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# AGRICULTURAL CREDIT ENHANCEMENT PROGRAM

## MIDTERM IMPACT EVALUATION
## NOVEMBER 2012

TECHNICAL REPORT

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Intensive production models supported by ACE/ADF loans.


One of 195 female saffron producers that accessed ADF loans

# MIDTERM IMPACT EVALUATION

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ADF/ACE/DAI

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ACE | Agricultural Credit Enhancement |
| ADF | Agricultural Development Fund |
| DAI | Development Alternatives Inc. |
| DM | Deputy Minister |
| FTE | Full-time Equivalent |
| GIRoA | Government of the Islamic Republic of Afghanistan |
| MAIL | Ministry of Agriculture Irrigation and Livestock |
| M&E | Monitoring and Evaluation |
| USAID | United States Agency for International Development |

# FOREWORD

The Agricultural Credit Enhancement (ACE) Program was launched in July 2010 with the fundamental purpose of building the institutional infrastructure of the Agricultural Development Fund (ADF) and managing its operations for the first 4 ½ years, in partnership with the Ministry of Agriculture, Irrigation and Livestock. The latter under the premise that the Government of the Islamic Republic of Afghanistan would officially register the ADF before the end of that year.

At the end of October 2012, as this report was being edited, the government had not yet registered the ADF, however there were indications that the final approval was weeks away. For this reason, and for a period of over 2 years the ACE program assumed the responsibility of providing credit to the agriculture sector, using a limited amount of off-budget resources and lacking the legal mechanisms to enforce loan contracts, but with an uncompromising commitment to deliver in an ambitious task with unprecedented implications for Afghan agriculture.

As of October 2012, the ACE program had set up a robust non-bank financial institution; loan approvals reached US$46 million and disbursements exceeded US$23 million, directly supporting over 15,000 rural households in 30 of Afghanistan's 34 provinces, while maintaining a default rate of around 1 percent.

This external evaluation has the fundamental purpose of assessing the impact that finance provided by the ACE/ADF has had on farm households and agribusinesses across different value chains, as well as on the agricultural sector as a whole. The findings presented in this report are relevant as the ACE program enters into its third year of implementation for they will guide strategic adjustments, seeking to overcome challenges and increase effectiveness.

In brief, this report looks at the impact that US government funds lent to Afghan entrepreneurs have had on the incomes of rural households, agribusinesses and on the agriculture sector. The findings will guide the activities of the ACE program and the ADF in upcoming years, seeking to maximize the impact of US foreign assistance.

**Juan M Estrada-Valle**
Chief of Party

# INTRODUCTION

This assessment gives a detailed look at the evidence gathered on the Agricultural Development Fund (ADF) lending activities by the Monitoring and Evaluation (M&E) team since the project's inception. During this time, different impact dimensions derived from ADF loans have been documented with periodic monitoring and sample-based evaluations. With an actionable credit provision strategy in place for twenty-four months, a number of positive results at the farmer, value chain, and aggregate levels have happened. Now that Year Three of the project has started, it is expected that ADF will continue to significantly narrow the gap between the lack of rural financial services and the needs of commercial farmers for whom formal agricultural credit is essential. The contribution of this evaluation is threefold: (i) to outline the findings supported by data; (ii) to provide in-depth recommendations to expand the results reached thus far; and (iii) to help the ADF team plan ahead, building on the impact generated in key, targeted value chains.

Over the past two years ADF has built a reputation among the Afghan agribusiness community as a credit provider that stands for lower costs, longer loan maturity periods, and adaptation to agricultural production and trading cycles particular to this industry.

Such a customized approach has supported key actors in targeted value chains to increase financing and improve cash flows. The range of beneficiaries includes input suppliers, farmers, and traders. As a result, the number of mutually beneficial, income-generating arrangements between Afghan suppliers and traders has significantly increased compared to the time before ADF's assistance. At the aggregate level, ADF has reached thousands of farmers with formal lending, broadening the viability of targeted value chains and fostering increased production and processing. These successful experiences set the stage for more frequent strategic lending where the aggregate return to the agriculture sector as a whole will be more significant in future years.

