

# Rural Finance for Small Farmers: An Integrated Approach

## Introduction

Seventy-five percent of the world's 1.2 billion<sup>1</sup> poor people live in rural areas. Most of them are small-scale agricultural producers and small, nonfarm entrepreneurs involved in a variety of microenterprises. The majority of these households have little or no access to formal financial markets or microfinance services. Lacking access to institutional sources of finance, most rural poor and low-income households continue to rely on costly informal sources of finance or on self-finance, neither of which allows them to take full advantage of economic opportunities. Microfinance providers can fill an important financing gap by expanding operations into rural areas.

This paper provides an introduction to the key elements of success in the expansion of microlending to rural areas. The first section identifies the common risks in agricultural production that may impact clients' repayment capacity. The next section outlines the steps an institution must take to expand responsively and sustainably into rural markets. The steps include determining optimal branch locations, understanding the new clientele and how men and women's economic activities in these markets differ, designing responsive financial products, identifying ideal loan officers, and finally employing a rigorous lending methodology suited to rural households and market dynamics. The last section summarizes what an institution must commit to in order to ensure successful rural expansion. This paper will use a case study of WWB's work with ADOPEM Bank in the Dominican Republic to expand into rural markets to give concrete examples of each of the key steps in the expansion process.



Small cotton farmer with employees at her farm in Uganda.

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### WWB's Work in Rural Finance

WWB has supported select network members in Latin America in expanding their financial services into rural areas, by combining rural expansion strategies and assessment methodologies to understand and mitigate the rural and agricultural risks. It has also hosted regional trainings on risk assessment methodologies for small farmers for network members in Africa. Building on this in-depth expertise, WWB hosted an international best practice workshop on rural finance in February 2007 and has organized several peer-to-peer exchanges to enable institutions launching rural finance programs to learn from other successful practitioners.

In the next phase of rural finance engagements, WWB will work with network members to understand household economic dynamics in rural areas, the particular financial needs of rural women, and the product design and delivery implications of these differentiated needs. Women in rural areas continue to be highly underserved by financial providers, therefore this next phase will be a critical element in WWB's mission to serve the financial needs of low income women entrepreneurs.

Microfinance providers must have a fundamental understanding of the risks that small farmers face.

## Risks and Costs: a Cautionary Note for Institutions Entering Rural Markets

### A. RURAL CONTEXT AND AGRICULTURAL RISKS

Microfinance providers targeting small farmers face a variety of challenges, such as understanding the cash flows of rural households and the business cycles of small farms, and estimating the repayment capacity of small farmers (who in many cases lack proper records). In addition to assembling detailed business profiles of potential small farmer clients, microfinance providers also must have a fundamental understanding of the risks that small farmers face. These include climate risks, price and market risks, and production risks.

#### Climate Risks

Crops are highly susceptible to fluctuations in climate and levels of rainfall. Access to water sources, availability of irrigation systems and temperature variations are factors that considerably affect the size and quality of the harvests of agricultural products.

#### Production / Producer Capacity Risks

Production risks result from pests and diseases that attack the products during the growth cycle, as well as from losses caused by substandard farming practices or inadequate conditions during harvest, transformation (processing) or transportation of the products. Inadequate handling of products before and after harvest can lead to significant losses that eventually affect the farmer's investments. Production risks are directly related to the technical and managerial capacity of the farmer, and to technical constraints such as the quality of agricultural inputs (seeds, fertilizer, etc.), harvesting processes and storage systems. The managerial capacity of the farmer significantly influences his or her ability to successfully produce and market crops.

#### Market Risks

Agricultural products that are most susceptible to substitution carry the greatest market risk, because purchasers are generally indifferent to the source of products that are homogenous and easily interchangeable. It is common for a farmer to have good yields and strong management of the crop cycle (production, harvest, storage) only to face a drop in price at the time of sale due to excess supply available. In saturated markets, farmers are forced to sell at low prices, often below the cost of production.

### B. RURAL CONTEXT AND TRANSACTIONAL COSTS

Very often rural clients are scattered across large geographical regions, posing additional costs and logistical challenges for financial institutions. Organizations need

to design distribution channels that are cost effective and convenient for both clients and organization. The development of flexible and easily replicable structures for marketing, delivering and monitoring loans is critical to the sustainability of an organization’s rural finance expansion.

## Key Steps to Expanding into Rural Markets

Working in rural areas has never been an easy proposition in any industry. The vast geographic areas and low population density, often scattered across hard-to-reach locations, result in higher operational costs for the financial institution. To offer sustainable financial services in rural areas, organizations need to develop and implement a comprehensive and integrated strategy, which should include: the design of effective risk assessment methodologies, the development of strategic collaborations with value chain players to mitigate agricultural risks, and the creation of cost effective distribution channels. This section will discuss some of these key areas as part of a strategy for rural expansion, referring in several instances to WWB’s work with its network member ADOPEM Bank to design and implement a rural lending product in the Dominican Republic.

