Water pollution is another worrying phenomenon with serious health implications (for example, bilharzias) in an area where the most of the population have difficulty in accessing health care.

### **3.2 The Abdoulaye Racine Anne family farm**

Abdoulaye Racine Anne describes his family: "My name is Abdoulaye Racine Anne. I am the head of the family. I'm 46 years old and I live with my three wives (Racky Sy, Hady Sy and Kadjata Mangane) and our 9 children. There are usually about 23 or 24 family members around, and we eat from a "common pot" every day.

My mother, Aysata Ly, looks after the finances on the family farm. She has lived with us since my marriage in 1981. She gets on very well with my three wives. Aminata Ndiaye, the wife of my brother Harouna, and her three children also live with us in the same homestead. They could have their own property if need be, but have chosen to be part of our family farm."

The extended family is organised around the separate households of two brothers, and its business affairs are organised according to the rules of seniority. All the boys and girls who are old enough to go to school do so, and two of the adult women can read and write. This gives the family an opening onto the outside world. There is a small paid workforce of two employees. "We provide both of them with food and lodging, and pay one 15,000 francs CFA per month for 12 months of the year and the other 15,000 francs CFA per month for 5 months of the year".

#### **Family capital**

Abdoulaye Racine Anne's account of his life centres on his land resources. He speaks about both innovative land management practices (irrigation) and increased land holdings. "In total, my family has 3.68 hectares of developed land, although in 1978, I lost one hectare that I'd acquired in 1977, because of my trip to Mauritania. That was the year of the really terrible drought. So that leaves us with 2.68 hectares of irrigated land. In

1981 I came back to the country to get married, and it was around then that I developed the land. On top of that, I obtained another 25 hectares through a loan contract with ISRA.<sup>8</sup>

Part of the farm's success is due to this extra land made available by ISRA. Instead of being left fallow, it was used to enlarge the productive holding and keep the family herd in a relatively confined area.

### 3.3 Agriculture

The Anne family grow a range of crops: banana, rice, tomato, groundnut and blue stem, as well as produce for the market and fodder crops. Some land is left for pasture. This year the farm invested in six lengths of hosepipe so that more land could be irrigated for market gardening and tree cultivation.

Crop rotation is used as part of the growing system. Over the last growing season crops were rotated according to the family's estimated domestic requirements and what they thought they would need to sell to raise cash for household expenses, also taking livestock rearing into account.

Family capital is augmented by a fairly varied selection of farm equipment. In addition to the commonplace and relatively inexpensive hand tools like axes, hoes, spades, rakes and picks, there is evidence of some mechanisation as the farm also has several pieces of machinery. The net book value of its agricultural equipment amounts to about 1,100,000 francs CFA. This includes a car, but excludes a motor pump whose value is totally written off but which is still functional.

Unfortunately, the family's rice plots are located separately in irrigated areas of Kodité, SAED<sup>9</sup> lands in Nianga, and Ngalenka. Very few seasonally flooded crops are grown now, but after the floods the farm does produce a little maize, sorghum, sweet potato, courgette, pumpkin and cowpea for eating.

Tree cultivation and market gardening complete the wealth of produce grown on the farm. "Our banana plantation covers 0.04 hectares. It's

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8. The Institut Sénégalais de Recherche Agricole.

9. Société d'Aménagement et d'Exploitation des Terres du Delta du Fleuve Sénégal.

doing well, making a gross profit of nearly 150,000 francs CFA, and we intend to double the area next year, God willing. This year we made around 1,000,000 francs CFA gross profit on the market gardening overall, but I'm nervous about increasing onion production because we have such trouble selling them".

### 3.4 Livestock

Another factor in the farm's success is the presence in recent years of a specialist service providing on-hand advice on the family's changing land use patterns. The conditions of the ISRA loan for access to more land do not stipulate any particular model of agro-pastoral management or experimentation. It is worth noting that neighbouring herds cannot graze on the contracted land, which only Abdoulaye Racine Anne has the right to use.

This significant increase in land capital has been beneficial in several ways. More land is available for family labour to put to productive use, and instead of following the herds now grazing on part of this land, all the children can go to school. Additional resources such as wood and grass have tangibly enhanced the lives of the women in the household, and better nutrition has improved the health of the livestock, now that grass cutting and other practices linked with permanent penning are part of the farm routine.

In an area where livestock rearing is less and less valued, it seems that the development of pastures and grazing no longer constitute an important means of capitalising on land resources. This is a shame, particularly when we know that farmers have always seen agriculture and livestock as complementary activities. "Farmers will never manage without both, and if they do it will always be touch and go. Anyway, I'm in no rush to change. Whether you're *Toucouleur* or *Woloff*, we still say that millet and milk is all we know. And we'll always want to combine the two", Abdoulaye Racine Anne.