Contrary to the general assumptions of the formal banking sector, ADF is showing that the Afghan agricultural entrepreneur welcomes and responds to structured credit programs designed where risk is present but manageable. With over twenty-nine matured and successfully repaid loans, ADF is an example to commercial bankers that despite some risk, the agribusiness sector can be a promising, growing, and responsible financial market. ADF unleashes the productivity of Afghan farmers and encourages the innate business ability of rural


Potato planting in Bamyan province where ACE/ADF provided loans to 21 cooperatives

entrepreneurs to expand trade domestically, regionally, and globally. While the efforts are mainly focused on upstream nodes of the chain (supply and production), ADF's activities are heading closer to consumers, where new opportunities and challenges are likely to be. Several ideas on what can be done to support the leading ADF clients in their pursuits to reach more consumers have been formulated in this report.

Other than the introduction and the executive summary, this report is divided into three parts. Part I describes key findings and an in-depth analysis of these results and implications for the expansion of targeted value chains. Part II contains recommendations on where to enhance impact in the near future, while Part III includes recommendations on how to improve the M&E system already in place.

# EXECUTIVE SUMMARY

Before the ADF was launched in 2010, agricultural credit provision in Afghanistan remained persistently in short supply, with no alternative to replace informal moneylending. No matter how flexible and available family or other informal sources of credit have been to the farmer, some characteristics of these lending mechanisms have worked against the growth of agribusiness. For example, informal moneylending tends to be of higher cost, it is small in scale, and it is usually provided for only a short period of time. Even in the face of highly profitable opportunities, the combined effect of these characteristics has severely restricted small- and mid-size agribusiness ventures.

ADF has been designed to remove these restrictions and unleash the potential of thousands of commercial-size producers (landowners of 10-jerib and above) who are creditworthy and able to link their production to value chains. Some key numbers illustrate ADF's achievement of functional objectives in just two years of operation:

- $22.3 million invested through eighty six loans with complete or initiated disbursements from which fifty loans have been repaid.
- 48.5% of these disbursed loans are Sharia-compliant, while 86% of loans already approved awaiting first disbursement are also Sharia-compliant.
- 5 financial products compliant with Islamic lending practices under Sharia law are available to all ADF loan applicants.
- 0.04% loan portfolio default rate that reveals how well a thorough loan application evaluation pays off.
- 8 different value chains are targeted to benefit over 14,000 direct and indirect beneficiaries participating through different credit provision schemes.
- 4 financial intermediaries facilitate inputs and machinery on credit through Credit Managements Units (CMUs) created by ADF.

While these figures are commendable, equally significant impacts have been also achieved. Interviews conducted on 12 loan accounts showed that, at the farmer level, accelerating technological change through access to more, better and timely use of inputs has led to gains in productivity and increased household incomes. At the value chain level, targeted subsectors have augmented their

[1] 1 jerib is roughly 2000 square meters; 5 jerib is roughly equivalent to one hectare.

viability (horizontally and vertically) creating more opportunities for income, sales and employment generation. At the aggregate level, ADF has invested efforts in building commercially viable agricultural credit provision, reducing dependence on moneylenders, and increasing transparency while guiding value chain growth toward higher levels of competitiveness. In numbers, data gathered through randomized samples from direct beneficiaries in representative loan accounts show that access to credit has led to significant impacts:

- 65% increased incomes on average for leading companies accessing loans to expand their businesses in several value chains (range of 11% to 310%).

- 67% increased sales on average for loan accounts (range of 10% to 300%).

- 36.7% increased income on average at the household level for farmers accessing formal credit through CMUs and farmer associations (range of 17% to 72%).

- 61% across-the-board increased production (range of 12% to 325%).

- 44% productivity gain per jerib by potato farmers (increased production over the same area planted in previous year), the highest among all accounts.
- 456 full-time jobs generated (following employment generation calculations).

Table 1 ahead shows in detail how these values have been calculated and their distribution across loan accounts. The data provide a strong sense of ranking for which value chains have the most impact at the farmer level. Among the big winners are producers of fresh fruit crops, potatoes, dried fruits, and nuts, with increased incomes greater than 40% after accessing ADF credit. While this is remarkable at the household level, even greater impact is seen with increased income for beneficiary companies that are able to improve their cash flow, stand longer credit periods with local and foreign buyers, and facilitate more farmer participation.

ADF's contribution at the value chain level has implications to both horizontal and vertical linkages. Through increased participation of processors and traders value chain dynamics have been positively affected by the increased flow of funds—e.g., immediate payment to farmers and credit facilitation to access more inputs when actors need them. At the aggregate level, value chains dealing with major food commodities such as grains, fruits, and vegetables have the greatest impact in numbers of farmers, as well as in expanding Afghan agribusinesses participation in domestic markets. Because of the importance of food markets to current and future ADF clients several reflections on where to invest next and how to introduce innovations are offered.