### WWB’s Work with Banco ADOPEM in Rural Finance

*In 2007, WWB began working with its network member Banco ADOPEM, of the Dominican Republic, to design a rural lending product to add to ADOPEM’s portfolio of credit and asset building products. ADOPEM is a specialized microfinance bank founded in 1982 by Dra. Mercedes Canalda. As of December 2006, the bank had a country-wide network of 21 branches, with more than 60 thousand clients and a portfolio outstanding of US\$ 21 Million. The organization has 277 staff members and offers working capital and fixed assets loans, housing loans, savings and remittances to its clientele. ADOPEM is now expanding its branch network to secondary cities (population less than 50,000) with strong links to rural areas. This section of the document will review the actions and strategies used by WWB and ADOPEM to identify regions of operation, design a rural loan product and extend the product to small farmers.*

## A. SELECTION OF BRANCH LOCATION

The selection of appropriate regions is of great importance to the success of rural expansion because careful selection can greatly reduce agricultural risks. The branch selection process evaluates the agricultural and market potential of a particular region, which will determine its risk exposure level. During this process each region will be analyzed and rated based on a set of seven variables, including agricultural potential, demographic characteristics, and infrastructure. See Appendix 1 for the complete regional selection tool used by ADOPEM and WWB.

### ADOPEM Case Study—Branch Selection

WWB and ADOPEM assessed three agricultural regions to determine the area with highest agricultural potential. The three regions were assessed and rated based on the variables shown on the regional selection tool (Appendix 1). The regions visited were La Vega, San Cristobal and Yamasa.

**La Vega:** This is a very dynamic region with excellent agricultural potential: the soils are rich and flat, and at least 30% of farmers have access to irrigation, enabling multiple harvests during the year. The main crops are vegetables and legumes, whose production cycles ensure monthly cash flows. Approximately 70% of farms are small or medium size with an average farming area ranging from 15 to 30 tareas (1 hectare = 5 tareas). The region is well linked to local and international markets. Local intermediaries and exporters are purchasers, giving local farmers a wide range of commercialization options. There are few suppliers of financial services for small farmers in the region. Banks currently target only large farmers, but there is a local cooperative that provides limited financial services to small farmers. ADOPEM has a branch in La Vega city, which is 10 to 30 minutes away from the production centers.

**San Cristobal:** This is a hot coastal region, with sandy soils and average nutrients. At least 80% of farmers have access to irrigation, enabling two harvests a year. The main crops of the region are corn, tomato, sweet pepper and chili. Cash flows are seasonal for some crops (corn and tomatoes) and monthly for others (sweet pepper and rice). Approximately 80% of farmers have small and medium

size operations with planting areas ranging from 15 to 35 tareas. For the tomato harvest, farmers can market to both local intermediaries and agroindustries. Small farmers have fewer options, however, often relying on the prices offered by local intermediaries. Banco Agricola and some agricultural distributors offer financial services to small and medium farmers. ADOPEM has a branch in San Cristobal City located 30 km away from the coastal region, a half-hour drive.

**Yamasa:** This mountainous region with mild weather is susceptible to erosion given the area’s topography. The region has no irrigation and most farmers rely on seasonal rains to irrigate their crops. The main crops are cacao, avocado and pepper, providing only seasonal income and irregular cash flows to the farmers throughout the year. Approximately 80% are small farmers with an average 15-30 tareas of cacao and avocado trees. There are few options to commercialize the products; most farmers sell the cacao and pepper to local cooperatives. Financial services are not readily available, except for a government program that finances a limited number of cacao and pepper growers.

Regional information was gathered and input to the regional selection tool (Appendix 1) to estimate the potential of each region. Table 1 is an example, for La Vega, of ratings for accessibility and crop diversification.

VARIABLE	INDICATOR	DATA FROM REGION	WEIGHT	VALUE	INDICATOR TOTAL	VARIABLE TOTAL
Accessibility	Distance to closest branch	Branch in La Vega	3.0%	4	0.12	
	Travel time	Less than 15 minutes	3.0%	4	0.12	
	Transport options	Multiple	3.0%	4	0.12	0.36
Crop diversification	Main crops in the region	Baby vegetables, legumes, papaya, yuca, banana, citrus and rice	5.0%	4	0.2	
	% of land with irrigation	20%	6.0%	2	0.12	
	Number of harvest per year	3 harvests per year	5.0%	4	0.2	0.52

Table 2 shows the rating of the three regions based on the seven variables and weights assessed in the regional selection tool (Appendix 1).

VARIABLE	LA VEGA	SAN CRISTOBAL	YAMASA
Accessibility	0.36	0.21	0.24
Crop diversification	0.52	0.43	0.26
Soil and weather	0.61	0.53	0.52
Demographics	0.61	0.56	0.6
Access to technical services	0.28	0.24	0.2
Access to financial services	0.46	0.41	0.35
Commercialization channels	0.3	0.24	0.28
<b>TOTAL</b>	<b>3.14</b>	<b>2.62</b>	<b>2.45</b>

Based on the information gathered, La Vega received the highest score for regional potential (3.14), followed by San Cristobal (2.62) and Yamasa (2.45). La Vega offers the

most stable setting for the initial phase of rural expansion—strong crop diversification, good market links and monthly cash flows of farmers—and therefore represents the best area for ADOPEM to expand into while minimizing the agricultural risks.

## B. IDENTIFICATION OF FARMER PROFILES

Once the most stable, productive region is identified, the profiles of regional farmers should be analyzed. This information will help ensure that the institution designs adequate products tailored to the needs of this new client base. It will also help the institution launch its rural expansion with clients that represent the lowest risk for the institution. Expansion into a broader, more diverse client base can happen once the institution is more familiar with the region.