The family uses mixed penning to maintain their herd of 27 cattle, 5 sheep and goats, 2 horses and some poultry. This means that the animals are kept on the holding throughout the year, and all the manure is used to improve the soil, enhancing the condition of the soil on which fodder crops for the livestock are grown as well as the market gardening crops.



At this point it should be noted that although the sheep run with the herd, they are the exclusive property of Racine's mother.

When he spoke of his pastoral activities, Racine talked about the farm strategy for breeding and the dairy products produced for sale and domestic consumption. "Last year we invested 250,000 francs CFA in a bull to replace one that we sold for 150,000 francs CFA. We managed to produce enough milk for our own needs and sell milk the whole year round, which made us over 1,500,000 francs CFA."

### 3.5 Crisis management strategies

Abdoulaye Racine Anne used the drought of 1972 as an example of how the family deals with a crisis. "Before the drought in 1972 everyone raised livestock and grew crops, alternating between the *diéri*<sup>10</sup> (rain-fed crops and livestock) and the seasonally flooded *walo* (flood retreat crops) according to the season. Agricultural activities and rearing livestock kept us going throughout the year. Customary institutions and authority were respected, although that didn't stop people competing for power.

But then the drought started in 1972. My family dealt with it by sending me to Mauritania. In 1982 I started growing irrigated crops on 0.04 hectares that I'd just got hold of, because when I came back from Mauritania I lost one hectare of the land I'd acquired before I left in 1977. Land became even more important with all the development that was going on. After this point there were more village fields and lands were managed by the *communauté rurale* of Guédé, which had just been created. This meant we had to give up our customary rights, but local people fought to defend their lands in spite of the law on public lands. These 'glorious times' were also times of doubt and social change."

### 3.6 Advisory services

If the service provided by the farmers' association proves sustainable, as we hope it will, and the family heeds its advice, there is a good chance that they can repeat the success of the 2003 growing season. It was this advisory service that enabled them to work out the different crop rota-

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10. Poor quality sandy lands traditionally used by herders in the rainy season.

tions that would meet all their needs: human (internal communication, consumption, health, training, social, etc.), livestock (fodder, health), soil and plants (improvements, fertilisation, plant care, etc.).

This service enabled Abdoulaye Racine Anne to make a real joint venture of his family farm. As a result of working together they increased both production and understanding among family members, through better management of their human and natural resources. The advisory service also helped put them in touch with a decentralised finance system and to learn technical skills.

### **3.7 Meeting the family's needs**

The family is self-sufficient for just over 11 months of the year. By going into debt, making budgetary adjustments and/or going without, they manage to cover most of their food needs. And if we analyse the patterns of consumption, we can see that by adjusting their less strategic and urgent expenditure, they do better than just manage. The consumption pattern of the Anne family is similar to that of an urban family, and is made possible by the diverse sources of income and large sums generated by the farm.

## 4. The Amadou Diallo family: A portrait from Mali<sup>11</sup>

BALOUGOU TELLY, ANDA OULAGELEM,  
BLANDINE SANGALA AND TEMBELY IBRAHIM

### 4.1 Background

This portrait was done with a family living the Bankass district in Mopti, the 5th region of Mali. Bankass is situated south east of the town of Mopti between the Bandiagara escarpment and the Burkina Faso border. It covers a total area of 9,504 km<sup>2</sup>. With 280 official villages, it has 203,600 inhabitants of Dogon, Fulani, Dafing, Samogo, Bobo, Bozo and Tuareg origin, and an average population density of 21 persons per km<sup>2</sup>. The main economic activities in the district are farming, rearing live-stock, fishing, trade and crafts (Bocoum et al, 2003).

The district is divided into three agro-ecological zones. Starting with the northernmost zone these are:

- The Plateau, which reaches altitudes of 400 to 500 metres. The vegetation ranges from the thin layer of grasses found on rocky terrain to forest in depressions along the ravines, and wooded savannah on the sandy soils in the immediate vicinity of the cliffs.
- The Seno, which occupies the central part of the district. This is a huge sandy plain that is completely covered in farmers' fields.
- The Samori, which is located in the south of the district. This is characterised by clayey and silt-clay soils, relatively plentiful forest resources

Figure 4.1 Map of Mali



11. This is an extract from a portrait carried out as part of IIED's Shared Management of Common Property Resources Programme. The objective of this programme was to research and identify how common property resources in the Sahel can be managed in an equitable, sustainable and peaceful way by the many people who rely on them for their livelihoods. Reports and publications from this programme can be found on [www.iied.org/drylands](http://www.iied.org/drylands).

and water from a permanent branch of the Sourou river which makes it a good area for growing rice and fishing (Bocoum et al, 2003).

