

# 3

## Cameroon: Revolving Funds Make a Difference

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### 3.1 Introduction

#### 3.1.1 Agriculture

Cameroon has 18 million inhabitants, 62% rural; 1.1 million farms have less than 2 hectares, although there are some large government and private farms. Most farms (72%) manage both crops and livestock; 25% are specialized in crops only (INS, 1999). Agriculture contributes 20% of the gross domestic product (FAR, 2010) and employs 73% of the workforce (Bella, 2009).

Of the 9.2 million hectares of potential agricultural land, only 1.8 million are farmed (FAR, 2010). Commercial farms produce export crops like cocoa, cotton, rubber, sugarcane, banana, oil palm, tea and tobacco. These large government and private companies play a big role in the economy. Smallholder farms produce staple food with 72% growing maize or sorghum, 71% groundnut, 58% root crops like taro or coco yam, 56% plantain, 53% bean or cowpea and 52% vegetables. Many also grow cassava, sweet potato or potato, among many other crops. Nearly 70% of the food produced is eaten on-farm (Annuaire Statistique du Cameroun). Rice is grown by an estimated 145,000 farmers on about 44,000 hectares, mainly in the irrigated schemes in the north.

As these are far removed from the centres of consumption in the south (Yaoundé and Douala), most rice is exported to the neighbouring countries of Nigeria, Chad and the Central African Republic (MARD, 2009).

Most of Cameroon has two rainy seasons, although the north has only one (June to November), with rains being more erratic in the far north.



Because of the low use of farm inputs and low soil fertility, the yields of most staple food crops are low in Cameroon, 2 tonnes per hectare for maize, 0.8 for sorghum, 0.8 for groundnut, 12 for cassava and 14 for plantain.

Food production is lower than demand, with imports making up the difference. In Central Africa, rice imports increased 14-fold between 1961 and 2007, rising from 32,100 to 470,974 tonnes, while per capita cereal production shrank from 157 to 85 kg (MARD, 2009). This is also true for Cameroon, which imported 300,000 tonnes of rice in 2009 while only producing 100,000 tonnes of paddy.

Although major roads are good in northern and southern Cameroon, the regions are poorly linked, apart from air travel. With increasingly erratic rainfall affecting agriculture in the drier north and no possibility of transporting food from the major port in Douala, FAO decided to help northern and far northern Cameroon become food secure. The seed enterprises described in this chapter focus on these two zones.

### **3.1.2 Seed industry**

There are no private seed companies producing or selling seed in northern and far northern Cameroon. State seed agencies have stopped producing seed and their land is now used by smallholder farmers either free of charge or for rent. Currently farmer seed producer groups are the only ones producing and selling seed.

Multinational companies like Pioneer Seed tried to produce seed on government-owned land, but failed. The official reason given was that seed production costs were high and farmers could not afford to buy seed at the proposed prices.

### **3.1.3 Seed legislation**

In 2001, a law was issued on seed prices stipulating that seed must be produced under specific terms of references to earn certain high prices. As no seed producer is meeting these quality standards, prices are determined by the market. Seed prices depend on the vendor and location and can be twice the seed producer's price. For example, in 2009 rice seed was sold at 200 FCFA per kg (\$0.48) in Lagdo area, while in Maga and Yagoua it was sold at 400 FCFA (\$0.95).

A law signed in 2005 created a fund to support the seed industry and seed research and to improve the conservation of farm-saved seed. A second law signed in 2005 regulates seed certification, quality control and marketing.

The law recognizes two types of seed: certified and local, with no intermediate category. Certified seed production in Cameroon has been around 7000 tonnes (Table 3.1).

Certification starts by declaring one's intent to produce seed before planting, followed by at least three field visits, sampling at harvest and issuing of certificates. However, laboratory analyses are still limited to seed germination and purity, as there is no equipment yet to test for pests and diseases.

