

*The financing of family farming  
in the context of liberalisation  
What can be the contribution  
of microfinance?*

*ATP – Cirad 41/97*



THEME SYNTHESIS

**THEME 1**

**Matching supply by MFIs and the needs  
of family agriculture**

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## **INTRODUCTION: OBJECTIVE OF THE SYNTHESIS**

The issues of the synthesis are as follows:

### **What is the current nature of supply and demand for the financing of family farms? How can microfinance services be best adapted to the financing requirements of family farms?**

I shall first review the knowledge gained in the various studies performed during the research programme on the financing of family farming.

What kind of needs exist and what is currently supplied?

Given the diversity of situations, it is difficult to make generalisations about the nature of requirements and existing supply; the aim is therefore to present the methods that have been used to comprehend the nature of demand and supply in the various case studies and to summarise the major observations drawn from the diversity of the results using a typology of requirements according to the system of activities on family farms.

The aim of the analysis is to go more deeply into the following questions.

What are the mismatches between supply and solvent demand? What are the specific constraints of the financing of agriculture in different contexts and the types of responses provided by microfinance (services, products, procedures and specific forms of organisation) in the face of these needs?

What are the 'insurmountable' constraints or those that go beyond the framework of action by MFIs? What are the pathways to be explored (subjects of discussion of the other workshops: guarantees, partnerships with agricultural and commercial banks, support from donors, the role and future of FOs and organised sectors, the role of public policies)?

Special analysis will be devoted to the conditions of the development of medium-term credit by microfinance.

The synthesis starts by reviewing the financing requirements of family farming. It continues with a panorama of the available financing and analysis of the constraints related to agricultural production and the supply of medium-term credit. This is followed by a more detailed analysis of the responses proposed by MFIs in terms of services and organisation. It finally concludes with the current matching of supply and demand and proposals for the improvement of the financing of family farms.

This preliminary synthesis provides an overview of the microfinance supply conditions and of demand from family farms for the financing of agriculture. The improvement of microfinance practices and its environment to provide a better response to the scale and specific features of needs will be studied in a specific, operational manner in the following workshops:

- Microfinance and the guaranteeing of credit for agriculture
- Microfinance, agricultural banks, commercial banks: what partnerships can finance agriculture?
- What modes of intervention by donors can strengthen the contribution of microfinance to the financing of agriculture?
- Microfinance, farmers' organisations and the financing of organised sectors: what sharing of roles and what partnerships?
- What public policies can strengthen the contribution of microfinance to the financing of agriculture?

## 1. THE NATURE OF FINANCING REQUIREMENTS FOR FAMILY AGRICULTURE

What are the financing needs of agriculture? What is the solvent demand?

What methods can evaluate these features? Reviews of the methods: typologies, budget analysis, pathway analysis.

What do we learn from situations in which households do not have access to financial services? How do they finance their agricultural activities?

Can a typology be proposed according to the systems of activity of farms, the type of family farming, types of stakeholders and agricultural financing requirements?

### 11. The diversity of types of family agriculture and the identification of their financial service requirements: basis for a method

The demand for the financing of family agriculture results from various economic units whose functioning must be closely understood in order to adapt the supply of financial services.

However, the adjustment of service to each cannot be envisaged but reasoning is performed for each type of demand to be covered. This means understanding producers' strategies, their production and management choices according to their constraints, understanding how producers are integrated in the market and how this raises the problem of financing for their family (Wampfler, 1996). For this, it is possible to use farm typologies, income and budget monitoring and analysis of farm 'trajectories'.

#### 111. Farm typologies: the organisation of diversity

##### a. Stages in the construction of farm typologies

A typology is used to identify groups of families that are homogeneous on the basis of a number of differentiation criteria (Nguyen *et al.*, 1999). Differentiation is performed using variables that play a role in farm strategies (the degree of wealth, life cycle, system of productive activities, etc.). In the case of the issues of the financing of agriculture, strategies are more particularly analysed from the point of view of understanding the management of household budgets, financing requirements and behaviour with regard to credit (Renard, 1999).

The stages in obtaining the data required for establishing a typology are as follows:

1. An overall view of agriculture in the study region: characterisation of the diversity of production conditions, of cropping systems and of the demographic situation leads to zoning the region.
2. A choice of study villages in each zone. These villages must be representative of the zone. Description of the villages chosen (population, land ownership situation, farming systems, supply of financial services).
3. The choice of a sample of households<sup>1</sup>: at random (recent, complete list of the villagers; random choice in the village, for example one house in ten), stratified (according to a pre-established typology of households: by the degree of wealth, for example).

<sup>1</sup> Concerning sampling methods, see for example an application in the case of the study of MFI clients: Henry C., Sharma, M., Lapenu, C., Zeller, M., 2000. Assessing the Relative Poverty of Micro-Finance Clients: a CGAP

**Strategies of rural households – Stratified sampling in Albania (Wampfler, 1996)**

During work performed in Albania, the choice of the families surveyed was made with a credit officer, the head of the village and the head of the village credit committee who introduced the survey personnel to the families. Three main criteria were used in the choice of families:

- the families surveyed should perform activities that more particularly concern the project that requested the study;
- the families had to be representative of the different 'economic levels' at which the activity was practised (e.g. sheep farming for on-farm consumption, a small flock with a few sheep sold, a large flock with a sales strategy);
- the families had to be representative of the categories of 'economic level' in the village.

Note: although these criteria were clearly explained to the heads of the villages and the credit committee, the latter of course made their own interpretation and led the surveyors to families that they knew well, to which they were close. However, the bias could be limited when the credit officer knew the families well and could modulate the choices.

Typologies can be defined as 'on expert authority' (village authorities, local officials and stakeholders distinguish groups according to the criteria that they consider pertinent) or on a statistical basis (factorial analysis using multiple components, upward ranking).

*b. The nature and use of typologies*

Different typologies can be drawn up according to the nature of the information available and the objectives of the study. They make it possible to analyse the strategies of families from different angles.

✓ **Typologies related to the degree of wealth**

Farms or households are classified according to wealth on the basis of ownership of goods (land, cattle, equipment, etc.), income and food self-sufficiency for food growers.

The table below (Table 1) presents a wealth typology drawn up in Cambodia 'on expert authority' with village officials.

Table 1. Wealth typology in Cambodia

Group	Main characteristics
Very poor	No land or less than 0.5 ha owned; very small house in palm leaves, no livestock or equipment except perhaps for oil palm; non self-sufficient in rice; sale of fish caught and their labour.
Poor	Land area of 0.5 and 1.5 ha; no livestock or sometimes 1-2 (exchanged or inherited); may have a plough or a cart, equipment for palm sugar, a bicycle; non self-sufficient in rice; sale of market garden crops, fish and their own labour; workers, rattan or wood cutting.
Medium	Area 1 to 2 ha; draught animals (2) and sometimes a cow; plough, cart, bicycle, sometimes a motorcycle, television; self-sufficient in rice (distinction made between 'medium plus' and 'medium minus' with regard to the possibility or not of selling surplus rice); diversification: palm sugar production, rice trade, market garden produce, livestock, mototaxi, wood cutting, rice mills, paid workers. The 'medium plus' category sells surpluses to the poorest families.
Rich	Area 3 to 8 ha (or no land); draught and reared animals (4 to 6), plough and cart, hired external labour, motorcycle and sometimes a car, rice mill, thresher, tractor, television, water pump; substantial trade: these people are middlemen; rental of farm machinery; they may be civil servants.
Very rich	More than 8 ha of land; they own all the 'basic' agricultural equipment and large machinery (tractor, battery charger); rental of machinery.

Source: Lesaint, 2001

Wealth typologies can in general be used as the basis of sampling for more precise surveys of farm functioning but do not allow the direct perception of demand for financing.

✓ **Typologies related to life cycle and assets**

Wampfler (1996) makes a distinction between three main types of strategy in farms surveyed in Albania:

- the strategies used by families that possess very little means of production (land and labour);
- the strategies used on farms whose land area and other means of production are sufficient to cover the main consumption requirements of the family and produce a little surplus;
- the strategies on farms where the preoccupation with feeding the family takes second place and where production is performed for sale, with strong insertion in the market.

Within these types, finer analysis of the strategies of families according to their advantages and constraints makes it possible to draw up a typology based on 8 groups (Table 2).

Table 2: Typology related to assets in Albania

Strategies	Group
Survival strategy	No external resources
	Access to external forage resources
	Access to external monetary resources
Strategy of sales of crop surpluses	Difficult access to the market
	Easy access to the market
	Technical problems in production
Market-oriented production strategy	Agricultural specialisation on a profitable market
	Development of non-agricultural activities

Source: Wampfler, 1996

It is then possible to analyse in each group in the typology the requirements that are covered and those that are not, to see who has access to credit and how financial services are used by these groups. Does the use of credit make it possible to manage the cash-flow, to diversify activities and to invest? What is the functioning of the budgets of the groups that do not have access to credit?

Daane *et al.* (in Doligez, 2001) combine life cycle and assets and distinguish between four types of household according to the age of the head of the household:

- 'beginners', who are very young and starting their activity,
- 'starting accumulators', households in mid-life that have begun an accumulation process;
- 'established accumulators', consisting of older households whose accumulations dynamics has succeeded;
- 'non accumulators', consisting of older households that have only accumulated or lost their wealth.

Different financing requirements correspond to each type of farm holding. Whereas 'beginner' households and, to a lesser extent, 'starting accumulators' will need loans to develop their activities, 'established accumulators' will be interested in investments and possibly a savings facility. In contrast, 'non accumulators' are characterised by absence of means and, in the study mentioned, by recourse to share-cropping to gain access to production resources.

#### ✓ Typologies based on systems of activity

Typologies based on systems of activity enable comprehension of the combination of activities on a farm in order to analyse the interactions and complementary features, in particular in financial flows.

For example, distinction is made between the following types:

- farm households concentrating mainly on food crops,
- farm households concentrating mainly on cash crops,
- households combining crop and livestock farming,
- pluriactive households combining non-agricultural activities (commerce, crafts industry, paid labour, agrifood processing, etc.).

Distinction is generally made in agricultural activities between rainfed and irrigated farming, market garden farming, annual crops and perennial crops. These systems differ in the degree of security of the activity and the nature of the investments required (short or medium term).

In animal husbandry, Marzin (1998) for example makes a distinction in Burkina Faso between large-scale traditional animal husbandry (low productivity but with free forage resources), agropastoralism and the settlement of livestock (the problem of access to resources) and more intensive peri-urban rearing of small ruminants.

### ✓ **Typologies based on the family structure**

The typologies may also take the family structure into account—the number of dependants, the labour available, etc. They are based on the production capacities and family constraints of the household.

It is often necessary to separate several levels in farms (Doligez, 2001). The production unit corresponds to the household performing agricultural activities but distinction should often be made between producers, men and women, partners in a couple or young unmarried people. The historically non-egalitarian nature of the economic units is another important phenomenon in social structure. This differentiation can lead to different types of demand for financial services. Relations of production take shape in villages and extended families, on which the forms of access to capital can have an effect.