The family lives in the village of Djinadio-peulh, in the rural municipality of Lessagou in Bankass district. Located about 3km west of the district's main town, the village was founded in 1888 by a herder called Belco Mohamadou Diagayeté, who came from Néné (Ouo *arrondissement* in the district of Bandiagara).

Sarréleyé is inhabited by Fulani from the Diallo clan, and by Rimaibé descended from slaves of the Fulani, although slavery has virtually died out since Independence. Sarréleyé is situated in the Seno, a very productive millet zone sandwiched between two pastoral zones – the Dogon plateau to the north and the Samori forest to the south. The Seno is inhabited by Dogon who came down from the plateau in search of cultivable lands.

## 4.2 The Amadou Diallo family farm

Amadou Diallo is Fulani. He was born in 1948 on transhumance in the district of Bandiagara, and now lives in Sarreleyé, in the municipality of Lessagou in Bankass district.

He has one wife, Fatoumata Diagayeté. She has had 7 children, 5 of whom are still alive (2 girls and 3 boys). Her first daughter, Bintou Diagayeté, was born in 1981, and has lived in Boundouré, in the *facala* (Djenné district) since her marriage in 1995. Fatoumata's first son, Adama Diagayeté, was born in 1985. He still lives with the family, along with her second daughter, Aissata Diagayeté, and second and third sons, Allaye Diagayeté and Aly Diagayeté, who were born in 1991, 1995 and 1998 respectively.

Amadou shares a homestead with his two brothers Gourou and Brahima, and the son of his deceased elder brother, Ousmane. In 1998 the family decided to separate management of the extended family, so now they live together but manage their affairs separately.

Amadou has a good relationship with his neighbours and holds various positions of responsibility in the village: he has been a village councillor since 1991, president of the village association and member of APSS (*Association pour la promotion d'élevage de Sahel et Savane* –

Association for the promotion of livestock rearing in the Sahel and Savannah) since 1994, and a member of the village natural resource management committee since 2000.

The family lives off two main activities: agriculture and livestock rearing. During his father's lifetime and until 1985 their livestock provided for most of the family's needs, but the drought years of 1973, 1984 and 1985 destroyed most of the herd and now they are more dependent on agriculture than on rearing livestock.

### 4.3 Agriculture

Amadou, a Fulani, is an agro-pastoralist. During his father's time the family was more dependent on pastoral production, milk and the income from selling dairy produce, but nowadays it is agriculture that feeds his family for 10 months of the year. Amadou owns three fields: two home fields and one bush field that he inherited from his father. He grows millet, cowpea and sorrel, as well as groundnut, *wandzou*<sup>12</sup> and gourds (used to store and sell milk) on small plots borrowed from neighbours.

He tries to improve the fertility of the sandy soil by penning livestock, rotating crops and 3-4 year periods of fallow. He discusses this with his neighbours so they can leave adjoining fields fallow, giving the livestock more space and allowing the two fields to be manured.

Amadou and Adama sow millet as soon as the rains begin (late June/early July) and then hoe twice before the harvest. He employs two men for two days for harvesting, three women to transport the millet to the house and 10-13 boys to fill the grain store. All the work in the fields was done by hand with simple tools until 2001, when he borrowed a plough. The ploughed fields yielded well, so Amadou is looking to invest in some agricultural equipment now.

All the millet, groundnut and *wandzou* are eaten by the family. Millet stocks usually last for 10 months; cereals for the two remaining months are bought with the money made from selling animals.

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12. A type of grain.

## 4.4 Livestock

Amadou's herd is made up of cattle, sheep and goats. He keeps the females to reconstitute the herd and for milk, selling the males and small ruminants to meet other needs. When millet stocks start to run low, normally towards July, Amadou sells a few small ruminants so that he can buy cereals, pay his local and regional taxes, buy clothes and pay for health care. Each year he keeps enough small ruminants so that they can reproduce and be used to meet the family's needs over the following year.