This impact assessment concludes with recommendations that zero in on the next two years of ADF's management under the Agricultural Credit Enhancement Program (ACE).

ACE/ADF clients that participated in the 2011 India International Trade Fair.

The capacity for Afghan farmers to increase output has been widely and successfully demonstrated during these first two years. Nonetheless, some cases of market saturation and lower prices to farmers have been encountered. More attention to increasing the capacity of credit clients to expand local and regional sales needs to be adopted. As discussed in this document, some ADF clients are sophisticated enough to hire their own sales representatives in market hotspots in India and other foreign lands, but other farmers are not. Over the next two years, a more aggressive use of grant funds should be invested in passing on knowledge and skills to companies such as Season Honey to compete better on their own turf and in regional markets.

A final section offers some recommendations to the M&E team, keeping in mind that data gathering is a time- and resource-consuming endeavor anywhere, but even more so in Afghanistan. The team has the responsibility of monitoring approximately 16,000 direct beneficiaries and over100,000 indirect beneficiaries through a variety of methods. This is no small deed, and it has been accomplished with timely reports. The most difficult aspect of the Performance Monitoring Plan (PMP) has been to deal with a heterogeneous set of loan accounts dealing with different products and different value chain nodes. The work done is highly acceptable, allowing for two recommendations: (i) how to make the monitoring and evaluation process more streamlined for the M&E team and (ii) how to conduct periodic multiple case studies in preparation for annual reviews.

# PROJECT ASSESSMENT APPROACH

The two major factors that defined the choice of methods for this evaluation were the number of active and completed loans from which data could be analyzed and the number of agricultural cycles covered by the repaid loans. The collection of this information was done in three different stages. First, a review of available files preceding the approval of each loan provided the scope and nature of each client's agribusiness. This information provided significant insights to build the guiding questionnaires before departing to the field. This information also resulted in better-constructed before-and-after questions regarding the level of the client's participation within the targeted value chain node and the client's influence on upstream and downstream actors.

The second stage involved a review of the monitoring and evaluation data gathered by the M&E team. These data consist of periodic compilations of key indicators. The work of the M&E team—guided by the USAID-approved PMP—includes reports of loan provisions to end-borrowers, total number of beneficiaries, sales and export figures, and employment generation expressed in full-time equivalent (FTE). Secondary data produced by other projects in Afghanistan with respect to production costs for the major crops targeted by ADF loans were also used.

The third data collection stage was a series of interviews with twelve clients. Following a methodology of multiple case studies, a questionnaire was developed to interview ADF clients about their loan, their challenges, and their new opportunities. They were asked where they felt ADF was having the most impact on their business. Field visits were scheduled according to the availability of the clients and the travel possibilities of the evaluator. This process gave systematic knowledge about the impact of the loans at the farmer level, the value chain level, and the aggregate level. This stage also allowed combining the breadth of quantitative information available with the depth of one-to-one interviews. The result was a gathering of insights on the behavior of farmers' value chain partners and how the farmers would like to expand their current programs with ADF in the near future. The final schedule of visits is included in the appendix. The following table summarizes the ADF clients that were included in this evaluation.