### ✓ **Typologies based on the financing strategies of farms**

More specifically, the type of short-term cash management, self-financing capability and medium and long term accumulation mechanisms can be taken into account with regard to the question of the financing of activities (Raubec, 2001). This enables familiarisation with the way in which farmers face up to fluctuations in their cash position and knowledge of the self-financing capability from which investments are made: observing when and how households will save, sell their products, contract loans, invest, etc. This is important not only for the identification of bottlenecks and the resulting needs for financial services (saving, credit) but also to see whether the financial services available and used are sufficient for the efficient management of cash and investments.

Several components of the typologies above can be combined to understand the different credit requirements and the potential risks that will determine overall for which groups demand may be solvent and to achieve a closer analysis. Thus, Renard (1999) combined life cycle, family structure, farming systems and assets to analyse the use of medium-term loans and the risks associated with this financing (Table 3).

Table 3. Family typology and use of medium-term credit in Benin

Typological group	Position of medium-term credit in strategies	Risks for each group
1. Young people in the accumulation phase, not pluriactive	Enables the rapid initiation of a accumulation of capital	Fragility related to the small amount of capital
2. Young people in the accumulation phase, pluriactive	As in 1, but with less priority for agricultural equipment	Fragility limited by income from the secondary occupation

3. Stabilised, with complete equipment, large cotton producers	Determinant for the least stabilised, useful but optional for the others	Substantial capital but monetary assets still small: possible transitory problems related to cotton
4. Precarious situation, small assets	Essential, but not always a factor in the accumulation of capital	Fragility resulting from small capital and an unfavourable family structure
5. Large families, medium land area, modest capital accumulation	Use of medium-term credit essential for equipment; it is well-managed	The absence of investments limits risks; a secondary occupation is common
6. Large families, large land areas, substantial capital accumulation	Medium-term credit rare; used in the last resort	Diversion for other persons; dilution of responsibility

Source: Renard, 1999.

Typologies make it possible to gain knowledge of the diversity of farms by identifying the differentiation factors of holdings: means of production, assets, market access, entrepreneurial capability (numerous workers, emigration, etc.), systems of activity, etc.

They should not target the functioning of the farming system alone in order to take into account all the financing opportunities and the links between activities in the family unit.

It is then possible to better understand the complexity of holdings: the overlapping of production activities, different sources of financing, the overlapping of the production unit and the consumption unit and the role of the diversification and specialisation of production in the strategies of families.

This formalisation/simplification first makes it possible to gain knowledge of the strategies of farms in order to then identify the main trends in demand for agricultural financing (credit requirements and saving and self-financing capability).

The identification of demand for credit should nevertheless be treated with caution because it is difficult to find out directly (Doligez, 2001). Indeed, it is rare to observe people who do not *a priori* declare that they have credit requirements to an outside researcher who might propose financing whose repayment constraints remain more or less theoretical. Identification must therefore be deduced from analysis of the financing requirements of the economic units, which remains extremely complex. Surveys of households are therefore necessary. Analysis of the functioning of the farm and household cash account is therefore necessary in the short term. The medium and long-term path of the build-up of the farm is monitored in order to understand the investment requirements.

### ***112. Income and family budget monitoring: identification of cash requirements***

The monitoring of incomes and family budgets is aimed at tracing the main receipts and the main expenditure according to the main periods of the year (translated from: *Commission européenne*, 2000). The information can also concern stocks of products and the use of labour.

The analysis is aimed at the accurate quantification of the incoming and outgoing flows of money, quantification of the relative importance of each activity, measurement of the degree of opening to the market or, in contrast, reliance on self-sufficiency, on the basis of investments in activities and the sale of agricultural and non-agricultural products and the detection of possible financing problems within farming systems.

This leads to better understanding of the cash requirements and adaptation of the financial products. This will be particularly useful for defining the duration of a loan and the repayment procedures according to product cycles. The budget may be common to the family or consists of several more or less autonomous budgets with a division of responsibility according to the

stakeholders. Special attention will be paid to analysis of the 'bridging period'. What social category is concerned, for how long and what practices are observed: indebtedness, realisation of capital, exodus, limiting of consumption, etc.? What happens in case of natural catastrophe, illness or decease? What happens when there are financial surpluses: family or social redistribution, purchase of livestock, expenditure on housing or equipment, increased consumption, monetary savings, etc.?' (translated from: *Commission européenne*, 2000).

#### Conditions of implementation and limits of budget monitoring

One-off surveys can provide a systemic view of agricultural households and their evolution. The establishment of regular monitoring then enables the quantitative validation of the hypotheses put forward after the one-off studies (Nguyen *et al.*, 1999). Work is then performed on the monitoring of budgets in which the households surveyed regularly record their income and expenditure during a given period.

The study of budgets is linked with the typologies method. Budget monitoring alone is not sufficient to describe—let alone understand—a family's farming system (objectives and strategies) because it provides only information about the flows (of goods and cash) and stocks of products. Typologies based on farming systems can be used to draw from budget analysis the main economic trends, the types of financing and the constraints for activities in each of the groups identified. Information about the farming system is therefore necessary in budget analysis in order to gain better understanding of the objectives and strategies of households, for better interpretation of the monitoring data and also for better control of monitoring (to identify omissions and incoherent features) (Nguyen *et al.*, 1999).

Limits have been identified in budget studies (Raubec, 2001):

- the cash accounts drawn up are generally simplified because it is almost impossible to take into account the multitude of small outlays and receipts in a household;
- the statements are based on the statements made by farmers (one-off surveys) or one regular written monitoring on sheets planned for the purpose and filled in by the households. There is thus a risk of omissions and oversights;
- when the analysis covers only one season, the entries in a previous period are not taken into account and it is difficult to understand the regulation mechanisms in case of problem;
- lack of precision is often observed in the amounts for consumption on the farm or used for other activities (Nguyen *et al.*, 1999).

Budget monitoring is nevertheless a useful method for understanding household cash management.

Through knowledge of systems of activity and their functioning, analysis of incomes and budgets concerns the identification of savings, borrowing and stock management (cash and products) in the family unit in order to understand how the supply of financial services can fit in.

In a general manner, distinction between budgets and the activities of men and women in the household makes it possible to differentiate between categories of strategy and to obtain information about their degree of independence, their complementarity or, in contrast, their competition.

### ***113. Accumulation paths: the identification of investment requirements***

Farm path analysis can then be used to better understand the construction of a farm in the long term and to propose financial services that facilitate capital accumulation.

The analysis of accumulation paths from the initial installation of the farm until the date of the survey must make it possible to identify the main mechanisms of farm accumulation processes, with the favourable features and the constraints. It must show the role that financial services (saving and credit) play or could play in these processes. The method is based on the gathering of historical (qualitative) data from members of the farms: evolution of the family structure,

activities of the members, the degree of capital accumulation and the way in which productive capital was obtained (land, livestock, equipment, etc.), the shocks experienced and the strategies used, etc.

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#### Accumulation paths and the position of animal draught. The case of northern Cameroon (Raubec 2001)

Farm path analysis in a village surveyed in northern Cameroon in which access to land is still possible reveals a 'single' accumulation path consisting of the acquisition of a satisfactory area of land, the acquisition of a draught team thanks to the crops produced and then a further increase in the cultivated area. Variations in the degree of intensity and the rate of accumulation are observed. In most cases, the accumulation process first consists of the earning of income outside agriculture. Access to credit could therefore accelerate the accumulation process.

In the two other villages surveyed, three different accumulation strategies were observed in general according to the land ownership context in the village. One strategy involves agriculture alone, the second includes lucrative extra-agricultural activities and the last tends to combine diversification activities and agricultural activities. Access to animal draught is important in all three. When the extension of land ownership is limited, donkey rearing continues to play a decisive role in the starting of an accumulation process. However, a stage comes in the path followed by each farmer in which animal draught can no longer drive the evolution of farms or simply maintain their standard of living. They must then turn to diversification activities.

The speed and intensity of the accumulation process depends firstly on the land initially available (depending on gifts and loans). The type of social integration of the individual will therefore play a decisive role. If integration is insufficient to obtain surpluses for investment, an accumulation process can only be started by extra-agricultural income. Cash management becomes more flexible with the increase in the cultivated area, making it possible to purchase food crop inputs in cash to increase the proportion of maize in the cropping pattern, to increase agronomic performance and self-financing capacity and finally capital accumulation in the form of the draught animals necessary for farming an increasingly large area of land.

A draught team is still a substantial investment. By enabling the spreading of the outlay in time, credit would make access to animals easier. The small coverage of the needs for financial services appears to account for much of the slowness of the dissemination of animal draught equipment.

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Path analysis also makes it possible to set in context the credit from MFIs in relation to the other sources of credit and financing in general. Thus, after surveys in Burkina Faso, Oppenheim (1998) makes a distinction between three types of accumulation pathway among men:

- an accumulation path based solely on emigration income (low level of accumulation),
- a path based on emigration income and credit for equipment (*Caisse Nationale de Crédit Agricole* - CNCA) (substantial livestock, variable level of accumulation),
- a path based on emigration income, non-agricultural income and credit for beef fattening (CNCA).

Path analysis emphasises the importance of emigration income in the accumulation process in this case. These results have also been underlined in Albania, for example (Wampfler, 1996).

#### Conclusion concerning the methods

Analysis of the complexity and overlapping of the different activities in family units is enabled by the use of methods based on typologies, budget monitoring and accumulation paths. Understanding the systems of activity makes it possible to identify the possible evolutions of farms and the potential and blockages by making a distinction between cash problems and those of equipment.

Various case studies have been conducted in Africa and South-East Asia within the framework of the CIRAD-CERISE programme on the financing of family agriculture. They provide an overall

view of the diversity of the requirements of family agriculture that is summarised in the next section.

## 12. The diversity of the requirements of family agriculture

The aim is to understand the specific features of the demand for financial services for agriculture by applying the methods described above in family farms.

What are the requirements of farms? What are the links between the financing requirements for the different activities in the family unit?

Is indebtedness necessary? What household strategies are used when there is no access to credit?

Is indebtedness possible? What is the solvent demand?

### 12.1. The requirements of farms

#### *a. Short-term requirements*

##### ✓ **Financing the farming season**

In agriculture, the financing of the farming season is one of the most classic requirements. The expenses concern the financing of inputs (seed, fertiliser, pesticides) at the beginning and during the season, extra labour (land preparation, planting out, hoeing, harvesting) and land taken on a share-cropping basis. The degree of intensification of production depends partly on the labour available and on the quantity and quality of the inputs used.

##### ✓ **Short-term financing of livestock farming**

Fattening (pigs, sheep, goats and beef) requires the purchase of young animals, complementary feed and payment for veterinary care. The fattening of a young animal for resale when it is ready for consumption often takes less than a year. This is often a profitable occupation in African countries and in South-East Asia but is subjected to the uncertainties of animal husbandry (sanitary problems, mortality, feeding conditions).

##### ✓ **The storage or processing of production**

Farmers seek to allow for price movements during the sale of their production by storing harvests while awaiting higher prices. However, these storage practices depend on the cash available and the monetary requirements at harvest time.

Some agricultural products require post-harvest processing before sale or can be sold better once processed (cassava, groundnuts, palm and the packing of certain fruits and vegetables, etc.). This processing work generally requires the appropriate equipment.