The following characteristics should be identified:

- Area cultivated
- Type and variety of products cultivated per season
- Number of agricultural seasons per year
- Maximum, minimum and average harvests for the zone
- Production systems and technological level of the zone
- Marketing channels used

The organization should analyze crops produced and area cultivated for an average small farmer in the region during the last agricultural year. Crop yields, volumes sold, crop prices in the region and commercialization channels and dates should be identified. Finally, production costs should be estimated, with breakdowns for labor, agricultural inputs and other costs. Based on this data, the organization can estimate yearly income, production costs and net income for different types of production units. Estimates can be rough at this stage; the objective of the exercise is to understand the characteristics, potential and credit risk associated with different types of farmers of the region. This information will enable the institution to determine which type of farmer offers a lower or more balanced risk profile.

Farmers' risks are associated with the frequency and regularity of their cash flows:

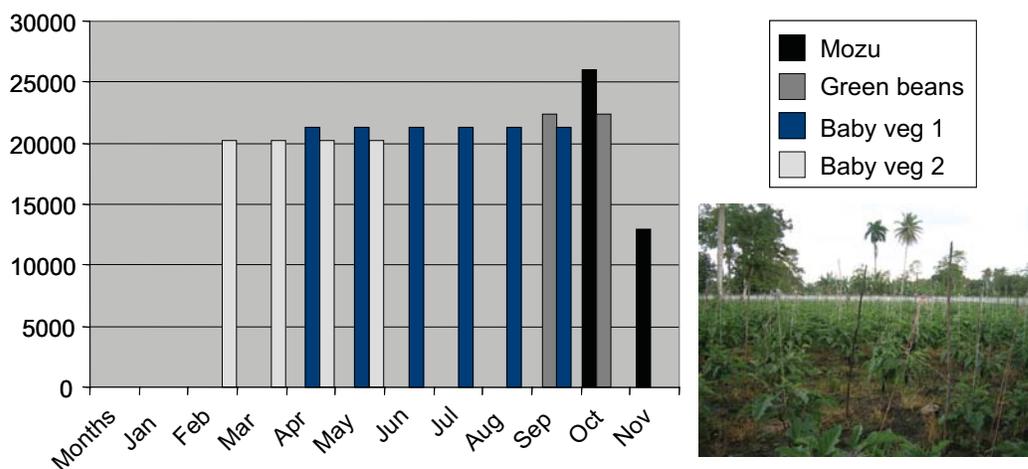
- **Low-risk farmers:** those with good crop diversification, multiple harvests during the year and access to irrigation, which enables them to generate regular monthly cash flows.
- **Medium-risk farmers:** those with some crop diversification, more than one harvest per year, who are able to pay at least the interest on a monthly basis and the principal in lump sums two to three times per year.
- **High-risk farmers:** those who have low crop diversification, generate only seasonal income and cannot pay interest or principal on a monthly basis but can only pay lump sums at the end of the crop cycle.

### ADOPEM Case Study—Farmer Profiles

In the next section we illustrate two types of farmers, a low-risk farmer and a high-risk farmer, using data collected by WWB’s network member ADOPEM Bank in the Dominican Republic.

#### Low-risk Farmer: La Vega

This small farmer produces approximately 34 tareas (3 hectares) of baby vegetables; he produces 4 types of vegetables throughout the year, and harvests the different vegetables on a weekly basis for 10 months during the year. This farmer has a yearly income of 292,440 Dominican pesos or US\$ 8,600.

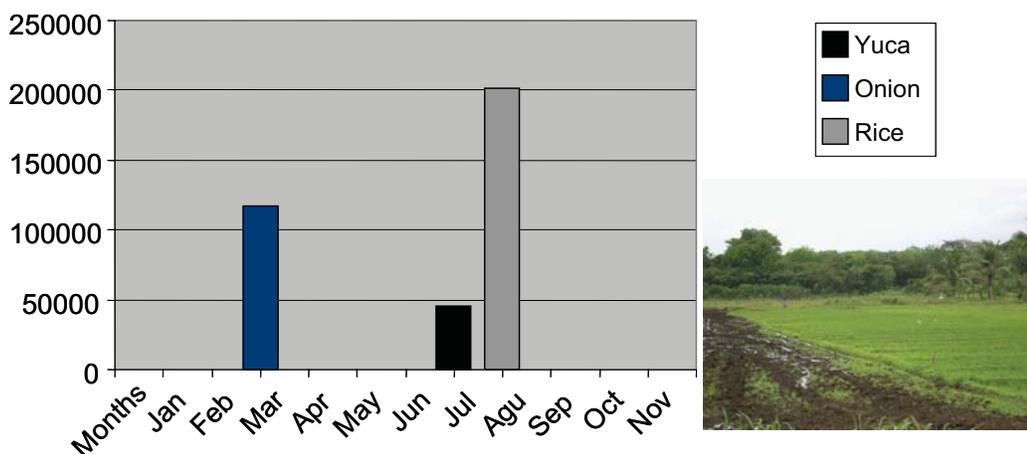


CROP	AREA	YIELD	VOLUME HARVESTED WEEKLY	NUMBER OF WEEKS	TOTAL PRODUCTION	QQ	PRICE/ QQ	MONTHLY INCOME	TOTAL INCOME
Mozu	10	28	3	6	180	60	650	26,000	39,000
Green beans	7	4	3	8	168	56	800	22,400	44,800
Baby vegetables 1	10	16	2	24	480	160	800	21,333	128,000
Baby vegetables 2	7	32	2	16	224	89.6	900	20,160	80,640
<b>TOTAL</b>									<b>292,440</b>

The production costs for this particular farmer represent 40% of his yearly income, or US\$ 3,440. His net income per year is approximately US\$ 5,160. As shown in the chart above, this farmer has monthly income from March to November, enabling him to repay a loan on a monthly basis.