Amadou lost many livestock when the great drought hit the Sahel in 1983-1985, and pasture became increasingly rare. In the rainy season of 1983 he went to the Samori forest where the grazing was better in an attempt to save his herd. Then in 1985 Amadou and Ousmane took the livestock to Barani in Burkina Faso, where they stayed with a pastoralist who had spent a long time near Sarréleyé, with whom Amadou had built up a good relationship. Ousmane spent eight months in Burkina Faso with the herd, while Amadou returned home with little hope for their survival. They did manage to save a few animals by doing this, but the family herd was virtually wiped out.

Access to pastures is free, but it has become difficult to cross the Seno because of farmers' fields and a lack of officially recognised livestock corridors. This makes it hard for herders to avoid damaging the fields, which leads to conflict between them and the owners of the fields. Another worry for Amadou is the disappearance of certain types of grass on the plateau, which he thinks is due to the irregularity of the rains. Since 1994 Ousmane has taken the livestock to the plateau so that Amadou can concentrate on agriculture.

When they get back to Sarréleyé, Amadou's animals have priority access to the crop residues, but he lets other animals onto his fields too in order to maintain good relations with his neighbours and improve the fertility of the soil. Several milk cows remain in the village, as none of the women go on transhumance. Each wife has a right to the milk of her husband's cows. Most of the milk is consumed by the family and the rest is sold to the neighbouring villages of Sarréleyé Dogon and Kikilé. Since 1994 Amadou has looked after livestock belonging to his cousins and some Dogon, which increases milk production and helps fertilise the fields.

The goats and sheep are looked after by Gourou's sons Adama and Moussa. In the dry season the small ruminants wander off during the day and are watered by Amadou's sons and the women of the household.

To make up for the lack of pasture and keep the herd healthy, Amadou and his son Adama gather *Prosopis Africana* fruits to give to the milk cows and weak or sick livestock. But these are becoming harder to find now, so they have had to start making hay.

Since 1994 he has used a technique developed by APSS, storing cowpea, groundnut and *wandzou* heads in the barn along with young sorrel and stalks of millet that did not produce any ears, leaving the other millet stalks in the field for the livestock.

In 1998 Amoudou was trained as an auxiliary vet by APSS, learning how to vaccinate and screen livestock. The cattle are vaccinated every December in the new vaccination pen in the municipality of Lessagou, and Amadou buys pills for the cattle and small ruminants if he spots any symptoms of parasites.

Lack of water in Sarréléyé makes life very difficult for the family. The well is not very wide and dries up quickly in the dry season, and the village is seeking a partner to help resolve this problem. Although the extended family is managed separately, they still work collectively, and all the livestock are tended together to free up family labour for farming.

## 5. Conclusion

These portraits from Ghana, Senegal and Mali show the diversity of activity contained within these family farms. Although they are specific case studies of three families, these portraits are useful for examining the arguments in the debate on the future of family farming. To conclude we will discuss the arguments below.

### 5.1 Characteristics of family farms

#### **A diversity of activities**

The family farm should not be viewed as an isolated economic unit focused entirely on agriculture and reliant exclusively on agriculture and reliant only on its own resources. Family farms typically include a diverse set of activities and outputs involving a range of crop and livestock production, fishing, hunting and gathering, trade and craftworks as well as seasonal or longer term migration (Zoundi 2003).

The portraits presented here demonstrate this diversity as all the families grow many different types of crops and keep livestock both for their own consumption and for sale at local markets. Other income generating activities include carpentry, migration, gathering firewood and fruits, trading and growing tree seedlings. This wide diversity of activities helps to minimise risk and reduce these families' vulnerability to environmental shocks such as drought.

#### **Flexible and adaptive**

Because these farms undertake a diversity of activities they are able to adapt when market or climate conditions change. When neither cultivation nor rearing livestock are productive the families rely on migration as a source of income until conditions improve. In Ghana for example, Ibrahim, had decided to switch to soybean cultivation as cotton production was proving unprofitable. And when climatic conditions are very unfavourable he can rely on carpentry as a source of income. In Mali, the family put more emphasis on agricultural production after drought years had reduced the number of their livestock.



## **Integrated into social networks**

These families are well connected into social networks. Using them to access labour both hiring and in the case of Ghana through the exchange of animals for ploughing. Farmers' groups are also important networks for these small-scale producers. As demonstrated in Ghana, the farmers' group to which Ibrahim belonged was able to club together to raise enough money to act as collateral for a larger loan.

In Mali, Amadou Diallo holds positions of responsibility in his village natural resource management committee and the Association for the Promotion of Pastoralism in the Sahel and Savannah. During the drought Amadou was able to take his animals to Burkina Faso to connections he had there in an attempt to save his herd.