#### *b. Medium and long-term requirements*

##### ✓ **Financing equipment**

The obtaining of agricultural equipment is often required for intensification (draught cultivation, motor pump, small machinery, etc.), the sale of production (transport facilities) and storage (buildings). The cost is generally high in comparison with production prices.

✓ **Financing perennial crops**

Plantations require an initial investment (coffee, cocoa, rubber, palm, fruit trees, etc.) whose first returns can only be expected after several years. These financing requirements are emerging in a new form, especially in West Africa, since the undertaking of the privatisation of these sectors. The investments in plantation renewal and maintenance hitherto financed by the agrifood industries in the sector will soon be covered by the producers.

✓ **The (re)constitution of flocks and herds**

The question of the financing of restocking with livestock is particularly important in the traditional livestock rearing zones where production facilities have been destroyed by a climatic shock (Sahelian droughts) or disorganised by a political system (the 'nationalisation' of cattle in communist states).

The question of the financing of draught animals is raised in the zones where draught cultivation is encouraged.

✓ **Purchase of land**

Access to land is one of the major constraints for farmers. The land market is often such that the purchase of land is difficult to envisage. Farmers therefore have short-term requirements for financing rental. However, the extension or setting up of a holding may require large investments in the purchase of land.

*c. 'Non-productive' requirements*

Because of the complexity of economic units that combine domestic consumption units and production units in family farms, it is frequently difficult to distinguish clearly between 'productive' requirements and 'consumption' requirements. Indeed, meeting the requirements of consumption makes it possible in particular to maintain the farm labour force (with sufficient food supplies and health care so that the work necessary can be carried out). In this case, the financing of 'non-productive' requirements may be included in the financing requirements of agricultural households. In particular, these households may be particularly sensitive to the bridging time preceding harvests.

*d. Savings requirements*

Because of the seasonal nature of farming, the concentration of monetary receipts during the main harvest generally makes it necessary to constitute short-term savings that are spent little by little to cover the requirements of the household. Farming households also generally have recourse to forms of saving in kind to protect against risks (precautionary savings), for purposes of investment (dedicated savings) or to prepare for a non-productive end of life (life cycle savings).

Farming households in numerous countries constitute savings in the form of food stocks or cattle.

After surveys conducted in Niger, Wampfler (1998) observed that the stakeholders did not display explicit requirements for a savings service. However, analysis of the strategies and constraints of certain groups shows that a significant fraction of the population possess savings capacity and might be motivated by a financial service that would enable the regulation of the cash position and also shelter savings from social pressure.

In the case of Benin, Doligez (2001) points out that given the importance of self-financing, the constitution of savings is an essential component of the financial strategies of economic units.



### e. Insurance requirements

The insurance requirements of family agriculture are immense in the light of the risks that it has to face. Nevertheless, the evaluation of these risks and the resulting cost of setting up an insurance system show that prospects are meagre for agricultural insurance. The main problems concern risk covariance: climatic risks (drought, floods) and livestock epidemics, for example, that affect all the farmers in the same zone and cannot be handled by a small-scale insurance system. The systems have generally been found to be expensive and did not provide the social benefits expected.

In theoretical work in agricultural insurance, Skees *et al.* (1999) analyse the causes of the failures of agricultural insurance and propose new pathways (a kind of lottery system in which one 'wins' if crops are destroyed). However, access to these for small farmers seems difficult in the light of their strong constraints with regard to the allocation of the resources available.

Today, the most promising insurance systems concern health insurance (GRET in Cambodia, CIDR) that can have indirect importance in the functioning of family farming by providing a response to the reduction in capital observed when families encounter health problems.

(See the synthesis of the guaranteeing of credit for an analysis of insurance)

### 122. Strategies in the absence of MFI financing

Farmers' strategies in the absence of financing by MFIs have been shown by various survey work analysing the financial flows between different activities. This work attempts to answer the following questions. What requirements are covered by self-financing? Are solvent requirements not covered for lack of access to suitable financial services? How can services strengthen existing strategies?

#### Various examples of strategies for financing agricultural activities

##### Clients of community banks in Benin (Leege, 1997)

Surveys of clients of community banks in Benin show that the sources of financing for agricultural activities consist mainly of the profits of small retailers. Tontines are also important to a lesser degree, especially for renting land and hiring labour. Although loans from the community bank do not seem to be invested directly in agriculture, the income generated by the other activities are reinvested in agriculture.

Is agricultural credit really necessary? Self-financing avoids indebtedness; however, credit may be necessary if a substantial increase in production or diversification is desired.

##### Clients of seed banks in Cambodia (Lesaint, 2001)

Lesaint observes that in the absence of seed banks, the strategies of access to inputs vary according to the type of farmer:

- the smallest farmers do not use fertiliser,
- strategies are varied in the intermediate categories: self-financing, family loans or loans from moneylenders, traders or other financial organisations,
- self-financing is the main strategy used by well-off farmers.

##### The sources of capital used in Benin (Doligez, 2001)

Capital is accumulated from lucrative occupations but is often reinvested in the same activity. Sources of financing that are more specific for agriculture concern the sale of agricultural products and processed products, the sale of small livestock, informal loans and girls' dowries.

##### Credit and self-financing in Mali (Gentil, 2001)

It is observed that the 'strategy of rural people' is the financing using credit of truly profitable agricultural activities (cotton, lowland rice, onions, occasional sheep rearing) and the self-financing of food crops (that are not very

profitable and carry no guarantees) using the profit from the occupations financed by credit.

Households choose between different strategies for the financing of agricultural activity:

- the spreading out of the investment costs;
- the minimisation of the investment costs; in the case of animal traction, for example, it might be chosen to purchase young oxen and an artisanal or second-hand cart;
- the reinvestment of income from agricultural occupations,
- non-agricultural income invested directly in agriculture or covering everyday expenditure, releasing agricultural income for agricultural investment,
- the constitution of long-term savings dedicated to future investment,
- the use of informal loans,
- family funds: inheritance, dowry.

Devèze (1999 *in* Raubec, 2001) underlines the role of guaranteed income for agricultural investment. Household self-financing sources are their agricultural occupations or extra-agricultural diversification. Thus, the possibility for farmers of obtaining substantial, reliable and regular income from cotton growing makes it possible to purchase equipment. In the case of cotton, the security of the sector enables farmers to undertake investment projects. Regular income from an extra-agricultural occupation can cover everyday household expenditure and the one-off income from farming seasons can then be invested.

Raubec (2001) records transactions within the household itself; there may be loan strategies to launch a diversification occupation. Men may thus give money to their wives for the purchase of the equipment needed to make *bil-bil* (sorghum beer) and also supply the grain for the first production batch.

The occupation systems on farms in southern countries are not usually specialised in a particular crop but combine a variety of sources of income in a multifunctional economic unit. Financial flows between these different occupations enable the cash and investment management of the entire family unity without there necessarily being strict compartmentalisation between the occupations. In particular, the fungibility of credit means that capital can be fed into these financial flows to finance an occupation or consumption without targeting a particular occupation.

Thus, the role of MFIs can be that of providing more support for these strategies by strengthening financial flows. In this case, the financing of farming does not necessarily involve a specific service for agricultural occupations but is incorporated in a strategy for the financing of the occupations of the family unit.

### **123. Solvency of demand**

As in any financing project, the major preoccupation in a loan for agriculture is the response to a solvent request. As Gentil writes (2001), 'talking in terms of solvent demand means appraising the quality of the entrepreneur, the profitability of his project, the risks and guarantees and the existence of a market; it also means applying several ratios and several principles of prudence'.

On the one hand, the solvent demand approach makes it possible to conduct reflection in terms of the multi-active farm and not just in terms of the sums of the sector requirements, which is a convenient division but does not always correspond to reality (Gentil, 2001). Solvent demand must therefore be appraised by taking into account the entire functioning of the family holding,

the sum of whose resources (agricultural and non-agricultural) can contribute to the repayment of loans.

On the other hand, solvent demand does not correspond to all the requests for financing that may be expressed by farmers for their cash and investment requirements, but only to requests concerning a profitable project for which the sources of repayment can be identified in the family income (volume and frequency of monetary income compatible with the repayment schedule). This considerably reduces demand, even if it is far from being entirely covered.

The figures for agricultural investment requirements and solvent demand may differ (Gentil, 2001). A study conducted by the World Bank in Mali in 1997 estimated agricultural requirements exclusive of production investments to be CFAF 190 thousand million. The BCEAO nevertheless considers that hardly 50% of this demand is solvent, considering that only the cotton sector is profitable enough to be 'bankable'. The *Banque nationale de développement agricole* (BNDA) shares this opinion although it considers that the rice sector is also 'bankable'. According to Renée Chao-Béroff, the 'bankable' nature of a sector depends more on its management capacity and degree of organisation than on the nature of the product.

**13. Balance: family farming financing requirements by occupation system**

Occupation system	Rainfed crops Weak diversification (remoteness from markets)	Diversified system based on plantations	Irrigated crops	Integrated sectors	Peri-urban zones (market gardens, small livestock, commerce)	Animal husbandry Weak diversification	Traditional fishing
Risk level	Strongly subjected to climatic risks		Protected from risk of drought	Protected from market risks (before sector liberalisation)	Low: diversification and proximity to urban markets	Risks of mortality and disease	
Constraints	Seasonal income Weak integration in markets	Delayed profitability Substantial investment	Investments in the irrigation system Seasonal income	Seasonal income		Large livestock: delayed profitability	Regular profitability High level of investment
Financing potential	Low level of investment	Financing of plantations in stages		Privileged access to financing	Steady profitability	Small livestock: steady profitability	
Short-term credit	- Inputs - Labour - Consumer credit (bridging period)	- Main season crop inputs - Village granaries - Consumer credit (bridging period)	- Main season and counter-season crop inputs - Labour - Irrigation network maintenance - Village granaries - Consumer credit (bridging period)	- Cash crop inputs - Labour - Consumer credit (bridging period)	- Inputs - Labour - Processing/packing	- Fattening - Small livestock	- Nets - Gas oil
Medium and long-term credit	- Equipment - Plantations	- Small equipment	- Equipment - motor pumps	- Equipment		- Cattle	- Boat - Motor - Nets
Savings	- Cash management - Emergency funds - Dedicated savings (equipment; plantations)	- Cash management - Emergency fund (precautionary savings) - Dedicated savings (equipment)	- Cash management - Emergency fund - Dedicated savings (equipment)	- Cash management - Emergency fund - Dedicated savings (equipment)	- Emergency fund - Dedicated savings	- Emergency fund - Dedicated savings	- Emergency fund - Dedicated savings (equipment)
Insurance	- Health insurance	- Health insurance	- Health insurance	- Health insurance	- Health insurance	- Health insurance - Cattle mortality	- Health insurance
Main solvent requirement for services							

## **14. Conclusion**

Globalisation and the economic liberalisation imposed in the southern countries are now considerably affecting the agricultural sector and giving the question of the financing of agriculture fresh acuteness. Family farming needs to be intensified and modernised, with the financing of technical and organisational innovations, etc.