So, by law, seed sold has to be certified, but, as the demand for seed far exceeds supply and the certification system is not yet fully operational, there is no enforcement of the regulation and any seed is accepted for sale. Fraud control is not yet implemented, although the Ministry of Agriculture and Rural Development is planning to strengthen seed inspection and certification. FAO recently trained inspectors and will contribute

to making seed laboratories available throughout the country.

### 3.1.4 Creating a sustainable seed production and supply system

When state agencies stopped producing seed there were no alternative sources. To address food insecurity in northern and far northern Cameroon the FAO and the government of Cameroon started two projects, Support for the multiplication and diffusion of improved and healthy rice seeds (Appui à la multiplication et à la diffusion de semences améliorées et saines de riz) (2004 to 2006) and Support to farmer organizations for the multiplication and diffusion of early maturing varieties of maize, sorghum and millet in the provinces of the north and far north (Appui aux organisations paysannes pour la multiplication et la diffusion de variétés précoces de maïs, de sorgho et de mil dans les provinces du Nord et de l'Extrême Nord) (2006 to 2008).

Both regions are prone to drought and needed support in grain production. State facilities for irrigation (dams and water reservoirs) were available. The governmental development authority MEADEN (Mission d'Études pour l'Aménagement et le Développement de la province du Nord) looks after the management of the Lagdo dam area, 60 km from Garoua, the regional capital in the northern region. Another governmental development institute, the authority for the expansion and modernization of rice in Yagoua (SEMRY – Société d'Expansion et de Modernisation de la Riziculture de Yagoua), completed a dam in Maga on the Logone River in 1979, specifically to irrigate rice in the far northern region. The Institute of Agricultural Research for Development (IRAD) had developed drought tolerant and short cycle crop varieties of maize, sorghum and millet and seed was available, albeit not in farm communities.

Triggered by the two FAO projects, certified seed is currently produced and sold in labelled bags in northern and far northern Cameroon (Table 3.2). Rice seed produced from 2005 to 2009 could not be officially certified as the foundation seed used came from the governmental development institute SEMRY, whereas by law this must come from IRAD. The rice seed produced was therefore not recorded or included in this table.

The two FAO projects aimed to strengthen cereal seed production and dissemination by farmer seed enterprises. Seed producer groups were formed or

**Table 3.1.** Seed certified (tonnes) in Cameroon, 2006–2009.

	2006	2007	2008	2009
<i>Maize</i>	3,457	4,075	4,100	4,124
<i>Rice</i>	575	625	710	718
<i>Sorghum</i>	81	125	120	125
<i>Millet</i>	10	14	11	14
<i>Potato</i>	1,551	1,923	1,810	1,940
<i>Cowpea</i>	110	195	213	217
<i>Groundnut</i>	76	100	91	94
<i>Beans</i>	36	48	50	48
<i>Soybean</i>	9	11	11	13
<i>Total</i>	5,903	7,116	7,106	7,293

**Table 3.2.** Certified seed produced (tonnes) under FAO project.

	2007	2008	2009
<i>Maize</i>	230	202	207
<i>Sorghum</i>	41	18	16
<i>Pearl millet</i>	4	3	0
<i>Total</i>	275	223	223

strengthened and officially registered as legal entities (GIC – groupement d’initiatives communes) and established their own revolving funds for seed production and marketing.

**Common features of the farmer seed enterprises.** Many of the enterprises created during the FAO projects have so far sustained their activities after the projects ended. They all set up and are managing their own revolving funds.

The seed produced was meant for local farmers of each project area, but some was sold to Chad and Niger. Before the project, paddy yields obtained with local seed in irrigated plots were below 4 tonnes per hectare while yields with quality seed were at least 8 tonnes after the project.

**Evolution of the seed producer groups.** In 2006, by the end of the 2-year rice project, 25 groups produced rice seed. In 2007, this number had dropped to eight, but seven groups took up seed production again in subsequent years (Table 3.3).