Family farms often rely on a set of social networks linking relatives and neighbours in near and more distant locations, through which mutual support is provided. Maintenance and investment in these networks constitute an important element in the household's strategy since they can provide an essential safety net in times of crisis (Toulmin and Gueye, 2003).

## **Investment in land**

Popular belief says that small-scale family farms are backward and too poor to manage natural resources sustainably. But evidence from these portraits shows that given the opportunity these farmers will invest in their land. In Senegal for example, Abdoulaye Racine Anne, bought lengths of hosepipe to increase the amount of land under irrigation. In Mali, Amadou Diallo practices crop rotation leaving some fields fallow and allows his animals to graze on crop residues to fertilize his fields. Similarly in Ghana, Ibrahim, uses compost and when possible buys fertilizer to increase crop yields.

These elements, a diversity of activities, flexibility, social networks and investment in land, are the strategies that these families use to reduce risk and vulnerability to market and climate changes. They are important life strategies in an area prone to drought and unpredictable levels of rainfall.

## 5.2 How can family farms be supported?

These family farms are the backbone of rural life in West Africa. Agriculture is source of livelihood for over 70% of the population. As such support to it should form a central element of poverty reduction initiatives in the region. This need not be done to the exclusion of commercial enterprises but the potential of small farms should be recognised and their development supported through government and donor policies and programmes.

### Access to land

Access to land is key for any farming enterprise both commercial and small-scale. But family farms face particular problems due to:

- A growing shortage of land and its rapid increase in value, especially in peri-urban areas. Most West African smallholders claim rights over land through customary procedures and do not hold formal paper title. As a result, these land claims may be vulnerable to stronger interest groups who are seeking land and can get governments to back their claims through formal procedures. The question of secure access to land is particularly problematic for pastoralists who take their herds on transhumance routes in search of pasture. As shown in the portrait from Mali, the increasing amount of land under cultivation is encroaching on grazing lands and making it more and more difficult for pastoralists to access grazing for their animals often resulting in conflicts between farmers and herders.
- The question of inheritance and fragmentation of land holdings is a serious problem for the viability of the family farm, which benefits from certain economies of scale when able to combine the labour and assets of several family members, rather than being limited to a nuclear family or single individual. While it is not always the rule, the death of the household head often leads to the break-up of the family into two or more separate units, with a division of the land and other assets. This fragmentation can lead to them becoming more vulnerable to risk and less able to maintain the livestock and equipment needed to run the farm (Toulmin and Gueye 2003).
- In Ghana, Ibrahim secured access to land through inheritance. But he has 12 children. Amadou Diallo is in a similar situation with 5 children.

Who will these children inherit land from and will it be enough to secure their livelihoods? What are the alternatives?

Security of land tenure need not be achieved in the same way for both large-scale commercial enterprise and smaller family farms. It may be possible to secure the land right of family farms using simple, low cost and locally accessible mechanisms. Farming businesses on the other hand may require more formal land registration procedures.

### **Access to inputs and markets**

The poorly developed organisation of small holder agricultural producers constitutes a serious problem in a context of rapid integration of marketing and production systems. While government parastatals used to play an important role as providers of inputs and credit, and buyers of certain crops, most governments have been forced to disband these organisations and privatise these functions. In the absence of a well-developed co-operative movement, small farmers have very little organised marketing power or negotiating ability with input suppliers and crop buyers (Toulmin and Gueye 2003).

In Ghana, Ibrahim's lack of knowledge and inability to negotiate a fair price for his crop meant he did not profit from growing cotton. Better access to information on market prices, access to cheaper inputs, and the ability to deal with cotton companies through a cooperative and thereby have been negotiating power, could make cotton a more profitable crop. Poor transport infrastructure is also a constraint in rural areas with regard market produce and obtaining inputs.

Government extension services can act as a valuable transmitter of information to rural farmers but they are inadequately resourced and are overstretched. None of the farmers described here mentioned extension services as a source of support or information. They relied instead on local farmer groups, CBOs or NGOs for information and access to inputs.

Access to resources (labour, land, other natural resources such as firewood and fruit trees and common property areas for grazing etc.), inputs and markets are vital for the success of family farms. Government policies on, trade, agriculture and rural development need to take into

account the interests of these families as well as those of commercial enterprises if poverty reduction is to be achieved.

The three family portraits described in this document demonstrate, in a very real way, the diversity of activities undertaken by these farmers, their ability to adapt to changing circumstance, how they are able to invest in land with very little support, and the vital role they play in rural social networks. It is hoped that this evidence will feed into the debate of family farming versus large-scale commercial enterprise and provide a more nuanced and realistic picture of small-scale family farmers.

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