Self-financing capacity alone is generally not sufficient to finance this modernisation. The financial service requirements concern various forms of credit (short-term for the season, fattening and bridging period, medium term for equipment and long term for heavy equipment and plantations) and also savings products and insurance services.

The requirements are therefore immense. However, this observation must necessarily be brought back to the question of the solvency of demand. The credit supply can only respond to solvent requirements in the family unit in order to be sure that the capital is repaid and the interest paid. A savings service must be able to collect a large enough volume of savings with reasonable transactions costs for the institution.

The question of the demand solvency has broad relevance in analysis of the solvency of the family occupation system. The fungibility of financial services and the multi-activities of farmers lead to proposing services that are not necessarily specific to agriculture. The financing of agricultural activities is therefore closely interwoven with the other components of the family budget (non-agricultural economic occupations, social transfer, savings in kind).

Furthermore, the financing of family agriculture in southern countries does not involve just the supply of credit but requires analysis of savings and insurance requirements. In particular, in the absence of the use of credit, the strategies of family holdings are based on self-financing. It is therefore possible in the short term to begin by supporting these self-financing strategies for example by promoting savings services that make it possible to adjust irregular cash receipts spread over the year with the necessary investment periods.

## 2. A PANORAMA OF THE FINANCING FOR AGRICULTURE AVAILABLE FROM THE MAIN CATEGORIES OF MFI

Who is involved, in the face of the diversity and complexity of agricultural financing requirements?

What does microfinance contribute to short term and medium term financing and savings and insurance services?

What is the future of the financing of the integrated sectors?

What is lacking?

### 21. 'Formal' stakeholders

#### *211. The withdrawal or absence of traditional stakeholders*

A large proportion of financing for agriculture in many southern countries has been public until now. The economic liberalisation being generalised will drastically reduce this supply of public aid. When they still exist, agricultural banks concentrate their financing efforts on a few secure sectors (export crops, irrigated farming, etc.) and only touch the non-guaranteed agricultural sector with much caution. However, some agricultural banks tend to innovate, in particular by becoming close to microfinance institutions (see the synthesis on agricultural banks).

The commercial banks are even more cautious and they have very limited involvement in the agricultural sector for the moment.

In Côte d'Ivoire, for example, Gentil (2001) observed the very small interest of the banking networks for the agricultural world, with the exception of sales campaigns and inputs in the organised sectors. In Cameroon, Raubec (2001) observed that after a phase of intense restructuring, the conventional banks seem little inclined to offer services to agriculture.

#### *212. MFIs: possible stakeholders for financing agriculture?*

Supported by a broad consensus of donors, microfinance is developing today in most southern countries, both in towns and in the country. It includes institutions of very varied kinds (credit unions, co-operatives, self-managed village intermediaries, private enterprises providing financial services, banks and savings/loan projects), some of which have several hundreds of thousands of clients. Given the lack of other financial operators, microfinance is becoming the key link in the rural financial market in many countries.

Numerous studies have shown that microfinance—generally based on short-term loans of modest amounts—can have a positive impact on the cash position of rural households, enhance the smoothing of their consumption and to a certain degree strengthen their resistance to economic shocks. However, many observers question the real ability of microfinance to stimulate household accumulation processes and to contribute to productive investment, especially in agriculture.

Impact analyses show that rural MFIs spontaneously finance the development of activities such as commerce, crafts activities and agroindustrial processing. These activities generate regular, comparatively reliable income with rapid capital rotation that reduces risks and allows high rates of profitability. Few agricultural activities display these features. The profitability of agricultural activities is often limited and not very compatible with the high interest rates that microfinance

has to apply to ensure its own sustainability. The financing of agriculture has specific constraints in terms of client diversity, the services necessary and in terms of risk.

These factors help to explain the extreme caution of most microfinance institutions with regard to agricultural credit.

However, the studies conducted within the framework of the CIRAD-CERISE research project show that certain institutions have innovated and that the supply of services for agriculture is not totally absent.

### Estimation of the volume of financing of agriculture by MFIs in 1997 (Wampfler 2000)

1997	VOLUME OF MFI CREDIT (thousand million CFAF)	ESTIMATE OF VOLUME OF AGRICULTURAL CREDIT (thousand million CFAF)	% OF OVERALL MFI CREDIT	CONTRIBUTION by type of MFI (%)*			
				SM	CV	PVC	CD
BENIN	14.5	5.5 - 5.7	36	99	-	1	-
TOGO	7.8	0.780	10	75	-	10	15
CÔTE D'IVOIRE	6.1	1.2	20	>90	-	5-6	2
SENEGAL	16	2.5 - 2.8	19	75	-	25	E
MALI	9.5	4.7 - 5	49	<75	>25	e	E
NIGER	4.5	1.3	29	26	-	48	26
BURKINA FASO	9.7	3	27	60	5	26	9
TOTAL	66.3	19 - 20	27	-	-	-	-

Source: Comparison of the PASMEC database with direct information collected from MFIs within the framework of CIRAD research programmes and missions devoted to the financing of agriculture.

\*: PASMEC classification: SM = *système mutualiste* (credit union); CV = *Caisses villageoises* (village credit intermediaries); PVC = *Projets à volet crédit* (projects with a credit component); CD = *Crédit direct* (direct credit)

Even though they show trends and not absolute values, the figures recorded in West Africa show the undisputed contribution of MFIs to the financing of agriculture.

The case of Madagascar (Wietzke, 1999; synthesis on Madagascar) also reveals the strong involvement of MFIs in the financing of agriculture: the mutual network of CECAMs (*Caisses d'Épargne et de Crédit Agricole*) has the vocation of providing support for the farming world and is focused on services for agriculture from the outset. The self-managed 'AECA' village banks in the heart of the Marovoay plain irrigated perimeter in the north-west mainly finance rice growing.

For EMT in Cambodia (Lenoir, 1999), the proportion of joint credit awarded for an agricultural investment (purchase of equipment and draught animals) is only 5% but the share going to agriculture rises to 65% when cash loans for agricultural purposes are included (fertiliser, fattening and the processing of agricultural products).

In the difficult agricultural context of Cambodia, Oxfam-Quebec set up a food security programme in 1993 that resulted in the constitution of seed banks (Lesaint, 2001). This first provided farmers with loans of rice seed and participative research activities aimed at improving rice production. The seed banks are gradually becoming more complex and are supervising the loan and training in rearing pigs and poultry and the supply of buffaloes and fertiliser. They are becoming 'agricultural service suppliers'.

The case studies conducted by Inter-Réseaux (FERT Madagascar, Kafojiginew and CVECA Mali) show that these MFIs are established in rural areas and that most of the loans are for agriculture (Gentil, 2001).

Observations of the services offered by MFIs in the southern countries (see box above) strongly temper the frequently proposed hypotheses that 'MFIs do not finance agriculture'.

However, the facts cannot mask the limits that remain.

Penetration by MFIs is very weak. An inventory of microfinance institutions supported by northern institutions<sup>2</sup> (Lapenu, Zeller, 2001) shows that an average of only 1.5% of the population of developing countries is a member of MFIs. Furthermore, very strong concentration is observed in which several major networks provide the majority of services. Thus, FECECAM in Benin totals 78% of the clients, 82% of the savings mobilised and 83% of the loans distributed by the MFIs (1995) (Doligez, Benin, p. 23).

The orientation or not of these networks towards agriculture will locally determine the availability or absence to direct services for agriculture. Now, many MFIs, even when established in rural areas, are cautious with regard to the financing of agriculture. In Cameroon (Raubec, 2001), the largest representative of the savings and credit co-operatives, CAMCCUL (Cameroon Co-operative Credit Union League) is unwilling to take risks and offers practically no services for agriculture.

In Côte d'Ivoire, the studies by Inter-Réseaux (Gentil, 2001) show that MFIs are developing rapidly in general but usually have a universal vocation, the agricultural sector being very much in the minority.

The example of certain networks in Madagascar (AECA, CECAM) that are very dominantly oriented towards agriculture shows that this is for historical reasons (development of networks by farmers' organisations or as support for farming organisations), because of initial siting choices (in areas that are almost exclusively agricultural) and the composition of local decision-making authorities (farmer members and reluctance or limits with regard to membership by other categories and especially civil servants and traders).

### ***213. The position of farmers' organisations (FOs) and systems combining financial services and technical support***

The agricultural crops hitherto funded within the framework of an organised sector (cotton, rubber, palm, coffee, cocoa, rice and groundnut in certain cases), like intensive production that is developing in particular in peri-urban zones (market garden production and animal husbandry) require large volumes of financing (for inputs, labour, primary collection, investments, etc.). In a liberalised context, farmers' organisations handle a large number of functions abandoned by the state. But can they take over the financing function? What can be the respective roles of microfinance institutions (MFIs) and farmers' organisations?

The dominant lines of thinking recommend the strict dissociation of the financing function (this is for the MFIs) and support functions for the organisation of the rural world (entrusted to the FOs). In practice, however, in the face of the weakness of agricultural financing alternatives, a number of farmers' organisations are tempted to work directly in the implementation of financial systems. Many failures prove the difficulty of the procedure but certain experiences of this type seem to be becoming successful and sustainable.

Beyond the question of direct involvement in financing, FO's are exploring other pathways: the creation by FOs of autonomous but linked MFIs, the investment of FOs in existing MFIs, the development of forms of intermediary financing by the FOs between farms and existing MFIs, the holding by FOs of shares in agricultural banks and partnerships with MFIs and the negotiation of state participation in agricultural financing.

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<sup>2</sup> The inventory does not take into account endogeneous experiences not supported by northern institutions (donors, operators, investment companies, etc.).

Many questions remain under discussion. How can MFIs linked to FOs be managed efficiently? Given the present institutional and economic weakness of FOs, the scale of the functions attributed to them by liberalisation and the considerable indebtedness that often makes them fragile, under what conditions will they be able to master their involvement in the financing of agriculture? What new forms of partnerships between MFIs, FOs and private operators should be promoted?

These questions are covered in the synthesis on farmers' organisations (Workshop 5).

## 22. The preponderance of medium-term credit

In a general manner, the majority of the credit offered by MFIs is on a short-term basis. This trend is found in particular in loans for agriculture with more than 90% of the volumes of loans for agriculture in West Africa by MFIs being short-term credit for inputs, labour or fattening (Wampfler, 2000).

However, it cannot be said that the credit offered is poorly suited to the characteristics of the agricultural sector. Given the small volumes distributed by MFIs today, these short-term loans respond to strong demand from farmers. This led Gentil (2001) to conclude in the light of the Inter-Réseaux studies that season loans for farms might be provided by MFIs.

## 23. The small proportion of medium-term credit

Given the preponderant position of short-term credit, the supply of medium-term credit is inadequate because of both the MFIs prudent strategy and doubtless because of the clients themselves (see box).

### Stakeholders' reluctance with regard to medium-term credit

ADRK in Burkina Faso (Bridier, 1999) initially proposed only medium-term credit and then diversified into short-term credit. The demand for short-term credit increased. Until 1994, the awarding of medium-term credit—almost exclusively for agriculture—formed 60 to 70% of total individual loans. The proportion has tended to become inverted in recent years. Two hypotheses have been put forward: the members of the association are equipped and demands are mainly from newly created funds; the members favour short-term credit for more lucrative commerce and crafts activities with a fast turn-around.