During the second project 117 sorghum, maize and millet groups registered in 2007, of which by 2008 111 were still active. This further dropped to 68 groups a year after the project ended (58% of the initial number) (Table 3.4).

For all cereal crops, 83 groups were still operating in northern and far northern Cameroon in 2009. All the groups said that demand for seed is still greater than what they can supply and they plan to expand their enterprises.

The variation in group numbers can be attributed to three factors: (i) some groups became landless as the landlord decided to stop renting them land and to embark on seed production himself as the activity was becoming profitable; (ii) some groups were

**Table 3.3.** Evolution of rice seed producer groups.

Region	2005	2006*	2007	2008	2009
<i>North</i>					
<i>Number of groups created</i>	0	4	0	0	0
<i>Number of groups which disappeared</i>	0	0	1	0	0
<i>Number of groups active</i>	0	4	3	3	3
<i>Far North</i>					
<i>Number of groups created</i>	8	13	0	4*	3*
<i>Number of groups which disappeared</i>	0	0	16	0	0
<i>Number of groups active</i>	8	21	5	9	12
<i>Total number of active groups</i>	8	25	8	12	15

\*Immediately after the FAO project ended in 2006 some groups stopped producing seed, but restarted a few years later.

unable to properly manage their revolving fund scheme; and (iii) some groups merged to form larger groups.

**Structure.** All newly established enterprises are officially registered and organized in a similar way with a president, a secretary, a treasurer and an accountant. The group members conduct all activities together, including seed production (ploughing, nursery, planting, harvesting, seed treatment and packing) and marketing (sales in markets or to farmers). Basically, the group members are the enterprises' staff. However, during labour-intensive activities such as ploughing or harvesting, the groups hire labourers. Specific details for each enterprise are described below.

**Links.** The project provided all enterprises with functional linkages with either MEADEN or SEMRY, both government development authorities. MEADEN manages the Lagdo dam area in the north. It cleans irrigation canals, manages the water supplies (for fees) and gives free technical advice to rice producers. MEADEN grants land for seed production to selected groups free of charge. However, farmers are responsible for buying inputs and for ploughing their plots. Being on good terms with MEADEN is important, as seed cannot be produced without land.

SEMRY aims at improving and expanding rice production in the Maga dam area, around Yagoua in the far northern region. It provides ploughing services, irrigation water, cleaning of the irrigation channels and advisory services. Land is owned by SEMRY, which grants each producer or group plots for a fee of 51,000 FCFA per hectare (\$121).

**Capacity.** Building technical and managerial capacities of the groups is essential for sustainability. The farmer groups received training in seed production, processing, packaging and marketing. They also learned how to manage a farmer seed enterprise and how to set up and manage a revolving fund. They received quality seed, fertilizers, pesticides and bags for seed packing. MEADEN and SEMRY published leaflets on seed production and distributed them to all groups. All groups became competent to produce and market their seeds, although some refresher courses are needed.

**Setting up the revolving funds.** Having easy access to formal financial services is often impossible in rural areas and constitutes a major bottleneck to the growth and development of seed enterprises. The FAO projects helped the groups open bank

**Table 3.4.** Evolution of maize, sorghum and millet seed producer groups.

Region	2007	2008*	2009
<i>North</i>			
<i>Number of groups created</i>	32	9	0
<i>Number of groups which disappeared</i>	0	6	3
<i>Number of groups active</i>	32	35	32
<i>Far North</i>			
<i>Number of groups created</i>	85	0	0
<i>Number of groups which disappeared</i>	0	9	40
<i>Number of groups active</i>	85	76	36
<i>Total number of active groups</i>	117	111	68

\*End of FAO project.

accounts at Credit du Sahel, which was created in 1997 by individuals in northern Cameroon and which aims at reducing poverty. It has 17 branches and 13 village banks in the three northern provinces of Cameroon.

The FAO projects advanced money to the seed producer groups to plant and market their first seed crop. After selling the seed from the first harvest the groups deposited the amount advanced into their own bank accounts, and added another 15% of the seed sales to it. This money was then available for the next planting season or served to secure loans from the bank.