### High-risk Farmer: San Cristóbal Province

This small farmer from San Cristobal has seasonal incomes, making him a higher-risk farmer than the previous example. As shown in the chart below, this farmer produces three crops (6 tareas of yuca, 8 tareas of onion, and 12 tareas of rice) with a total yearly income of 364,200 Dominican pesos or US\$ 10,711.



CROP	AREA	YIELD	VOLUME HARVESTED WEEKLY	NUMBER OF WEEKS	TOTAL PRODUCTION	UNIT PRICE/ QQ	HARVEST DATE	TOTAL INCOME
Yuca	6	15	1	1	90	500	July	45,000
Onion	8	30	1	1	240	490	March	117,000
Rice	12	560	1	1	6720	30	Aug	201,600
<b>TOTAL</b>								<b>364,200</b>

This farmer’s average production costs are approximately 50% of his yearly income, resulting in a yearly net income of US\$ 5,356. In this case the farmer has only seasonal incomes, in March, July and August; this prevents him from paying the principle or interest on a monthly basis, and increases the credit risk for the institution.

The difference in male and female farmers' profiles has real implications for their distinct credit needs in terms of loan accounts, terms, and access to alternative credit sources.

## C. PRODUCT DESIGN AND CLIENT TARGETING

With a detailed understanding of average farmers' cash flows, institutions can design financial products suited to the needs of small farmers in different regions. A thorough picture of small farmers' profiles, including production cycles and cash flows, will help institutions define loan amounts, grace periods, frequency of installments and terms suitable to farmers' needs in different regions.

The financial products offered to small farmers are classified in the following categories:

### Crop Production Loans

Crop production loans usually are disbursed before the start of the crop cycle, and are intended to finance part of the production costs: agricultural inputs, soil preparation, crop maintenance and harvest. In general these loans have a longer term and one or more disbursements. The loan repayment schedule should match the crop cycle; traditionally there is a grace period between initiation of the crop and the sale of the production. The loan term and number and frequency of installments are closely related to the cost structure of the crop and harvest and selling period. Production loans can be classified by type of crop primarily produced by the farmer:

**Baby vegetables and legumes loans:** These crops have short growth cycles and therefore are appropriate for the initial stage of rural expansion, during which organizations will most likely focus on short term loans with monthly installments.

**Staple crop loans (corn, soybean, rice, wheat, oil crops):** These crops have seasonal income and require a grace period, which makes them more risky. Microfinance providers should roll out this type of loan product in the second phase of rural expansion, once they have gained some experience in the region and are more familiar with its agricultural risks. Staple crop loans usually have terms of 6 to 12 months, with multiple (1-3) installments.

**Minor or annual fruit loans (berries, cherimoya, bananas, or passion fruit):** These fruits have growth cycles shorter than one year, however they require from 6 to 9 months to enter production. Once they reach maturity, the production cycle can last from four months to two years. Even though the risks initially are higher due to longer loan terms, the monthly cash flows generated once these fruits start producing make these loans very convenient and reliable.

### Maintenance and Harvest Loans

These loans provide liquidity to the farmer during the last phase of a crop; usually these loans are less risky due to their shorter duration. The money generally is used by the farmer to pay for labor during the final phases of the crop. A significant expense during

this phase is harvesting and handling: farmers need to hire large numbers of laborers for short periods of time to rapidly harvest and pack the crops. The credit risks of these loans are smaller because loan terms are usually shorter compared with the production loans; in addition, this type of loan is less risky because production risks have been overcome. Loan terms could range from 2 to 4 months with one or multiple installments.

### Commercialization Loans / Factoring

Commercialization loans are very important for farmers. Traditionally, once the product is harvested, prices drop considerably due to the overwhelming supply of the product during a particular period of time. Farmers often require liquidity to pay production costs or loans due by the end of the season, and are forced to sell their products at very depressed prices to pay their debts and commitments. By providing liquidity during this period, commercialization loans allow farmers to store their product and wait for better prices.

Factoring loans are a key mechanism to help farmers with short-term liquidity needs. Factoring is a transaction whereby the bank purchases farmers' crop receipts at a discounted price, providing immediate liquidity to the farmer. The bank later receives payment when the purchaser of the crop settles the account. Farmers often have difficulty managing cash flows prior to harvest, and factoring allows access to liquidity during vulnerable periods throughout the year.

### Summary

As a general principle the organization should begin by targeting low-risk activities based on the following criteria:

1. Finance only those crops that are well known by farmers.
2. Finance short cycle products (vegetables and legumes) that have monthly cash flows. Later the institution can expand into financing crops with longer cycles and seasonal incomes.