In Cambodia in 1995, EMT (Lenoir, 1999) tested individual loans of larger amounts than those of classic micro-credit and with a 2-year duration but success was limited among rural households. Agricultural equipment (draught, plough and cart) is mainly financed by savings or a family heritage. It is rarely the subject of loans by moneylenders or EMT because households have small annual incomes and refuse to contract loans of amounts greater than the joint credit proposed by EMT with a fixed repayment date. The reluctance of households is all the stronger as the credit officers limit loans to 10 months. The latter thus seem to be particularly cautious with regard to new types of credit.

At the AECA Marovoay in Madagascar (CIDR, 2000?), it is noted that the funding of agricultural equipment has remained at negligible levels, with the main reason being that the members continue to become indebted during the season and do not take the risk of further indebtedness for equipment.

The demand for medium-term credit tested in 1991-1992 at the *Crédit Rural de Guinée* (IRAM, in press) was found to be extremely limited at the time. Clients had projects in mind but the market was small and supply practically non-existent outside Conakry. Obtaining price information and arranging for the transport of the machine in question required two or three return trips to Conakry, that would use up a proportion of the money available.

Medium-term loans are generally tested in a stabilised economic environment (price, marketing, supply): FECECAM medium-term credit for the purchase of equipment in the cotton belt within the framework of organisation of the sector (Doligez, 2001): FERT Madagascar hire purchase credit in a dynamic zone in which agriculture is particularly diversified, benefiting from strong agroindustry presence and close to the capital and the importance of Antsirabe for access to urban consumer markets (Wietzke, 1999).

In the face of the weak supply of medium-term credit, surveys show how an accumulation process can emerge from regular access to short-term credit (Doligez, 2001)

## 24. The limited supply of savings and insurance services

The savings services proposed by the MFIs are not specifically adapted to agricultural production. Flexible services are available in the form of deposits with little or no interest and medium-term services in which interest is paid and the deposits are blocked for several months or even several years. Forms of savings linked with investment credit do exist but the approach is not focused on agriculture for the moment.

Thus, little has been created for the requirements and specific features of agriculture. However, analysis of the requirements of family agriculture has revealed strong self-financing capacity that could be encouraged by the provision of appropriate savings services.

MFI insurance services are generally still embryonic and so very few policies suited to family agriculture are available. Only a few attempts at providing insurance for animal mortality linked to fattening loans or draught cattle have been proposed.

## 25. Sector financing

### 251. The functioning of sector financing

The principle of the functioning of integrated sectors is based on a monopoly of the collection and marketing of production by the public bodies responsible for the sector. The financing of inputs is therefore provided at the beginning of the season by the same bodies with guaranteed repayment deducted from the income from the crop. Furthermore, guaranteed price stability at production ensures a stable, steady income for farmers.

#### The cotton sectors

Cameroon (Raubec, 2001)

In the northern Cameroon cotton belt, the operations of SODECOTON consist of the technical supervision of farm production, the collection of the harvest, ginning, milling of seeds, preparing by-products for cattle feed and selling production on the international market. A number of functions were delegated to growers in 1981 to lighten a management structure that was too costly and with the aim of giving planters more responsibility, a measure in line with the liberalisation movement that continues today.

SODECOTON supplies most of the agricultural credit (some 95% of the planters use 'cotton inputs' credit). It supplies farmers with inputs (seed, herbicide, fertiliser, insecticides) on credit. 'Food crop inputs' credit is limited to a third of the 'cotton inputs' credit (measured by the cotton crop). Repayment is by direct debit when the cotton is sold. SODECOTON also provides animal traction and cultivation equipment (but not draught animals) on a credit basis (repayment over a period of one or two years).

Thanks to a stabilisation fund fed by surpluses in good years, the farmers can count on stable payment for their

cotton production. This income will have made it possible in particular to purchase draught animals and equipment. In this indirect way, SODECOTON plays an important role in financing the rural world.

Benin (Doligez, 2001)

The FECECAM system is adjusted to the functioning of the cotton section (with use of the joint guarantee system and adjustment of repayment schedules). Farmers use the sector credit for inputs and FECECAM credit for labour.

Thus, with the restructuring of the chain, any difficulty in the latter can have repercussions on the FECECAM network. Renard (1999) made the following observations: both the state and private partners experience the greatest difficulty in finding their feet in the liberalised sector. Private operators expect the state to set up interprofessional management and distribute the tasks. The state cannot manage to redefine its role and is not emerging from administered sector logic. Beyond statements of principle, the state, ginners and importers of inputs have doubts concerning the ability of producers to perform their tasks. Finally, the cotton sector is strategic for the state, which fears that liberalisation might weaken it.

As long as the organised sectors operate on the basis of the present organisation, credit for sector inputs is generally provided by the banking sector or by suppliers. Credit for marketing is very substantial but is also well covered by the banking sector (Gentil, 2001).

However, two main problems are arising within the framework of sector financing. On the one hand, the financing of sectors does not solve the problems of farms. Because of the absence of connection between the different financing systems, each of the latter finances a section of the holding, leading to risk of over-indebtedness. This shows the advantage of budget analysis methods that provide an overall view of the functioning of the farm and make it possible to identify complementary features and bottlenecks between the different activities in terms of financing and labour. On the other hand, the liberalisation of the sectors will result in the calling into question of the guaranteeing of loans via the integration of loan and marketing functions and with this, the guaranteeing of the awarding of loans.

### ***252. What is the future of the link between credit and production with the liberalisation of sectors?***

The liberalisation of production sectors is generally recommended by the IMF and the World Bank to face the budgetary problems of states and the inefficiency of public sector management structures. The main benefit expected is the obtaining of better prices for farmers as a result of competition at crop collection level.

However, at least in the short term, the dismantling of the sectors may increase the risks in financing agriculture that were hitherto very small, with strong fluctuations in domestic prices, farmers' uncertainty with regard to the quality of inputs and markets, a decrease in technical supervision, the lack of long-term prospects, etc.

The question of new organisation of support services for production and of control bodies is therefore crucial. Privatisation also makes necessary increased training for producers and greater professionalisation of FOs.

### **The financing of animal traction in northern Cameroon (Raubec, 2001)**

The progression of animal traction, that has been performed until now jointly with the managed extension of the cotton sector, with substantial state support, is now called into question by state withdrawal from rural sector development functions. This results in the imminent privatisation of the cotton company.

Although the cotton company provided, and still provides, most of the services enabling access to animal traction and its development (supply of equipment; credit, inputs, sanitary monitoring, etc.), with liberalisation the latter must pass into the hands of the private sector. This requires an institutional reconstitution process in which the new stakeholders are confronted with demand whose characteristics they do not yet know.

Faced with the need for the development of savings and credit institutions, the liberalisation movement that also affects financial systems has resulted in the considerable development of the latter, which form potential that can provide financial services for agriculture. However, the products proposed by these new institutions do not seem to be well suited to farmers' requirements.

It can be noted that the integration of financing and marketing of production does not exist only in public sectors but may function on the basis of contracts between a private enterprise and farmers. For example, this is the case in Madagascar for flour companies and wheat production and breweries and barley production (country synthesis on Madagascar). The liberalisation of export sectors in West Africa does not necessarily mean the halting of integration. However, new forms of contract-based organisation must be negotiated.

### 3. THE CONSTRAINTS OF FINANCING AVAILABLE FOR AGRICULTURE

What constraints limit the supply of services for agriculture and in particular medium-term credit?

What is the impact of the present context of sustainability constraints for MFIs and liberalisation of economies in southern countries?

What are the implications for services for agriculture?

#### 31. The constraints of the supply of services for agriculture

##### *311. The constraints and technical risks related to agricultural production*

###### *a. Agroecological risks*

The major risk for the agricultural sector concerns yields. Whatever the level of inputs, the final production volume is uncertain because of climatic uncertainties, diseases or attack by insect pests. For cattle, the production risks are those of shortages of feed, diseases or the death of livestock.

This risk is greater in work in zones with few guarantees: rainfed zones with no access to irrigation, Sahel zones subjected to frequent drought, flood zones (delta zones for example), etc.

###### *b. Seasonal features*

The seasonal nature of agricultural production induces a number of constraints for the supply of financial services. Credit applications are concentrated during the period preceding plantation and repayment and savings deposits increase during the harvest period. The seasonal effect concerns firstly cash management by the institution. Furthermore, the productivity of agricultural credit officials is subjected to these seasonal fluctuations, increasing fixed payroll costs. Finally, repayments tend to be annual and are more difficult to supervise than the weekly or monthly repayments proposed by the MFIs (Klein *et al.* 1999).

The seasonal feature of cash requirements may be aggravated by the weak development of the local financial system.

###### Flexibility of services

Madagascar (Wietzke, 1999): because of the climatic variability in the Vakinankaratra in Madagascar, there may be one or two months difference in the work from one zone to another. This variation adds to the inter and intra-zone cultural diversity and is a constraint for a financial system supplying agricultural products. Financial products for crops must be available at different dates depending on the zone and the culture. This flexibility has a high cost in terms of management. If a financial system keeps to a single date for the release of funds throughout the region for the main season, this may be early or late in relation to the cultural calendar and the financial system will be penalised. Thus, until July 1998, the CECAMs proposed only a single date for the release of funds during the main season and one of the main criticisms made by beneficiaries was that the credit for agricultural production was late.

Benin: for reasons of ease of management, FECECAM tends to apply uniform standards to the awarding of loans, release dates, repayment frequencies, guarantees, etc. (Doligez, 2001). The local office penalty system consisting of ceasing the awarding of credit until the situation has been corrected in case of repayment of less than 90% is considered by farmers to be particularly harmful during critical periods (Renard, 1999). The circumventing of the rules is then observed and some offices do not cease their activities when the ceiling for unpaid amounts has been

exceeded.

According to Renard (1999), the delays in the awarding of funds in certain survey zones are almost always marked. The need for co-ordination of the application formalities has been pointed out to the FECECAM.

Clients then criticise the rigidity of the services:

Lesaint (2001) reports that the clients of the grain banks in Cambodia often criticise the lack of adaptation/adaptability of loan duration to the climatic constraints. Joint reflection is needed on the harmonising of lengths, guarantee funds and rescheduling. 'These farmers have complained about having to refund at a date on which everybody sells their pigs and when the rates at moneylenders are not at their best. The setting up of three loan cycles for this activity (instead of the previous two) is aimed at providing a more suitable response to this demand – even if the absence of a real market survey means that the best periods for the sale of the products of animal husbandry are not known precisely'.

### *c. Calendar uncertainty*

The ideal agricultural production calendar depends on the characteristics of the farms (constraints regarding labour, the availability of equipment, etc.) and weather conditions and is difficult to know in advance. However, yields may vary strongly, with deviations in relation to their optimum calendar.

A delay can call the year's production into question and MFIs must arrange to release funds in time for the farming season.