## Table 1. Loan Accounts Assessed and Sources of Information Used in the Evaluation

| Loan No | BORROWER | Value Chain | Source of information | Area of Impact of ADF Loan |
|---|---|---|---|---|
| 4 | Hariwa Habibzadah Company | Fruit Crops | Random sample and M&E periodic data | Company has cash flow to increase fruit/ nut purchases |
| 42 | Eastern Region Fruit Growers Association | Fruit Crops | M&E random sample | Farmers have increased and timely access to inputs |
| 27 | Javed Afghan Wheat Thresher (two loans) | Ag Inputs | Interview and baseline information | Company sales threshers to farmers on credit |
| 17 | Hamid Flour Mill | Grains | Random sample and M&E periodic data | Company counts on financial capacity to buy local wheat |
| 10 | Sayed Jamal Flour Mill | Grains | Interview/Loan application data | Expanded from 180MT/day to 250MT/day |
| 50 | Season Honey Processing Factory | Honey | Interview and baseline information | Promoting expanded production and retail of honey |
| 43 | Bamyan potato cooperatives (all) | Vegetables | Interview and M&E random sample | Farmers access to inputs led to productivity gains from 2800kg to 4200kg/jerib |
| 18 | Tyoran Ayobi Salaughterhouse and Fridge | Livestock | Interview and M&E random sample | Increased sales from 30MT to 80MT/ month |
| 16 | Sanaizada Edible Oil Extraction | Oil Crops | Random sample and M&E periodic data | Loan facilitates increased purchase of cotton from farmers |
| 9 | Dr. Abdul Wakil Farmers Association | Fruit Crops | Interview and M&E random sample | Off-season fruit sales led to farmer revenue gains from 180 to 260 Afs/kg |
| 11 | Samsor Ban | Ag Inputs | Interview and M&E random sample | Company has increased cash flow to import top quality tools and inputs for farmers and supplies them on credit |
| 51 | AAIDO | Fruit Crops | Interview and M&E random sample | Company mediates with buyers and organizes industry |
| 55 | Islamic Investment and Finance Cooperative | Financial Intermediary | Random sample and loan application docs. | Farmers have increased and timely access to inputs |
| 19 | Ghoryan Women Saffron Association | Herbs and Spices | Interview and M&E random sample | Increased from 20kg/year to 50kg/year |
| 28 | Apple Association | Fruit Crops | Interview and baseline information | Farmers have increased and timely access to inputs |
| 5 | Kunar Farm Service Store | Ag Inputs | Interview and baseline information | Farmers have increased and timely access to inputs |
| 6 | Helmand Farm Service Store | Ag Inputs | Baseline information | Farmers have increased and timely access to inputs |
| 13 | ANSOR | Grain | Interview and loan application data | Farmer organization shortened payment period to seed producers providing the incentive for increased production |
| 3 | Shir Ali Yaqoobzada Co. Ltd. | Fruit Crops | Random sample and M&E periodic data | Company has better cash flow to pay farmers upon delivery and increase exports |
| 12 | Habib Omid | Animal Fibers | Interview and loan application data | Company has increased cash flow to pay suppliers |
| 2 | Afghan Rice Mill | Grains | Random sample and M&E periodic data | Company can pay suppliers upon delivery and increase output |

PART I:

# IMPACT ANALYSIS

## CHANGING THE AGRICULTURAL CREDIT LANDSCAPE

Agricultural credit is important for the development of Afghanistan. Without it, fewer farmers and agro-industrial entrepreneurs would undertake new investments or adopt new technologies to increase output beyond a restrained, small-scale level. Loans that are designed for agricultural commodities are necessary to accelerate change and to scale up farming, processing, and trading. When larger scale is matched by market opportunities—particularly in food markets—financing agribusiness operations makes sense as an economic growth mechanism in both rural and urban areas.

Before the ADF was launched in 2010, agricultural credit provision in Afghanistan was persistently in short supply, with no alternative to replace informal moneylending. The situation before the end of the Taliban regime is only partially documented, but it is known that the national finance system in urban and rural areas had collapsed. After 2001 the many needs of the country in the rural areas were—and continued to be—addressed by development programs that focused on farmers, but no significant push for a sizeable agricultural credit program was launched.

Development interventions focused on introducing new technologies, disseminating better-performing crop varieties and addressing the most evident production bottlenecks. But no interventions addressed the credit problem. Informal moneylending was usually the only choice available to the rural entrepreneur.