3. Analyze the production unit using an integrated approach, considering all sources of income to determine financial requirements and repayment capacity, not simply a single crop.
4. Finance part of the production costs, identify local sources of financing for small farmers and complement the unmet financial requirements. This approach prevents the institution from assuming all financing risks.
5. Finance only those crops with proven demand and where farmers are well linked to markets.
6. For perennial crops (coffee, oranges, apples, African palm, mangos, etc.), finance only crops that already are in the production phase. Finance maintenance activities, harvest or post harvest requirements. Do not finance the development of new crops.
7. Finance harvest and post harvest activities for perennial and short cycle activities.

### D. CONSTRAINTS TO RURAL WOMEN'S ACCESS TO CREDIT

It is estimated that women produce between 60 and 80 % of the food in most developing countries and are responsible for half of the world's food production.<sup>2</sup> But despite being the primary small scale agricultural producers, women have far more difficulty than men accessing credit. This lack of access to rural credit is due largely to women's lack of access to resources—land title, agricultural inputs, extension services, decision making, technology.

Microfinance providers expanding into rural areas must understand the key differences between the profiles of male and female farmers. Whereas men tend to produce crops for cash, women generally bear the burden of producing food for consumption for the family and for local sale. Since much of their production is consumed within the home, women farmers also supplement their farm work with non-farm activities that generate income. The difference in male and female farmers' profiles has real implications for their distinct credit needs in terms of loan amounts, terms, and access to alternative credit sources.

Microfinance providers must understand the roles and responsibilities of men and women in rural households in order to understand their different credit needs and how to design products and delivery mechanisms that best meet those needs.

### Delivery Adaptations to Respond to Rural Women Clients—Association Al Amana, Morocco

In many rural regions, women engaged in any combination of farm and non-farm activities face significant constraints on their mobility. This can have a direct impact on their ability to access credit, if it means traveling to the nearest branch for disbursement and loan repayments. Association Al Amana, a WWB network member and a leader in the Moroccan microfinance market, recognized this significant barrier for reaching women clients when it launched its rural expansion strategy in 2005. In order to reach a larger number of women in the rural areas, the institution realized that it would need to adapt its product design and service delivery model to address the mobility constraints of rural women. The adaptations included: doorstep collection of loan payments by loan officers, increased number of female loan officers and changes to the incentive system to encourage outreach to women clients. These adjustments resulted in significant shifts in the gender balance of clients in rural areas.

In the next phase of its work in rural finance, WWB will integrate its extensive experience in developing financial products that serve needs of women with its on-the-ground experience in rural lending, in order to ensure that WWB network members tailor the design and delivery of rural lending products to be responsive to low income women entrepreneurs.

## E. SELECTING STAFF BEST SUITED TO RURAL FINANCE

Whether or not to hire new loan officers to manage its rural lending portfolio is a key question for institutions entering this sector. In most cases, the answer is yes, because of the specialized knowledge and skill set

required. The ideal rural loan officer should have an educational background and expertise in agricultural or cattle production. It is also desirable that the candidate have first hand knowledge of the agricultural sector and production techniques. Traditionally, urban loan officers do not have these skills or experience. This knowledge of agricultural production is very important when analyzing crop yields and production costs.

Qualities of the ideal candidate for rural loan officer:

1. 21 to 35 years old.
2. Educational background in agricultural engineering or farm management; a technical degree in farming or agricultural production is also beneficial.
3. Has at least two years work experience in crop production, and/or knowledge of the agricultural regions and potential.
4. Knowledge of accounting or finance.
5. Good communication skills.
6. Identification or motivation to work with the sector (small farmers).
7. Willingness to work in the field at least 60% of the time.
8. Willingness to travel daily by motorbike.

## F. DEVELOP RIGOROUS METHODOLOGY TO ASSESS REPAYMENT CAPACITY

A lending methodology is a set of processes, systems and tools used by microfinance providers to gather and analyze microentrepreneurs' and small farmers' financial information and household data in order to approve loans to the sector. These methodologies enable the delivery of large numbers of small loans in a cost effective manner, ensuring high portfolio quality.

In general, microentrepreneurs and small farmers do not keep track systematically of their economic activities, posing challenges to banks and microfinance institutions to analyze and understand their business size, solvency and repayment capacity.

Successful rural lenders recognize that rural households have multiple sources of income, and therefore multiple sources for loan payments. Therefore any methodology used for lending to rural households must include an integrated analysis of all economic activities to understand crop diversification strategies and cash flow trends throughout the year. WWB's loan assessment forms (Appendix 2) are effective tools for performing this kind of integrated analysis.

The process for analysis is as follows:

1. First, identify the historic incomes based on the last year of production. The loan officer must identify seasonal incomes, collecting information on type of crops, area harvested, yields, quantity sold, selling prices and dates. This information provides important information regarding the size and income distribution of the farmer. The loan officer must also identify monthly incomes and off farm incomes (salaries, remittances, rent of land, pension, and other business income). See Appendix 2: Analysis Form, Section II (Historic Revenue).
2. Once the historic information is collected, the analysis focuses on the future activities of the farmer during the financing period. The information gathered focuses on projected crops, area, and dates of commercialization. The yields and prices used to estimate future income should be conservative and based on the farmer's historic yields. See Appendix 2: Analysis Form, Section III (Projected Income).
3. Next, the loan officer determines the production costs for the different activities estimated based on the following criteria:
  - a. Agricultural inputs
  - b. Labor practices
  - c. Fixed costs (rent, water, etc) See Appendix 2: Analysis Form, Section IV (Projected Expenditures).
4. Once all farm and off-farm income and expenses are identified and estimated, the loan officer builds a monthly cash flow to analyze the monthly cash surplus or deficit. This information will inform the design of the loan features (loan amount, grace period, term and frequency and number of installments). Total income and expenditures for the financing period are estimated to determine the net income and repayment capacity of the unit. See Appendix 4: Cash Flow Form.
5. Finally, the loan officer presents the information above to the credit committee for review and approval. It is important to stress that the key factors determining approval of the loan are cash flow stability, repayment capacity, managerial skills, technological level, experience and references. The loan applicant's guarantees are not a deciding factor in the approval process.