## **312. An uncertain economic and political environment**

### *a. Economic risks*

Farmers face commercial lack of security (supplies and sales): rise in purchase prices, late delivery of inputs, poor quality crop chemicals, uncertainty with regard to selling prices and late payment. The socioeconomic environment is unstable and risky in the absence of well-mastered agricultural policies and reliable farmers' organisations (Devèze, 2000) and also because of dependence on the non-controllable international environment.

In addition to the risks peculiar to the agricultural sector, the development policies in southern countries have also often favoured the domestic industrial sector at the expense of the agricultural sector. Numerous countries have distorted price incentives for the agricultural sector: low, controlled agricultural prices, disproportionate budgets for the development of urban infrastructure, underdeveloped property rights and the excessive taxing of agricultural exports. As a result, agricultural production has been weakened and the purchasing power of rural populations has decreased. These conditions have also limited encouragement for the providing of financial services suited to agricultural sector requirements (Yaron, *et al.* 1997).

### *b. Poor infrastructure development in rural zones*

With the exception of that of peri-urban zones (market garden crops and small livestock), agricultural production is conducted in rural zones whose infrastructure is generally poorly developed: little developed or poor quality road system sometimes impracticable for part of the year (during the rainy season), rare and expensive public transport, poor development of markets, etc. Social facilities may also be underdeveloped: no hospital, few dispensaries, schools a long way

away, defective communication facilities (mail, telephone, etc.), poor access to price information, etc.

These conditions aggravate the physical distance from urban zones; this increases transaction costs in the sale of farm production and can make the supply and purchase of inputs and agricultural equipment difficult or expensive. It also results in poor encouragement for managers to work in rural zones, penalising the institutions that require qualified staff.

### *c. Structural adjustment plans*

The liberalisation policies implemented in developing countries within structural adjustment plans have concerned privatisation and fiscal and trade reforms. The results have been somewhat disappointing overall in Africa (Losch, Marzin, Voituriez, 2000). Growth has been unstable, especially in agriculture, and the markets are marked by considerable uncertainty (the dismantling of the integrated sectors, world price fluctuations, etc.). This uncertainty, combined with the poor development of private support services (extension, veterinary services, traders, etc.) may increase the reluctance of MFIs to become involved in agricultural financing.

The role of public policies is thus still capital in the security of farming and hence in the security of the activities of MFIs doing business with farmers (see the synthesis concerning public policies, Workshop 6).

## **32. The constraints of the supply of medium-term services**

The supply of medium-term credit (and long-term credit even more so) is limited in volumes and reserved for a small number of MFIs (mainly credit unions). However, the financing of agriculture requires medium-term services and this is a further challenge. Indeed, medium-term credit supply has to face various types of constraint resulting from the duration of the contracts (Wampfler, 2000).

### ***321. The technical mastery of medium-term loans***

Medium-term credit is generally risky. The large sums and repayments spread over several years make it a risk factor for the financial stability of an MFI and the risk is greater in the agricultural sector.

Guarantees are even more difficult to obtain for medium-term loans. The social guarantees generally used by MFIs (joint surety) do not work well for large sums; the material guarantees and real sureties corresponding to medium-term loans (agricultural land, building land, houses) are difficult to realise in the case of failure to repay.

The awarding of medium-term credit requires excellent investment credit application analysis capacity. It is thus necessary to 'change professions' (Doligez, 2001).

The farmers making most use of credit to finance their first equipment are those that possess the least capital, causing greater risks at network level (Doligez, 2001)

According to Gentil (2000), medium-term loans (2 to 5 years) do not raise insurmountable problems for microfinance when the loan is for a profitable purpose, as is shown by the experience accumulated in equipment with animal traction (especially in southern Mali and Benin). This approach can be extended to a fairly broad range of investments: motor pumps (in

the Tarka valley in Niger), miscellaneous agricultural equipment (FERT credit union hire purchase in Madagascar), motors and large nets in fishing, small hydro-agricultural developments, livestock rearing installations and processing equipment (hullers, etc.).

As in all credit, the central problem is the evaluation of the quality of the borrower, of the profitability of the investment and of the risk. If the investment is profitable, the risk can be better mastered than with short-term credit because the material can serve as the guarantee (possible recovery or rather the hire-purchase system) and it is easier to award partial moratoriums in a bad year. The failures observed for certain medium-term loans are often the result of insufficient investment profitability, technology that is poorly mastered by the borrower, a non-functioning maintenance and spare parts service, inefficient, non-existent or insufficiently available veterinary services, bad adjustment of the loans to the production calendar or to the social characteristics of the environment.

### ***322. The use of the appropriate financial resources***

Medium-term credit requires long, stable resources that MFIs lack chronically. The savings collected are mainly deposited on a short-term basis and are volatile. The PARMEC law in West Africa strongly limits scope for turning it into medium-term credit. The capital bases of MFIs are very limited for the moment and external resources are often also short-term resources.

### ***323. Difficult strategic choices***

The demand for short-term investment in reliable sectors (commerce, transport, etc.) is often so strong that it diverts MFIs from medium-term credit in uncertain sectors.

For an MFI, investing in medium-term credit means having a clear vision of the evolution of the institution and this is not yet the case for many MFIs that manage their futures on a two or three-year basis.

## **33. Implications for financial services for agriculture**

### ***331. The knowledge necessary for the requirements of the sector***

With regard to demand, the heterogeneity of requirements and the complexity of the economic units discourages MFIs from going into a sector that is new for them. With regard to supply, the unfortunate experiences of agricultural development banks and of certain financing projects for agriculture are all discouraging examples. They result in particular from poor knowledge of the sector.

MFIs must possess technical knowledge in the agricultural domains in which they wish to operate in order to appraise the quality of applications, and in particular the solvency aspect, and provide a perfectly adjusted service.

Thus, Wampfler (1998) identified the poor mastery of the link between the technical aspect (rice growing) and credit as the main stumbling block in the failure of the season credit operations of the APOR project (NGO: *Action pour la Promotion des Activités Rurales*) in Niger.

### **332. The cost of financial services for agriculture and the debate on interest rates**

Scattered demand, small sums, remoteness from urban centres, poorly developed transport and communication infrastructure are constraints that increase transaction costs for MFIs. They are not peculiar to the financing of the agricultural sector and apply in a general manner to the supply of financial services in rural areas. However, these constraints are aggravated by the low profitability of the agricultural sector, which does not allow the setting of interest rates that are compatible with the investments planned.

In general, regular clients do not complain about interest rates in the mode of functioning of MFIs. Reticence in the face of high rates is more marked in the case of the financing of agriculture.

#### **Interest rates for agricultural activities**

Madagascar (Wietzke, 1999)

The equipment loan set up in 1993 is for the financing of the usual agricultural equipment (cart, plough, harrow, wheelbarrow, hoe, etc.). Although there is demand, it is not very successful, among other things because of the high interest rate, the relatively short duration of the loan, the low profitability of the equipment and the large personal contribution required. According to the project, difficulty in obtaining supplies also accounts for the small demand. In 1999, the project and the Unions were to test a product of the hire-purchase type for the acquisition of equipment, taking the blockages of previous experiences into account, with 24% annual interest and the obligation for the borrower to deposit only 10% of the value of the purchase as a guarantee.

Benin

In his surveys of clients of FECECAM, Renard (1999) noted that many remarks concerned rates of interest considered to be too high, even though the farmers observed that they could not obtain loans at a lower rate.

Inter-Réseaux report (forthcoming)

Historical analysis of the development of agriculture in the industrialised countries shows that agricultural credit has been an important lever in the modernisation process. The interest rate (often lower than the usual rates at banks) was in many cases a factor in the changes in agriculture. These choices form part of a political determination to sustainably stimulate the modernisation of agriculture taking into account the specific risks related to farming and the need for investment with delayed, often uncertain profitability (market risks, climatic risks, etc.). The interest rate subsidy policy for agricultural credit is now more rare in industrialised countries because their agriculture is more competitive, farming is less risky thanks to effective market organisation mechanisms or simply because states no longer agree to allocate large sums for farm modernisation.

In developing countries, liberal orthodoxy and observation of the lack of state resources justifies in many cases the rejection of any idea of subsidising interest rates for agriculture. In this case, how is it possible to talk seriously of the efforts necessary for modernising agriculture, making it more intensive and enabling it to ensure at least part of food security? Is it forbidden to imagine other mechanisms for the financing of the investment and credit efforts required by farming in developing countries?

### **333. The role of agricultural policies**

The limits observed in the supply of services for agriculture are strongly linked to price policy and agricultural market factors, to the weakness of rural infrastructure and to problems of insecurity. It is nevertheless in the joint interest of microfinance and the public authorities to have profitable agriculture with minimum risk (an open, relatively stable market, good productivity and hence high-quality research and information, input availability, management board and marketing networks that include transport and storage, etc.).

Some constraints may appear to be insurmountable for MFIs, especially as they go beyond their framework of action. The definition and application of agricultural policies taking these limits into account at the national and also the international level may operate in favour of the guaranteeing of the supply of services and the encouragement of demand (see the synthesis on agricultural policies).

#### 4. ANSWERS FOR THE FINANCING OF AGRICULTURE

How do services for agriculture fit in with the economics of family farms? What are the specific features of the financing of agriculture?

What attempts at direct financial services for agriculture have sought to respond to the constraints identified?

What are the procedures of these services and under what conditions are they accessible? Can they be developed? How can they be improved?

What are the consequences for MFIs with regard to organisation?

#### 41. The multifunctionality of farmers and credit fungibility

##### *411. The supply of credit for family units*

The injection of credit into family units can relieve the cash constraints of the farm budget and ease the financing of farming activities without the loan being initially invested in these activities.

The examples of the surveys performed in Benin can be used again here (Leege, 1997). The surveys of clients of community banks show that the source of financing for agricultural activities is mainly profits from the small retail business. Although community bank loans do not seem to be invested directly in agriculture, the income generated by the other occupations are reinvested in farming.

Medium-term financing by means of short-term credit

A succession of short-term loans over a period of several years may facilitate diversification and accumulation by certain borrowers when social redistribution logic is not predominant. Medium-term investment for the purchase of livestock for example can be self-financed, as credit makes it possible to cover season expenditure. In the case of plantations, staggered investments can be covered by a short-term loan refunded using income from existing plantations or other resources (Gentil, 2000)

##### *412. Savings procedures*

Likewise, without necessarily targeting agricultural activities, savings services may make it possible to manage farm stock and financial flows and indirectly finance agricultural activities.

*a. Preventing the reduction of capital: emergency funds*

In poor harvest years, farmers may have to sell their cattle or their equipment to cover their basic needs. Emergency funds could be set up in good years to avoid this.

In France, Groupama for example is considering mutual funds in order to pool the risks, as emergency funds set up on an individual basis are not sufficient.

*b. Support farmers' self-financing capacity*

Study of household strategies in the absence of use of loans from MFIs revealed the following strategies for the financing of farming:

- staggering investment costs,
- reducing investment costs to a minimum,
- reinvestment of income from farming,
- non-agricultural income invested directly in agriculture or covering day-to-day expenditure to release agricultural income for agricultural investments
- the constitution of long-term savings dedicated to future investment,
- use of informal credit,
- family sources: legacies, dowries.