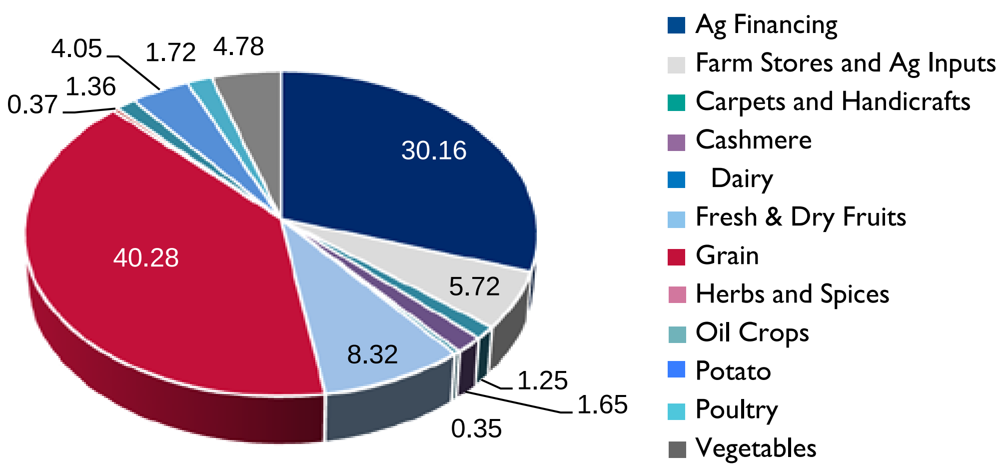
Moneylending among family members is the default financial system within close families and social groups in Afghanistan. Despite its importance and ubiquity in rural areas, this type of credit provision has not been significant enough to boost agribusiness growth. A household baseline study done in early 2010 by IDEA-NEW in the eastern region provides some evidence on this fact. Using a clustered sample of 970 subjects who borrowed money from informal lenders, the study showed that while nearly 90% of rural households depended on agriculture and livestock as their major source of income, over 83% responded that the money borrowed went (i) to food and household purchases, (ii) to pay for weddings and funerals, or (iii) to pay medical emergencies.

Only 12% confirmed the money was used for seasonal agricultural production; about 20% mentioned using the funds for livestock purchases. While this study focused on only one region of Afghanistan, it is safe to assume that the findings depict the reality for the rest of the country. The primary source of borrowed money for 88% of the households in this study was a family member. Only 6.4% of the 970 subjects said they borrowed money from landlords for the purchase of agricultural inputs, while the rest of the loans came from moneylenders and, only rarely (2.7%), from credit institutions.

No matter how flexible and available family or other informal sources of credit have been to the farmer, some characteristics of these lending mechanisms have worked against the growth of agribusiness. For example, informal moneylending tends to be of higher cost, it is small in scale, and it is usually provided for a short period of time. Even in the face of highly profitable opportunities, the combined effect of these characteristics would severely restrict promising small- and mid-size agribusiness ventures.

ADF has been designed to remove these restrictions and to unleash the potential of thousands of commercial-size producers (landowners of 10 jerib and above) who are creditworthy and able to link their production to value chains. From a results-based standpoint, ADF has accomplished two major objectives:

**GRAPH 1. PERCENTAGE OF ADF LOANS INVESTED BY MAJOR VALUE CHAIN NODE**




**1) FULFILLING THE ROLE OF A BANKING INSTITUTION:**
ADF has developed a list of financial services implementing the necessary measures to identify credit-worthy clients. It can monitor loans to ensure that the funds are used as intended. These financial products turn ideas and innovation into profitable business ventures in domestic and regional markets.

**2) CONSOLIDATING A BANKING STRATEGY FOR THE AGRIBUSINESS SECTOR:**
ADF has adopted a transformational, scalable, and actionable agribusiness banking strategy designed to help entrepreneurs seize market opportunities and generate wealth. The key to this strategy is a straightforward performance frame that consists of targeting small commercial farmers

with a strong track record in their line of business, as well as having strong collateral. There is a robust, transparent loan repayment enforcement mechanism.

To illustrate ADF's banking success, these two objectives can also be summarized in numbers with $22.3 million invested, fifty-seven loans in various stages of disbursement, over fifty loans repaid, and fewer than 0.04% of loan portfolio defaults.

Equally important, from an impact-evaluation standpoint, ADF's objective has been to select applications from credit-worthy clients who will have the largest impact in the agriculture sector at the farmer, value chain, and aggregate level. ADF's intended impact includes:

- Farmer level: Accelerating technological change in farming through access to more, better and timely use of inputs that allow for higher productivity, increased outputs and increased net incomes.
- Value chain level: Increasing the viability of broader (horizontal linkages) and longer (vertical linkages) value chains by customizing financial services to specific product characteristics, credit period needs, market structure and other business opportunity-specific needs.
- Aggregate level: Building commercially-viable agricultural credit provision schemes that reduce dependence on moneylenders, increase transparency in value chain governance (addressing asymmetric information) and guide value chain growth toward higher levels of competitiveness.