The projects also subcontracted specialized institutions like IRAD and consultants to train the groups in managing this revolving fund. All training was provided at no cost. To increase their fund, groups decided that each member would donate a certain number of rice bags. All bags are then sold and the collected funds are used to replenish the revolving funds. The funds are first of all used to fund collective farm activities and have been essential in sustaining group activities after the projects ended.

*Seed inspection and certification.* Ensuring the quality of seeds produced is important to build trust, to guarantee a market and obtain a good price. In the FAO project areas the seed inspection service (Service Régional de Contrôle des Intrants et des Produits Agricoles), based in Garoua, has two inspectors and one lab technician. The laboratory is under renovation and is expecting new equipment. Each farmer of a group planning to produce seed has to declare the location of his or her plot, its size and the crop. Currently the staff makes three inspections (at planting, before flowering and at harvest). Seed samples are analysed in the laboratory for purity and germination. Labels and packaging are only for seed with more than 87% germination. The inspection and certification cost is supported by the government through the Seed Fund. Soon the inspectors also intend to inspect markets, looking for fraudulent seeds.

## **3.2 The Aoudi Sanguéré Federation**

### **3.2.1 History**

The Aoudi Sanguéré Federation was created in 1994 and hosts 14 unions with 2000 members. It is based in Garoua, is officially registered and operates at the national level. The federation was created by former MEADEN and SEMRY employees who knew seed production. Because of its capacity to produce foundation seed, the federation was included in both FAO projects.

The federation obtains breeder seed from IRAD and produces foundation and quality seed of maize, rice, sorghum, cowpea and groundnut, the main crops in northern and far northern Cameroon. Since 2005 the federation has produced 57 tonnes of foundation seed, of which 80% was maize (Table 3.5).

The seed is produced on its own land during the rainy season (June to December) only because irrigation is not available. Seed production has increased over the years and amounted to 30 million FCFA (\$71,400) in 2009. Some of the federation members also produce quality seed on their own land.

The federation intends to increase its membership to 3000 by accepting selected new groups and individual farmers willing to join. The federation also plans to evaluate some Nerica rice varieties in the region and set up a commission for investigating fraudulent seed sales. It will work for stronger law enforcement to avoid grain being sold as seed.

### 3.2.2 Structure

The federation has a management committee composed of a secretary general, a treasurer, an internal auditor, a store-keeper and a technical supervisor. It has noticed that some of the varieties in circulation are not pure and give low yields. Besides purifying them, it

explores sources of pure breeder and foundation seed of the varieties that it grows. They work in an office in Garoua, along with several casual labourers. The federation plans to increase its farm size, which in 2009 was about 7 hectares.

They apply fertilizers, herbicides and pesticides, but no irrigation. They use a big warehouse belonging to the Regional Agriculture and Rural Development authority which can accommodate 100 tonnes of seed. The federation is responsible for maintaining the warehouse. Recently, it has asked the local authority for a 1000 square metre plot on which it wants to build its headquarters, a seed warehouse, a seed drying facility and a small seed quality control laboratory for internal usage. Individual members also grow vegetables and rear small animals, such as goats, chickens and sheep.

### 3.2.3 Cash flow

The federation has a revolving fund of 2,000,000 FCFA (\$4760), successfully implements farm activities and markets its seeds without any external support. It is planning to increase its revolving fund in 2010 by raising the contribution of individual member farmers and increasing its membership.

Among other things, the revolving fund is used to pay a local supplier of seed bags with whom the group has a long-standing relation. The cost of the bags is recovered through seed pricing to enable continuous sourcing of the bags, which hold between 2 and 15 kg depending on the crop.

### 3.2.4 Marketing

Main clients for the foundation and certified seed are the 2000 members of the 14 unions, who are all seed producers. Other clients include local seed and grain producers. In 2009, certified seed was also sold to relief agencies for Chad (Table 3.6).