The savings services of MFIs could support reinvestment strategies by proposing flexible short-term accounts in which farmers can deposit the profits of their work while waiting for the time when agricultural investment is necessary. Furthermore, regular, frozen deposits clearly identified for a future investment, possibly accompanied by a complementary loan, could meet the need to accumulate long term savings. These formulas are similar to the French *Plan Epargne Logement* saving system for house purchase.

**The FECECAM experiments** (Gentil, Doligez, 1999)

The investment savings plan (*plan d'épargne-investissement*, PEI) is inspired by the habit of regular payments in informal tontine type systems. The repayment amounts (monthly or quarterly) for the loan to come are very close to the amount of the savings deposits made regularly for several months. For the purchase of equipment on a medium-term basis, the guarantee based on the ability to save is completed by a hire-purchase type agreement.

The product was launched at the end of 1998 in two urban banks in each region (i.e. in 14 banks) and the initial results were disappointing (22 PEI with CFAF 2.6 million collected in March 1999). The hypothesis has been put forward that too broad an experimental phase reduced monitoring.

## **42. Services specific to agriculture**

### **421. The procedures for short-term loans**

*a. Season loans*

Classic season loans fund the main crops in the zone. The funds are released at the beginning of the season and repayment is at the time of the main harvest. The duration is thus generally 6 to 10 months.

The release of funds may sometimes be performed at several times of the year (the main cropping season, between-season, counter-season). Repayment can be scheduled over several weeks after the harvest to avoid selling the crop when prices are at their lowest.

*Crédit Rural de Guinée* (CRG) (IRAM, forthcoming) proposes agricultural credit derived from the initial service with monthly repayment. '*Crédit agricole solidaire*' (CAS) has a 6-month deferment period with repayment in three parts (25 to 50% at the harvest and the others during periods—generally February and March—when the prices of products have risen markedly). As for its classic service, the loans are guaranteed jointly.

The CRG village contract is a formula tested since 1993 for farmers in enclaved villages that wish to obtain agricultural credit. The procedures for the awarding and repayment of loans are simplified. The loan is awarded in within the framework of groups of 5 to 10 persons, but the CRG has signed only one combined account and a single guarantee savings account in the name of the group or village. The loan is awarded in a single payment. Repayments are performed jointly on the dates set by the appointed persons (two representatives per contract).

Although this procedure is usually well-suited for agricultural financing, it can form a constraint in the absence of short-term financial products for the financing of other occupations (trade, crafts industry, etc.).

In terms of greater flexibility, CARE has tested 'pre-approved' credit lines with several organisations in South Africa (message from C. Miller, DevFinance, 22/08/01). As insect pests or diseases can attack crops very rapidly and destroy them, pre-approved loans can be awarded (generally in kind) if the farmers need this and precisely when it is necessary. The interest is paid on the amount of the ongoing loan. The alternative consisting of clients purchasing insecticide ahead and storing it carries health and environmental risks and is financially inefficient for the client.

#### *b. Credit for fattening*

Loans are awarded for the purchase of young animals (pigs, sheep or cattle) and possibly for the purchase of feed and veterinary products. The loan is repaid when the fattened animals are sold. The major risks concern the mortality and mobility (theft, transhumance) of livestock. This makes necessary the regular monitoring of the borrower and the use of this type of loan in an economically secure environment for animal husbandry: reliable veterinary services, the availability of forage resources, low population mobility, etc.

#### *c. Village granaries*

The purpose of these granaries is to help farmer members to keep control of the selling price of their crops from harvesting to sale. The stock generally serves as the guarantee and ensures the satisfactory repayment of the loan. However, the system can only operate with non-perishable products for which the price at harvest time is certain to be lower than during the bridging period. This is the case in particular in enclaved rural zones (see box).

#### **Example of the functioning of common granaries**

Cameroon (Raubec, 2000)

The granaries are aimed firstly at improving food security. They are then designed to help in cash management. They plan the purchase of grain from the producer at a low price at harvest time and give him the opportunity of buying his own production back during the bridging period at a price much lower than the market rate, making it possible to escape price fluctuations. The persons who do not wish to recover their sacks of grain receive the difference between the market price and the price at which the group bought the grain from them.

Village common granaries, Madagascar (Wietzke, 1999)

Storage credit, generally referred to as 'GCV', is inspired by the village community granary. In the Vakinankaratra, this concerns the storage of paddy rice and maize, grains that are not perishable and whose price fluctuations make storage profitable. The farmers store their products either in premises that can be a room in the house of a participating member or in a specially constructed facility. The minimum storage period is set at five months by the Union and was previously four months (our surveys). Management costs for shorter periods would be too high in relation to the amount charged by the Union (shares, rate) and the rise in price would risk being too small for storage to generate sufficient margin to make the GCV profitable. Until the 1998 season, the Union provided material to ensure safe storage (in the face of theft and spoilage): locks, ring-bolts, rat poison, etc. (our surveys). According to the new handbook of procedures (1998), packing is now the responsibility of 'storer-members'. The latter receive a loan of two-thirds to three-quarters of the sales value of the goods stored. Given the rise in price (approximately 100%), this product is very profitable for the beneficiary members. According to our surveys, a member receives a loan of FMG 600,000 per tonne of paddy rice harvested (in May, paddy rice sells at FMG 700 per kg), and sells it six months later after storage for FMG 1,500 per kg, meaning that he gains FMG 1,380,000 (profit from the sale of the stock, from which the variable holding and the interest has been deducted) instead of the FMG 700,000 that he would have received from the sale of his harvest. This almost doubles his earnings.

GCV credit carries practically no risk for the financial system (except for theft, fire or the spoilage of the goods stored) as the guarantee is physically enclosed in the granaries and represents a greater sum than the amount of the loan awarded. However, its extension in a given zone could be accompanied by a fall in price when the goods are removed from storage.

Thus, for the first time, in 1999 the gain was only 20% since the fall in the world price of rice and the liberalisation of imports caused a strong decrease in bridging time prices (Fraslin, 2000).

During the surveys, farmer members made criticisms concerning the repayment of the GCV loans. The beneficiary is supposed to refund his loan and the interest before the products are removed from storage so that the system conserves the material guarantee. INTERCECAM is considering the possibility of anticipating repayment and performing this in stages to avoid risks. This would certainly facilitate repayment but has two disadvantages for members. The latter pay interest on an initially fixed duration, even if they repay early, and furthermore receive a lower price for the paddy rice stored because of the earlier repayment date.

Difficulties that sometimes occur in storage loans show that the farmers with access to this credit become local collectors, that local traders hinder the good functioning of the granaries and that the poorest farmers are excluded from the system because of insufficient stock capacity. It is therefore important to monitor the social consequences and trade flows in these systems.

#### **422. The procedures for medium-term loans**

##### *a. 'Classic' medium-term loans*

FECECAM is an exception as a decentralised network capable of orienting a large part of its portfolio towards medium-term credit (Gentil, Doligez, 1999). Its 'lengthened short-term loans' and medium-term loans formed a total of 14% of loans and 19% of amounts on 31 March 1999. Lengthened short-term loans are aimed at financing operating resources for commercial activities that required storage. They can be repaid in quarterly, half-yearly or annual payments and the interest rate is the same as that for short-term loans or slightly lower (15 to 18%). Medium-term loans can finance agricultural equipment (animal traction) for a three-year period or the improvement of housing for two years. These loans were introduced in three regions (1999 data) using external lines of credit. In the Borgou, in addition to the conditions for short-term loans (being a member, having saved for 3 to 6 months, the approval of other members), the borrower must have the guarantee of a village group with no members with outstanding payments and whose savings must cover part of the risk. The sums are small (less than CFAF 500,000), the interest rate is 16% per year and repayments are annual. In the Mono, some loans are large, as high as CFAF 10 million and the interest rates are lower in a range of 10 to 12% per year (see box).

**FECECAM medium-term credit – Analysis and recommendations for monitoring and evaluation (Gentil, Doligez, 1999)**

Monitoring and evaluation result in questions to be considered concerning medium-term loans (MTLs).

Analysis

1. 'Housing' loans are diverted considerably from their purpose. Nearly 60% (?) of the funds is used for other purposes (e.g. the purchase of motor pumps, season loans, working capital for commerce, etc.) or used only partially for housing.
2. MTL beneficiaries do not always have regular relations with their banks. The prior saving often consists of short deposits made just before the awarding of the loan and sometimes made thanks to loans from family or moneylenders.
3. The procedures are not always respected, especially with regard to guarantee of village groups and the freezing of savings.
4. Some loans are over-sized as they are obtained thanks to special relations with certain board members.
5. Some loans are too large and awarded to clients with little experience or for high-risk purposes. Furthermore, animal traction is still poorly mastered in some zones (Mono).
6. The technical dossiers are usually insufficiently examined.
7. There is practically no monitoring of loans after they have been awarded.
8. Satisfactory repayment does not necessarily mean that the loan has been successful. Certain borrowers repay but by realising capital.

Main recommendations

- a. Choice of borrowers
  - Borrowers who are already known and have regularly repaid their previous short-term loans (steadiness)
  - Borrowers who already perform regular prior saving
  - Try to favour processing activities performed by women.
- b. Purposes of loans: purposes should be open and not previously targeted but their profitability and risks must be studied on a case-by-case basis.
- c. Amounts
  - MTLs should not be confused with large loans.
  - MTLs are not suitable as commercial working capital.
- d. Duration: 2 to 3 years (except for justified cases) because experience shows (Borgou) that repayment difficulties begin in the third year.
- e. Interest rate: it is better to have a comparatively high rate (minimum 13.5%) and not too different from the short-term rate in order to prevent the perverse effects of the diversion of purposes.
- f. Repayment procedure: this must be linked with the economic cycle of the activity: appropriate awarding and repayment dates, possibility of deferment, repayments that are not necessarily annual (monthly repayment may be suitable for loans for crafts occupations or certain services).
- g. Type of guarantee: this should be examined in each case, with assurance of the real existence of the material guarantees proposed; see also joint surety, frozen savings, hire-purchase, 2% contribution to the guarantee fund.
- h. Awarding procedure: simplified application and prior talk with the manager.
- i. Regular monitoring: this must be presented more as being a support, a discussion that is useful for other people to know the conditions of success or difficulties rather than a control.
- j. Training elected officials and managers. Technical staff and elected officials have displayed strong demand for specific training in the examination of applications (profitability, debt capacity, risks, market sufficiency, mastery of the specialisation or technology).

However, MTLs can only be financed with stable resources, especially in the light of the PARMEC law<sup>3</sup>. This makes it necessary to develop own capital, to develop long-term savings products, negotiate credit lines well or have access to the financial market.

ADRK medium-term loans (Bridier, 1999) were the only type of credit awarded from 1969 to 1989. With annual repayments, this was guaranteed by obligatory savings equal to 25% of the

<sup>3</sup> The 'PARMEC law', covering mutual institutions or savings and credit co-operatives does not permit any resources with a view to future use, even if a proportion forms a stable stock.

outstanding amount; it was guaranteed first by the item financed and then by other items among the applicants assets. Equipment loans are awarded in kind by ADRK.