## FARMER-LEVEL IMPACT

Increased productivity and increased income meet agricultural credit in two converging points: timing and access to inputs. Farm productivity's dependability on timing and availability of improved seeds, fertilizers, pesticides, and, in the case of livestock production, feed, cannot be understated. Missing the planting season with high quality seed is missing a full year's worth of food production and financial earnings. To support farmer productivity ADF is particularly aligned with these concerns since approximately 93% of loaned funds are directly or indirectly supporting farmers' expanded access to better quality inputs. As shown in Table 1, controlling for the gains in productivity at the farmer level, the average productivity gains by farmers reached 36.7%. Potato growers were the big productivity winners, rising from 2.8 metric tons (MT)/jerib for the control to over 4.2MT/jerib for ADF beneficiaries—a 44% jump in productivity.

The Dr. Abdoul Wakil Association farmers have also attained significant increases of up to 37% in productivity in apples (production obtained on the same area and compared to the previous year), more than double of what is reported by Wardak Apple Association members (12%). However, this difference is further explained in a shift in quality of the product without necessarily leading to increase yields. Please see Table 4 below

In general, ADF financing is expanding the rate at which higher and better access to soil fertility inputs and pest-control technology is being spread to increase productivity of major crops. Around the world the effect of increased inputs on productivity has been documented from 10% to up to 200% for similar crops under special conditions (e.g., increased inputs, technical assistance and irrigation). If we compare the top percentages achieved

## Table 2. Impact indicators for repaid and maturing loans in 2012

| Borrower | Value Chain | FTE* | Increased Production (%) | Increased Sales (%) | Increased Income (%) | Household Level Impact | Company Level Impact |
|---|---|---|---|---|---|---|---|
| Hariwa Habibzadah Company | Fruit Crops | 10 | 325 | 300 | 310 | | x |
| Eastern Region Fruit Growers Association | Fruit Crops | 0 | 27 | 67 | 72 | x | |
| Javed Afghan Wheat Thresher (two loans) | Ag Inputs | 68 | 58 | 41 | 64 | | x |
| Hamid Flour Mill | Grains | 15.6 | 74 | 68 | 60 | | x |
| Sayed Jamal Flour Mill | Grains | 79 | 72 | 66 | 55 | | x |
| Season Honey Processing Factory | Honey | 22 | 115 | 90 | 54 | | x |
| Bamyan potato co-operatives (all) | Vegetables | 0 | 44 | 42 | 52 | x | |
| Tyoran Ayobi Slaughterhouse and Fridge | Livestock | 100 | 267 | 266 | 45 | | x |
| Sanaizada Edible Oil Extraction | Oil Crops | 44 | 28 | 49 | 45 | | x |
| Dr. Abdul Wakil Farmers Association | Fruit Crops | 0 | 37 | 69 | 44 | x | |
| Samsor Ban | Ag Inputs | 62.4 | 35 | 44 | 43 | | x |
| AAIDO | Fruit Crops | 0 | 18 | 19 | 42 | x | |
| Islamic Investment and Finance Cooperative | Financial Intermediary | 0 | 0 | 0 | 37 | x | |
| Ghoryan Women Saffron Association | Herbs and Spices | 6.6 | 40 | 99 | 36 | x | |
| Apple Association | Fruit Crops | 0 | 12 | 0 | 23 | x | |
| Kunar Farm Service Store | Ag Inputs | 4.85 | 20 | 20 | 22 | x | |
| Helmand Farm Service Store | Ag Inputs | 4.05 | 20 | 20 | 22 | x | |
| ANSOR | Grain | 0 | 12 | 16 | 17 | x | |
| Shir Ali Yaqoobzada Co. Ltd. | Fruit Crops | 20.25 | 16.8 | 117 | 14 | | x |
| Habib Omid | Animal Fibers | 20 | 15 | 12 | 12 | | x |
| Afghan Rice Mill | Grains | 0 | 12 | 10 | 11 | | x |
| **Total/Average*:** | | **457** | **59%** | **69%** | **51%** | **37%** | **65%** |

* Total FTE reported up to October 2012. To represent better the average impact at the household income level it was necessary to calculate it separately from the increased income reported by companies.

by ADF clients, the gains appear to be above the target set by the PMP of 10% for household income.

Approaches to farm productivity are not limited only to the use and increase of better inputs, but also to the mechanization process of labor-intensive farming activities. The Javed Afghan Wheat Thresher Company is an example of how the efficiency of labor is tripled by reducing the amount of time needed to thresh one ton from four man-days to ten minutes, and down to one-fourth of the cost as shown in Table 2. Rice, which is the most expensive cereal to thresh by hand, is reduced from $60/MT to about $21/MT according to calculations provided by the client.