See Loan Assessment Forms, Appendices 2-5.

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## Key Success Factors for Rural Expansion

This final section provides a summary of the key areas to consider when designing services in rural areas.

### A. DIVERSIFY PORTFOLIO COMPOSITION

Risk diversification and sustainability are among the most important drivers of success when expanding into rural markets. To reduce risk concentration, microfinance providers must diversify portfolio composition, offering financial services to all economic players in rural areas, from farmers (engaged in a range of different kinds of harvests) to small grocery shops in the villages, to service providers and manufacturers. Ideally, the agricultural portfolio should not be larger than 30% of the total portfolio. Limiting the share of agricultural portfolio enables a more efficient use and allocation of loan officers' time due to the seasonality of agricultural demand, which requires processing most loan applications in specific months of the year. This seasonality creates operational bottlenecks in some months and under-utilization of the labor force in others. By having a diversified portfolio an institution can smooth the seasonal demand throughout the year.

### B. INCREASE RISK EXPOSURE GRADUALLY

As mentioned earlier, institutions should begin by financing low-risk farmers in low-risk regions, then expand financing to longer term and more seasonal crops once further market information is gathered and the institution has increased experience in the region. Low-risk farmers are generally those with monthly cash flows who have substantial experience and access to good commercialization channels.

### C. UNDERSTAND LOCAL FINANCING SYSTEMS USED BY SMALL FARMERS

Small farmers use different sources of financing for operations: neighbors with tractors often help prepare

the soil for planting and are paid at harvest, input dealers also finance fertilizers or pesticides and are paid at the end of the crop cycle, and grocery shops finance the food requirements of the family. These important local and in some cases informal financing sources share part of farmers' risks. Microfinance providers should not try to replace or compete with all of them, but rather offer financing to farmers to complement their cash requirements or to replace expensive or inconvenient sources of financing.

### D. CREATE FLEXIBLE DISTRIBUTION CHANNELS TO REDUCE TRANSACTIONAL COSTS

To reach remote locations, institutions generally implement flexible systems like mobile banking or build low-cost networks of points of service using existing clients with storefront businesses to offer a transaction system close to the clients.

Mobile banking requires the creation of working routes in the region, servicing different villages throughout the week. Loan officers are assigned to two or three routes per week. During the route visits, loan officers market the product, visit clients to assess their businesses and farms and collect loan payments when necessary. The working routes usually vary in length from 20km to 60km and have small villages as end points. Loan officers offer services to all businesses along the route and in the end village or town. This strategy helps cover vast areas with limited infrastructure while keeping operational costs low.

Points of service networks increase the services to clients in rural areas, but pose other challenges in building relationships with the points of sale and controlling cash flows. Here technology becomes an important component to connect the points of sale with the organization. A simpler option could be the forming of strategic alliances with banks or postal services to enable clients to make loan payments at these locations. This option does not require the acquisition of new technologies or maintaining and controlling a point of sale network.

## E. FOSTER STRATEGIC COLLABORATIONS WITH VALUE CHAIN PLAYERS

Market and price risk could jeopardize a successful crop, and a drop in crop prices or lack of demand could reduce dramatically a farmer's capacity to pay back a loan. One way to ensure greater stability of prices and demand is to identify potential local alliances between agroindustries or retailers with farmers associations. Harvest contracts are powerful instruments to reduce price and demand volatility. Value chain players could also be valuable partners to mitigate market risks. The organization will need to assign a staff responsible to foster and manage those strategic alliances with other players.

## Conclusion

The approach to serving the rural poor has evolved in the last 30 years. The 1970s were marked by the prevalence of highly subsidized, centrally planned, state bank-run credit programs. The landscape has shifted dramatically in some regions, producing a dynamic marketplace where a broader range of actors—including innovative microfinance providers, value chain players, and insurance companies—are combining efforts to mitigate agricultural risks, and finance products with strong demand and secure markets.

Today demand, supply and prices define the priority crops that financial institutions will finance. Traditional loan analysis, focusing on a fixed set of production costs for selected crops, has been replaced by an integrated analysis of the financial needs of farm-household production units. No longer is the repayment capacity of farmers estimated by evaluating only the main crop; risk analysis today is focused on the combined activities and cash flows of the farm-household unit. Financial institutions no longer try to replace all sources of finance by one mega loan; rather, institutions today seek to provide a complementary source of liquidity for small farmers. Sharing credit risks with local players has proven a more prudent strategy for banks.