#### *b. Hire-purchase and leasing*

In accordance with the hire-purchase system, the project remains the owner of the machine hired out until the last hire payment has been made. The hired machine serves as security in case of failure to respect the contract.

#### **Examples of hire-purchase**

##### **Guinea Conakry**

Primo (1997) described the functioning of a hire-purchase experience for animal traction in Guinea Conakry (TBDIA project).

Organisation of the operation. Applications for machines on a hire-purchase basis were recorded several months before the first ploughing. If the response is favourable, the project purchases the corresponding machine for delivery. The project staff handles the collection of applications, passing on the project's opinion, arranging delivery of the machine on the signing of the contract and the receipt of the first payments, receiving payments and requesting repossession in case of dispute. Delivery of the machine is arranged several weeks before the first tillage. Repayments are paid into an MFI bank account.

Reduction of risks. The machines are the guarantee for the contract. The project remains the owner of the machine until the last payment has been made. In case of dispute, the subject is a machine and not a sum of money; this facilitates negotiations and possible repossession. The contract is countersigned by a second signatory and a well-known person gives a character reference. The farmers already have experience of using the project demonstration machines during the previous season. Furthermore, the machines are of good quality, standard design and meet the farmers' requirements. They are made locally, facilitating ordering, payment, delivery, the respecting of deadlines and the supply of spare parts. Village blacksmiths know the machines and maintain and repair them. Strong incentive is given for early repayment reducing the cost of hire-purchase. Farmers are encouraged to perform services for others to make it easier to make the payments.

##### **FERT leasing system** (Wietzke, 1999)

This medium-term credit (for a maximum of 3 years) was designed to enable farmers to purchase agricultural equipment such as ploughs, harrows and carts and also draught oxen, milk cows, etc. Risks of loss, especially as a result of disease, are small in the region given the care awarded to livestock and the technical support provided by certain NGOs and associations.

The credit has been managed by the financing body, URCECAM of Vakinankaratra, since 1996. Technical analysis of the application (feasibility, profitability and solvency) is performed by the CECAM adviser under the control of a Union technician; beyond the limits of the prerogatives awarded to each bank, this analysis is performed by a Union technician. Furthermore, applications exceeding the ceiling of FMG 20 million must be forwarded to INTERCECAM for a technical opinion.

The awarding of credit is decided by the regional commission for the awarding of credit that meets every month. Mutual hire-purchase means that URCECAM remains the owner of the goods financed until the completion of repayment.

In order to prevent any dispute concerning the quality of the goods financed, the person taking the contract is solely responsible for choosing the goods to be purchased and negotiating the initial price. This is particularly important for animals since although the loan organisation is the owner it is not responsible for the sanitary condition of the oxen.

Quarterly payments were required in 1996. Since 1998, to adapt payments to the capacity of the beneficiary, the frequency of payments must be negotiated by the beneficiary when he makes his application.

In theory, hire-purchase systems provides an assured guarantee for the lender. However, the latter may encounter a number of difficulties (Pandolfi, 1996). A sophisticated item on a limited market does not, provide a guarantee because it is not possible to resell it under satisfactory financial conditions. This results in the limiting of financing to very standard goods. Agricultural equipment in southern countries is not necessarily in this 'standard' category. The provider of hire purchase generally only gives his approval if the risk of difficulty of the activity is compensated by the activity of other sectors of the enterprise or of the family farm. In case of dispute, the legal

risks involved in justice that is not very used to the nature of these contracts should not be neglected. The slowness of procedures may mean that the provider recovers his property in a mediocre state of maintenance at best.

*c. Pathways for low profitability agricultural investments*

It is underlined in the European Commission document (2000) that certain agricultural equipment displays comparatively low profitability and funding can only be repaid on a medium-term basis. Specific measures must therefore be taken for this type of investment: improvement of profitability by reducing costs, improving use, proposing incentive low-interest lines of credit and reducing the management costs as a result of the larger sums. The risks may also decrease with hire-purchase systems (see above), technical monitoring by extension officers and selection by a group of borrowers. If this is essential, the interest rate for this type of credit can thus be reduced by taking care to limit perverse effects such as resale and use of the money for another purpose.

In cases of deferred profitability (with the risk of 'forgetting' repayment undertakings) or low profitability but for a useful investment, it is possible to reason in terms of joint financing (local investment funds, village development funds, etc.) (Gentil, 2001)

**424. The procedures for insurance**

See the synthesis on the guaranteeing of credit for agriculture.

**43. Diversification in response to agricultural risks and seasonal features**

**431. Diversification of the loan portfolio**

Lenders diversify their portfolios by financing a combination of loans for different purposes and with different repayment periods and procedures. They also provide services for different types of borrower in diversified agroecological zones. The examples studied by GTZ and FAO 'Agricultural Finance Revisited' programme (Klein, 1999) illustrate cases of diversification strategies. Although its portfolio is devoted entirely to the financing of agricultural activities or activities directly related to farming, the BAAC (Thailand) has diversified its portfolio by providing loans for a broad variety of crop and livestock farming activities, by addressing both small and large-scale farmers with different risk profiles and by covering the whole of the country in different agroecological zones. Calpià reaches both urban and rural clients, different geographical zones and borrowers with different income levels. Loans for agriculture do not exceed 20% of the loan portfolio. The CMAC (Peru) also limits the proportion of agricultural loans to 30-35% of the portfolio and the rest is allocated to urban or non-agricultural rural loans.

The example of Calpià (Klein, 1999) shows that the analysis of the degree of diversification of the incomes of farming households can form an integral part of the evaluation of a loan application. At Calpià, the farmers who have multiple sources of income can obtain larger loans. In diversification, distinction can be made between the food security diversion and market integration diversion. Likewise, distinction can be made in specialisation between survival specialisation when families have very little means of production and market specialisation when families have substantial means or have found a buoyant market (Wampfler, 1996). Different modes of financing must be designed according to the strategies chosen and the reasons for these choices.

### **432. Difficulties in diversification**

Geographical dispersion and solidarity between dispersed banks must enable the diversification of risks and especially agri-climatic risks for agricultural financing. Nevertheless, this diversification may be expensive (the cost of managing a scattered network) and MFIs may experience difficulties in implementing regional solidarity between autonomous banks (the case of the Marovoay village banks in Madagascar). In Benin, Doligez (2001) thus stresses that as has been the case in Burkina Faso and Mali, the forced solidarity of village groups may collapse in case of payment crisis and result in the splitting of the village groups into more limited structures at village level.

Loan diversification is not necessarily easy in a context of weak local diversification of activities and risk of the poor suitability of services (in the case of analysis that is too superficial or insufficient staff training) is not negligible.

The CECAM in Madagascar (Fraslin, 2000) awards a third of credit (by value) to farmers' associations (5% of its clients) to reduce management costs in spite of the danger of such a concentration of risks.

#### **Diversification of the Marovoay CVECAs (CIDR, 2000)**

The strong dependence of the network on rice growing, and particularly on season funding, was identified as a negative factor from the start of the Project. Various measures were taken during the Project to favour the financing of other economic activities. The financing of short-cycle animal husbandry was promising but unfortunately called into question by the African swine fever epidemic. Several years will doubtless be necessary to re-launch this type of financing under safe conditions. Refinancing after paper applications was stopped after repayment difficulties. Although this had given good results in most cases, the financial risk was too great (failure to respect the division of risks) and caused work on the establishment of the dossier and monitoring that is doubtless not profitable. The financing of agricultural equipment with medium-term credit or hire-purchase gave little results as demand was found to be very small. The great majority of farmers still depend on credit for season funding and do not wish to become over-indebted. The diversification of activities cannot therefore be performed in the medium term in the Marovoay network. Whence the advantage of its integration in a regional network within which it can diversify.

MFI strategy can be that of beginning with secure agricultural zones (Klein, 1999). Thus, Calpià chooses pilot zones for agricultural loans on the basis of the following criteria: ease of access and proximity to existing banks, the density of potential clients and a relatively stable climate with good availability of water. Calpià moves on to more risky zones when the operations have been consolidated in the pilot zones.

In a general manner, as for any financial service, the institutions providing services for agriculture must seek to manage their costs as closely as possible and in particular through the use of incentives for employees or the delegation of responsibilities to local elected officials working for a lower cost.

Two features nevertheless seem primordial within the framework of the financing of agriculture: training in agriculture and decentralisation.

Training credit officials makes it possible to analyse risks, to evaluate solvent demand and to continuously adapt services to the requirements and evolution of the economic environment. Decentralisation enhances knowledge of the environment, the responsibility of stakeholders and functioning flexibility with the rescheduling of loans on a case-by-case basis to face agricultural risks for example.

Technical support is often necessary. While remaining a separate function of MFIs, this requires co-operation work with local technical support. Microfinance can only respond to the scale of agricultural financing requirements if links of joint knowledge and confidence are increased between the financing and agricultural development support sectors (Wampfler, 2000).

Management advisory methods implemented with farmers and also with farmers' organisations can be effective means for improving the production of information on the specific needs and constraints of agriculture.

## 5. MATCHING SUPPLY AND DEMAND: BALANCE AND PROPOSALS

What are the major reasons for the present imbalance?

Pathways to be followed. What adaptations should be designed to better respond to the requirements of agriculture? Are specific products required for agriculture?

Topics for discussion of other workshops: security, partnerships with agricultural and commercial banks, support from accompanying structures, the role and future of FOs and organised sectors and the role of public policies.

### 51. Balance

Today, MFIs that offer services for agriculture have reasoned in terms of demand. Certain microfinance institutions have been created by farmers' organisations and the question of the financing of agriculture is thus central for them. Others have become interested in agriculture because it is an important source of clients and others consider that they cannot achieve the scale of national operator if they totally ignore agriculture, a vital economic sector.

The decision-making components of the MFIs most involved in the financing of agriculture often include players belonging to the farming world: FOs, FOs turned into MFIs, MFIs managed locally and established in agricultural zones, etc.

MFIs handle the financing of agriculture as a service among others: analysis of profitability and risks, contribution related to this analysis, not a specific response to a particular requirement that is not covered => partial response in cases of sector integration (little risk) or profitable agricultural activities. MFIs thus provide credit services for agriculture but to spread the risks the portfolios of most MFIs are not specialised in agriculture.

Short-term credit responds to part of the demand for the financing of inputs, fattening, storage and agrifood processing. Demand is not entirely met.

Medium-term credit is available when investments are profitable and guaranteed but remains rare and on a one-off basis (provided by only a small number of institutions).

### 52. Proposals

#### Services

- Disseminate and test in new contexts innovations in hire-purchase and medium-term credit for agriculture.
- Develop savings services more specifically targeting agriculture that would encourage and optimise the resorting to self-financing capacities.

#### Organisation

- Develop knowledge, analysis of requirements and interactions between the agricultural sector and the microfinance sector (see the syntheses on FOs, donor intervention modes and public policies).
- Consider modes of guaranteeing medium-term loans and sector loans with the liberalisation of the latter (cf. workshop on guarantees).

- Consider ways of obtaining stable resources, in particular by working with institutions in the financial system (c.f. workshop on agricultural banks and commercial banks).
- Enhance the development of a secure, inciting economic and political environment for supply and demand (c.f. synthesis on agricultural policies).

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