With over 300 threshers sold, many tractor owners are now providing these services to more farmers in more provinces of Afghanistan. While it is hard to measure the direct impact of mechanization on the whole farming operation, key informant accounts and the high demand for these machines are indicators that the impact of this gained technical efficiency is highly appreciated by farmers. As conditions and time allow, a detailed impact study on mechanization practices expanded by Javed Afghan Wheat Thresher Company with ADF funding will be recommended.

**Table 3. Comparison of threshing costs by machine and by hand (in US$)**

| Thresher Capacity | Cost of threshing for 8 hours | Fuel (L) Demand | Cost of L of fuel | Total cost of fuel | Labor ($7/man day) | Total cost of labor | Total Cost (machine, fuel and labor) | Cost of Threshing by Machine /Ton | Cost of Threshing by hand/MT* |
|---|---|---|---|---|---|---|---|---|---|
| Wheat 19.5TON | 160$ | 40 | 1.09$ | 43.6$ | 4 | 28 | 226.6 | 11.62 | 50.00 |
| Corn 19.6TON | 140$ | 35 | 1.09$ | 38.15$ | 5 | 35 | 213.2 | 10.88 | 54.00 |
| Rice 12TON | 180$ | 48 | 1.09$ | 52.32$ | 6 | 42$ | 247.3 | 20.61 | 60.00 |

*Estimates of cost by hand provided by Javed Thresher Machine Company calculated on value of product paid to laborers for threshing these cereals.

## PRODUCTIVITY AND HIGHER NET INCOMES

While productivity means higher production levels per area, it will ideally lead to lower production costs per unit of output, compensating for the cost of accessing better seed and applying more fertilizers. Efficiency gained by increasing the marginal product of labor (such as mechanically threshing cereals), benefit farmers by decreasing costs, leading to increased competitiveness downstream in the value chain.

This is the theory, but in practice, increased productivity in a number of commodities (potatoes, for example) represents a problem when markets do not have the capacity to absorb significantly high production peaks. Without this market-clearing capacity, a negative impact on farmer prices and margins can be expected.

In Bamyan's 2011 production cycle, ADF succeeded in facilitating access to inputs for over 380 Bamyan co-op farmers. These inputs increased Bamyan farmers' production. The farmers' joint output reached approximately 600MT. (When enough other farmers join Bamyan, this output could easily reach about 900MT.) For 2011's harvest, these farmers expected sales of Afs 11/kg from buyers such as the Tak Dana company. But the increased yield that resulted from improved inputs market dropped prices to between 7 and 9 Afs/kg. Fortunately, the significantly increased production (see Table 2) compensated for the lower prices. Interviewed Bamyan farmers said that if markets had stayed at the expected price, their season would have generated unprecedented profits.

With this level of increased output and the experience gained from the 2011 season, a closer look at attracting new actors to participate in market expansion closer to the consumer should be considered before another case of high market saturation is faced.

## INDUCING SHIFTS IN QUALITY GRADES TO MAXIMIZE NET INCOMES

Increasing net income is the major driver for adopting technologies that impact higher productivity. Nevertheless, productivity as we know it—total higher output per area—is not the only way to increase net income.

**Table 4. Wardak apple association: apricot production quality shifts**

| PARAMETERS | BEFORE TREATMENT | | | AFTER TREATMENT | | |
|---|---|---|---|---|---|---|
| **Quality levels*** | **A** | **B** | **C** | **A** | **B** | **C** |
| **Output in MT** | 0 | 1 | 3 | 2 | 1 | 1 |
| **PRICE PER TON (AFS)** | 21000 | 17000 | 11000 | 21000 | 17000 | 11000 |
| **REVENUE (AFS)** | 0 | 17000 | 33000 | 42000 | 17000 | 11000 |
| **TOTAL REVENUE** | | 50000 | | | 70000 | |
| **COST OF TREATMENT (AFS)** | | 0 | | | 1725 | |
| **NET REVENUE** | | 50000 | | | 68275 (38% higher) | |

* A: Export quality. B: Kabul market quality. C: Rejects or, at best, processing quality

Introduction of new technologies at the right time can also shift the proportions of top-quality, medium-quality, and low-quality output in a given crop. Driving this shift toward higher proportions of the quality that receives the highest prices can lead to higher profits without necessarily increasing total output per area. In the case of apricots produced by the Wardak Apple Association, it is the best quality fruit that earns farmers the highest prices and net incomes. (The lowest quality is sold for very low prices or discarded.) This example clearly shows how productivity gains through shifts in quality can impact farmers' net income. See Table 4.