Although this new approach has enabled some financial institutions to successfully provide financial services in many regions, there is still a huge unmet demand in rural areas. WWB will work with its network members to better understand the rural context and agricultural risks and adopt integrated strategies to enter rural financial markets in a sustainable and prudent manner. The collaboration with different value chain players will help share and mitigate the multiple risks faced in rural areas. Collaboration and new technologies to improve distribution channels will be key ingredients to expand financial services to the new frontier.

## Appendix I: Regional Selection Tool

The selection of an appropriate region for expansion is of great importance to the success of rural expansion because careful selection can greatly reduce agricultural risks. The branch selection process evaluates and identifies the agricultural and market potential of a particular region, which will determine its risk exposure level. During this process each region will be analyzed and rated based on a set of seven variables which are discussed below.

The ratings are defined as follows:

CONDITION	RATE
Does not exist	0
Poor	1
Average	2
Good	3
Excellent	4

DIMENSION	VARIABLE	INDICATOR	RATE	WEIGHT	TOTAL VALUE
Agricultural potential of the region	Accessibility	Distance to the closest branch		3%	
		Travel time		3%	
		Transport options		3%	
	Crop diversification	Main crops in the region		5%	
		% of farms with access to irrigation		6%	
		Number of crop cycles per year		5%	
	Soil and weather	Rain level and distribution throughout the year		4%	
		Max, min and average temperatures / year		3%	
		Main weather risk in the region		4%	
		Type of soils		4%	
		% of farming land / total land		4%	
<b>SUBTOTAL</b>				<b>44%</b>	
Region's demographic characteristics	The region has strong presence of small farmers	Regions total population		4%	
		Number of farmers in the region		4%	
		% of small farmers / total farmers		5%	
		Average area planted		3%	
		Technological level of small farmers		2%	
<b>SUBTOTAL</b>				<b>18%</b>	

DIMENSION	VARIABLE	INDICATOR	RATE	WEIGHT	TOTAL VALUE	
Productive infrastructure of the region	Access to technical services <sup>3</sup>	Presence of agricultural input dealers		4%		
		Presence of technology transfer agencies		4%		
		Supply of crop insurance		2%		
	Access to financial services		Number of banks in the region		4%	
			Number of cooperatives in the region		3%	
			% farmers with access to financial services		3%	
			Type of financial products available		3%	
	Commercialization channels		Type of guarantees required		1%	
			Number of farmer's markets in the region		4%	
			Supermarkets in retailers in the region		4%	
			Agroindustries in the region		4%	
			Price and demand information available		2%	
<b>SUBTOTAL</b>				<b>38%</b>		
<b>TOTAL</b>				<b>100%</b>		

## Appendix 2: Loan Assessment Forms

### ANALYSIS FORM NEW CLIENTS

#### I. GENERAL INFORMATION

Date of Visit \_\_\_\_\_ DD/MM/YY \_\_\_\_\_ Analyst \_\_\_\_\_  
 Applicant's Name \_\_\_\_\_ Application number \_\_\_\_\_  
 field office

Analysis  field  office

#### Data of loan requested

Main source of income \_\_\_\_\_  
 If there are problems with the source of income: How will you pay for the loan? \_\_\_\_\_

#### Information about the plot

	Plot 1	Plot 2	Plot 3
Location	_____	_____	_____
Area	_____	_____	_____
Risk	_____	_____	_____
Current/Planned Crop	_____	_____	_____
Tenure	Own _____ Rented _____	Own _____ Rented _____	Own _____ Rented _____
Plot Value	\$ _____	\$ _____	\$ _____
Own	_____	_____	_____
With Title	Yes ___; No ___	Yes ___; No ___	Yes ___; No ___

#### II. HISTORIC REVENUE OF THE SOCIOECONOMIC UNIT

Last 12 (or \_\_\_ ) month revenue

##### A. Agricultural Revenue

(max + 2min + U.C.)/4

Crop	Ha/Acres	Total Prod qq.	Household Consumption	Crop Sold	Sale Price	Revenue Obtained	Sale Date	Total Revenues	Weighted Revenues
Agricultural Total Income									

##### B. Livestock Income

##### C. Periodic Income (Monthly)

(Wages, rent, milk, eggs)

Type of Livestock	Numb. of Animals sold	Price per Animal	Revenue Obtained	Sale Date	Income Type	Quantity per Month	Unit Price	Monthly Income	Annual Income
Total Livestock Income					Total Monthly Income				

**D. Income from Other Activities**

(Stores, restaurants, etc)

Activity	Monthly Income	Annual Income
<b>Total Other Income</b>		

**Total Income from Period**

A + B + C + D	
---------------	--

**How You Used Your Income from Last Period**

(Specify Amount)

Capital Assets Purchase (Specify)

Livestock Purchase (Detail)

Investment in Crops

Debts Paid To

Other Investments

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**III. PROJECTED INCOME FOR THE FINANCED PERIOD**

**A. Agricultural Income**

Crops to Be Sowed	Area	Projected Return	Projected Production	Household Consumption	Production Sale	Sale Price	Revenue from Sale	Sale Date
<b>Total Agricultural Income</b>								

**B. Livestock for Sale**

Type of Animal	Number	Price	Total Income	Sale Date
<b>Total Livestock Income</b>				

**C. Periodic Income (Monthly)**

(Wages, rent, milk, eggs)

Income Type	Monthly Amount	Unit price	Monthly Income	Annual Income
<b>Total Monthly Income</b>				

**D. Income from Other Activities**

(Stores, restaurants, etc.)