To boost its seed sales, the federation organizes radio campaigns and participates in seed fairs and agricultural shows. The federation also organizes open days to demonstrate quality and transparency.

The federation will also sign partnership agreements and engage in the distribution of seed produced by these partners to further increase the income of the group.

**Table 3.5.** Foundation seed produced (tonnes), Aoudi Sanguéré Federation.

	2005	2006	2007	2008	2009
<i>Maize</i>	9.2	8.3	6.4	13.0	9.0
<i>Rice</i>	0.7	0.3	0	0.5	0.6
<i>Cowpea</i>	1.4	3.0	0	0.7	0.2
<i>Groundnut</i>	1.1	1.3	0.3	0.8	0.3
<i>Total</i>	12.4	12.9	6.7	15.0	10.1

### 3.3 The Sayem Seed Producers Union

#### 3.3.1 History

The Sayem Seed Producers Union (Union de groupements de multiplicateurs de semences de Maga) comprises three rice producer groups with 12 to 16 members. The groups were created in 2005 with FAO support and are legally registered. The union is based in the Maga dam area, 300 km from Garoua, in the far northern region.

The governmental development authority SEMRY manages 11,500 hectares with 6200 allocated to rice producers at Maga, although the area has a potential of 20,000 hectares of irrigated rice (MARD, 2009). When the irrigated area is increased to 20,000 hectares, the union will be able to increase its production.

Before the FAO project, paddy yields obtained in Maga with local seed were below 4 tonnes per hectare, while they now reach 8t because of access to quality rice seed.

One rice variety, IR 46, has been grown in the Maga area since the beginning of the project. Two cropping seasons are possible but land is scarce and the union produces seed only in the dry season (December to May). Seed of IR 46 could be grown during the rainy season, but it is highly susceptible to rice blast, a serious disease caused by the fungus *Magnaporthe grisea*.

Farmers would also like to have other varieties, especially ITA 300, which is high yielding and grows in the rainy season. Since the Sayem Union was established, they have produced about 490 tonnes of quality seed (Table 3.7). The union produces more than 70% of

**Table 3.6.** Clients of the Aoudi Sanguéré Federation.

	1994	2009	2015 (predicted)
<i>Members</i>	1	1	1
<i>Relief agencies</i>	–	2	3
<i>Individual farmers</i>	–	3	2
<i>Women and youth groups</i>	–	–	4
<i>Companies</i>	–	–	5
<i>Agro-dealers</i>	–	–	6

Ranking assessment by senior management of seed enterprise, 1 being the most important.



Farmers in northern Cameroon grow rice seed only in the dry season, because their popular variety, IR 46, is susceptible to rice blast, especially during the rainy season.

**Table 3.7.** Quality rice seed produced, Sayem Union.

	2005	2006	2007	2008	2009
<i>Tonnes</i>	72	132	109	–*	176
<i>Hectares</i>	15	22	21	–	22

\*No plot was granted to the union.



the total seed needed for the Maga region and the group plans to meet the regional need for quality seed.

### **3.3.2 Structure**

Land is the main limitation to producing rice seed in the Maga region, since all 6500 hectares are distributed to farmers who want to produce rice. Land is allocated based on family size, but no farmer can access more than 2 hectares. SEMRY allocates land directly to the union for seed production and its members also apply as individuals to SEMRY for land for paddy or seed production. Since its creation the union has planted 22 hectares.

For both quality seed and paddy production, fertilizers are used but urea is expensive and not always available on time. Pesticides are also used. Machinery for harvesting and threshing is not available. The groups store their own seed until it is sold.

Irrigation permits a second growing season per year, but farmers in the Maga region currently grow rice only during the dry season because the rice varieties they use have a long cycle and, if grown during the rainy season (June to November), occasional rains towards the end of the season make seed harvesting, drying and packing risky. Farmers buy the foundation seed for quality seed production from the Aoudi Sanguéré Federation. Farmers also raise livestock and have other activities.