Activity	Monthly Income	Annual Income
<b>Total Other Income</b>		

**Total Income for the Period**

A + B + C + D	
---------------	--

**IV. PROJECTED EXPENDITURES FOR THE FINANCED PERIOD**  
**Seasonal Agricultural Expenditures**

**A. Farming Inputs**

Inputs	Unit	Unit Price	Total Cost	Date of Purchase
Total Inputs				

**B. Labor**

Activity	Number of Laborers	Wage Price	Total Cost	Payment Date
Soil Preparation				
Sowing/fertilization				
Cleaning/fertilization				
Insecticide application				
Harvest				
Transportation				
Other				
Total Manpower				

**C. Investment in the Farm**

(Construction, fences and wells repairs, purchase of animals)

Type of Investment	Amount	Date

**D. Monthly Household Expenses**

Category	Amount
Food	
Transportation	
Education	
Electricity/Water	
Clothes	
Help to Family Members	
Entertainment	
Health	
Other	
Total	



## Appendix 4: Monthly Cash Flow Form

FLOW	Revenue from items				Expenses				Household expenses	Debt Payments	Monthly balance before credit	Flow without credit and intl. balance	Disbursement payments	Balance with accumulated credit
	1	2	3	4	inputs	soil preparation	Labor	crop						
Items				rec CxC										
months														
Jul											0	0		0
aug											0	0		0
sep											0	0		0
oct											0	0		0
nov											0	0		0
dec											0	0		0
jan											0	0		0
feb											0	0		0
mar											0	0		0
apr											0	0		0
may											0	0		0
jun											0	0		0
Jul											0	0		0
aug											0	0		0
additions	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total Income		Total Expenses		Ratios
		Balance (Income - Expenses)		Debt (Liabilities/Assets)
Total Guarantees				Repayment capacity (Income/expenses)

Maximum	50%
Minimum	150%

### Credit Decision

Requested by client	Amount	Term	Installment amount
Suggested by analyst			
Approved by Committee			
Disbursement date	DD/MM/YY	# of grace months	# of installments
Payment frequency	DD/MM/YY	Date of final payment	Signatures
Committee Decision	Approved	Rejected	Date DD/MM/YY

## Appendix 5: Farming Credit Decision Form

### FARMING CREDIT DECISION FORM

Applicant name \_\_\_\_\_  
 Application number \_\_\_\_\_ Analyst name \_\_\_\_\_

#### ECONOMIC EVALUATION

##### Debt Level

a. Total Asset: \_\_\_\_\_ b. Total Liability \_\_\_\_\_ c. Suggested amount \_\_\_\_\_

**Debt Ratio:**  $((b+c)/a)*100 \leq 50\%$  **DR=** \_\_\_\_\_

##### Payment Capacity

Sources of income	<table border="1" style="width: 150px; height: 30px;"><tr><td> </td></tr></table>		Main source of payment	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>	
	<table border="1" style="width: 150px; height: 20px;"><tr><td> </td></tr></table>		Suggested amount	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>	
a. Seasonal income	_____	f. Household consumption	_____		
b. Periodic income	_____	g. Seasonal expenses	_____		
c. Suggested amount	_____	h. Periodic expenses	_____		
d. Available	_____				
e. Total income from period	_____ (a+b+c+d)	i. Total Expenses	_____ (f+g+h)		
j. Loan payment (Capital + interest)	_____				

**Payment Capacity Ratio**  $((e-i)/j)*100 \geq 140\%$  **PCR=** \_\_\_\_\_

#### CREDIT DECISION

Approved _____	Total guarantee _____	Requested amount _____
Rejected _____	Guarantee coverage _____	Suggested amount _____
		Suggested term _____

Disbursement date	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>		<b>Collateral</b>
Approved amount	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>		Pledge
Term	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>		Personal
Form of payment	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>		Mortgage
Cancellation date	<table border="1" style="width: 80px; height: 20px;"><tr><td> </td></tr></table>		

##### Observations


Date \_\_\_\_\_

Signatures \_\_\_\_\_

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## Notes

1. IFAD, Rural Poverty Report 2001: The Challenge of Ending Rural Poverty; and World Bank, Rural Finance Services: Implementing the Bank's Strategy to Reach the Rural Poor, 2003. The most recent World Bank data ("Global Monitoring Report 2005") indicate that this number has fallen to 1.1 billion.
2. FAO Focus: Women and Food Security, [www.fao.org/FOCUS/E/Women/Sustine.htm](http://www.fao.org/FOCUS/E/Women/Sustine.htm)
3. In the case of access to financial services the ratings are lower when there is strong competition from other financial institutions. Source: Morgan Stanley.

### About WWB

Our mission is to improve the economic status of poor families in developing countries by unleashing the power inherent in women. We believe that when a woman is given the tools to develop a small business, build assets, and protect against catastrophic loss, she is empowered to change her life and that of her family. Drawing on our global diversity, resources and experience, WWB helps to strengthen our network of microfinance organizations and banks, all of whom share our commitment to helping poor women access financial services and information.

Women's World Banking was established in 1976 to be a voice and change agent for poor women entrepreneurs. Our goal is to continue to build a network of strong financial institutions around the world and ensure that the rapidly changing field of microfinance focuses on women as clients, innovators and leaders.

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