### **3.3.3 Cash flow**

The revolving fund is big enough to grant interest-free loans to members. The fund is also used to support social activities, such as weddings, funerals, school fees and receiving visitors. Members who benefit from such grants pay them back to the group. For now, seed supply is still below the demand.

### **3.3.4 Marketing**

At the beginning of the project quality seed was sold to FAO. Currently, all seed is sold to local farmers, who are attracted by the quality of the seed and the resulting high yields, as demonstrated on field days. Occasionally, quality seed or paddy is also sold in Niger (Niger Basin Project). The union is looking for big customers, but it is aware that the main limitation will be access to enough land to produce the quantities requested. Seed produced is stored and marketed collectively.

Seed price has been stable since the union started and is currently 400 FCFA per kg (\$0.95) while paddy is sold for 150–210 FCFA (\$0.36–0.50). The members earn a substantial income from rice seed, but also from paddy (at least 2 hectares per member), fishing, livestock and vegetable growing.

At the beginning of the project, FAO provided bags for packing the seed, holding 2 kg for maize seed and 5 kg for rice seed. Sales increased thanks to the prestigious FAO logo on the bags, promising high quality. This experience has created an incentive for seed producers to embark on branding their products.

## 3.4 The Agrelenas Seed Producers Group

### 3.4.1 History

The Agrelenas group (Groupement de producteurs de semences de maïs de Nassarao-Garoua II) was created in 2006 by the FAO and is based in Garoua. This group started with 12 members but now has eight men and one woman.

All varieties used came from IRAD during the FAO project. Three maize varieties are used: CMS 90-15, CMS 85-01 and CMS 87-04, which yield on average 3 tonnes per hectare. The rice variety used is IRAT 112, which yields on average 4.5 tonnes per hectare. The maize and rice seed produced has slowly increased (Table 3.8).

**Table 3.8.** Quality seed produced, Agrelenas group.

	2007	2008	2009
<i>Maize</i>	2.5 (2)*	2.0 (2)	3.0 (4)
<i>Rice</i>	3.0 (0.5)	4.5 (1)	5.0 (1)

\*In tonnes, with hectares cultivated in parentheses.

### 3.4.2 Structure

The group does all its activities together. Land is rented and is difficult to find near their homes around Garoua. The group has to rent it further and further away due to competition and prices. When some landlords see that seed production is lucrative, they decide to keep the land to start producing seed themselves. The group rents 12 hectares of land at 20,000 FCFA (\$48) per hectare. The group has still not been permanently settled on land.

Seed producers buy foundation seed from the Aoudi Sanguéré Federation in Garoua (Section 3.2) to grow quality seed during the rainy season.

Fertilizers are used when they are available on time and affordable. Pesticides are also used. Farm machinery is not available and all work is done by hand. They have a storehouse and are building a bigger one.

Most of the members of this group were involved in maize, rice and off-season sorghum grain production. Income from seed is now 40% of their income. Some of the members produce vegetables, some keep cows, goats, sheep and chickens.

The group is currently investing in a warehouse and has acquired two oxen for ploughing the land. It will significantly increase its revolving funds and agricultural land. It has acquired a water pump for vegetable production as a group.

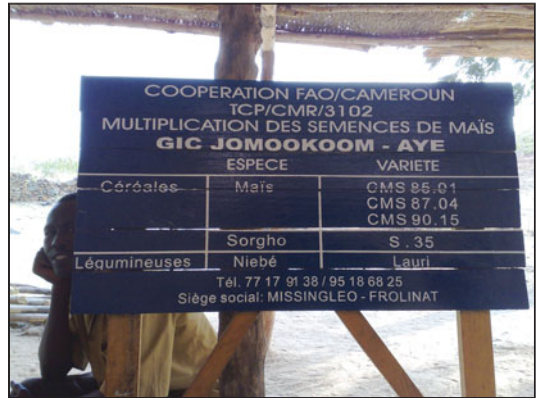
### 3.4.3 Cash flow

The group has a revolving fund and is successful without outside support. It has a bank account and access to micro-credit. They have not used bank loans. The revolving fund holds a minimum of 700,000 FCFA (\$1670) for production and marketing. Members can also get loans without interest from this fund for funerals, school fees, Ramadan and Christmas.

### 3.4.4 Marketing

Initially the seed was sold to local farmers, the FAO project and the Ministry of Agriculture, but currently only to local grain producers. The seed is produced during the rainy season (June to December) only.

The price of seed has been stable at 500 FCFA per kg (\$1.19) as against 100–200 FCFA per kg for grain (\$0.24–\$0.48). The group stressed that the seed bags provided by the FAO were good publicity. They plan to produce similar bags.



Most groups use signboards to announce the seed varieties grown and a contact telephone number.

## 3.5 Challenges and Strengths of the Seed Enterprises

**Limited access to land.** In the government managed areas (SEMRY and MEADEN) land is ploughed and distributed to groups or individual farmers according to availability and other criteria (such as family size). In Maga two rice seasons are possible and farmers and common initiative groups have to pay 51,000 FCFA (\$121) per hectare, but land is still not available to grow rice during the rainy season. For farmers outside the government managed plots, access to land is uncertain, especially near the farmstead (Goufo, 2008). Long distances increase transport costs. In the government strategic plan (MARD, 2009) irrigated land will be increased in the Lagdo dam area to 5000 hectares; it is now 800. In the Maga dam area SEMRY available land will be increased from 11,500 hectares to 20,000. However, corruption in land allocation has often raised tensions and weakened local institutions governing collective natural resource management (Asah *et al.*, 2008).

**Availability of farm inputs.** All groups complained of high input prices, especially for fertilizers. The price of NPK doubled in 2007, and it was often not available on time.

**Availability of machinery.** Machinery for ploughing, harvesting and threshing is not available for hire. For ploughing the groups hire ox teams; they hire casual labourers to help with the harvest.

**Revolving funds.** Revolving funds for seed production were the base for success of all these enterprises. Some groups, not described in this chapter, failed because they did not set up a revolving fund. The successful ones all set up funds of at least 700,000 FCFA (\$1670). Such a small fund is used exclusively for production and marketing. Groups with bigger funds make short-term, interest-free loans for school fees, funerals and weddings. All groups are planning to increase their funds after the next harvest.

In general, financial institutions lend more easily to groups rather than to individuals as risks and costs are lower (Adams and Ladman, 1979). To better equip farmers to cope with change in the drought-prone areas of northern Cameroon, autonomous saving and credit systems at the village level need further strengthening (Asah *et al.*, 2008).

**Availability of pure foundation seed.** Some of the foundation seed does not meet quality standards, leading to low yields. Seed growers need pure seed lots which give higher yields and quality of a level acceptable to the seed inspectors.

**Need to better organize the seed industry.** The unions want the government to reinforce the seed law in order to prevent any fraudulent sale of low quality seeds or grains. The seed growers intend to set up a commission to improve the collection, storage and marketing of quality seed. Federations can make significant contributions in seed marketing and as such help to sustain their farmer seed producer groups (Samsuzzaman and Van Mele, 2005).

**Factors of success.** The seed producers said that the key factor to success was group solidarity and motivation followed by the high incomes they were able to achieve. The regular visits of the FAO project manager had initially motivated them and showed them that seed production was important. Most members have made a major purchase (a house, a shop or a motorbike). All members have added new activities such as individual seed production, animal husbandry, grain and vegetable production.

The successful revolving fund and self-financing led to success; all farm operations are now self-funded. All enterprises are planning to increase the fund beyond the current minimum of 700,000 FCFA (\$1670).

High seed quality (all the seed produced is inspected by the government) was also important. Most grain producers got higher yields and returned to buy quality seed. Farmers who used the quality seed and got higher yields spread the news to their neighbours, increasing demand and markets.

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