With ADF, farmers in this association have been supported to access 30kg/jerib of urea (nitrogen fertilizer) and two more applications of pesticides (an Afs 1,725 investment). These introduced inputs, managed according to a technical recommendation and good timing, have changed the proportions of quality harvested, but not necessarily the quantity of output. As shown in Table 4, regardless of the same volume achieved, the net revenue is significantly increased by 38% because export markets reward higher quality with better prices. As discussed in the interview with representatives of this organization, achieving higher-than-average quality also improves the terms of the deal in other forms like—for example, preferential treatment and shorter payment periods.

In summary, the mobilization of credit through farm stores and farmer associations is resulting in the intended effects. Impact is being achieved at the farmer level, leading to better harvests and enabling farmers to learn new techniques. All the cases interviewed are showing productivity gains, increased output, and net income gains beyond the expected levels in the PMP. Continuing on this path represents a great potential for other opportunities down the value chain where processors, logistics service providers, wholesalers, and end-market traders can be involved. Whether farmers are able to capitalize on more value-addition opportunities beyond their farm's gate will need to be seen. For now the goal of impacting their daily livelihoods with improved access to inputs to generate higher profits at the farm is being met as a result of ADF assistance.

## Value Chain-Level Impact

Two areas of impact at the value chain level have been confirmed in the evaluated ADF loans. First, loans provided through the network of farm stores, CMUs, and farmer organizations are diminishing reliance on informal money lending sources in major value chains. The resulting outcome is increasing production scale and creating opportunities for processors and traders to meet national and regional markets with a stronger business approach in quality and volume. For example, without ADF loans to the dry fruit and nut industry, realizable opportunities in India, the Gulf region and markets as far as Turkey and Russia would remain outside the radius of action of Afghan companies. Table 5 shows how different value chains performed in terms of promoting increased full-time equivalent (FTE), production, sales, and income for individual growers and companies. It is important to note that a true value chain ranking is not possible, since every loan account is different. As a result, loan accounts in the agriculture inputs value chain have performed at different levels, but all above the 10% target established in the PMP.

It is important to notice in Graph 1 and in Table 5 that over 93% of loans focused on increased productivity and output. This shows how ADF has made a commitment to established input providers to facilitate promote higher production, while some agro processing companies ponder the importance of quality and volume requirements in export markets. For all these activities, the availability of cash in daily transactions with and between farmers and traders is imperative.

## Table 5. Ranking of value chains income generated

| BORROWER | Direct Beneficiaries | Value Chain | FTE* | Increased Production (%) | Increased Sales (%) | Increased Income (%) | Household Level Impact | Company Level Impact | Income Impact Bracket |
|---|---|---|---|---|---|---|---|---|---|
| Hariwa Habibzadah Company | 0 | Fruit Crops | 10 | 325 | 300 | 310 | | x | >50% |
| Eastern Region Fruit Growers Association | 1852 | Fruit Crops | 0 | 27 | 67 | 72 | x | | |
| Javed Afghan Wheat Thresher (two loans) | 0 | Ag Inputs | 68 | 58 | 41 | 64 | | x | |
| Hamid Flour Mill | 0 | Grains | 15.6 | 74 | 68 | 60 | | x | |
| Sayed Jamal Flour Mill | 1625 | Grains | 79 | 72 | 66 | 55 | | x | |
| Season Honey Processing Factory | 0 | Honey | 22 | 115 | 90 | 54 | | x | |
| Bamyan potato cooperatives (all) | 15 | Vegetables | 0 | 44 | 42 | 52 | x | | |
| Tyoran Ayobi Salaughterhouse and Fridge | 0 | Livestock | 100 | 267 | 266 | 45 | | x | >40-50% |
| Sanaizada Edible Oil Extraction | 0 | Oil Crops | 44 | 28 | 49 | 45 | | x | |
| Dr. Abdul Wakil Farmers Association | 0 | Fruit Crops | 0 | 37 | 69 | 44 | x | | |
| Samsor Ban | 0 | Ag Inputs | 62.4 | 35 | 44 | 43 | | x | |
| AAIDO | 1915 | Fruit Crops | 0 | 18 | 19 | 42 | x | | |
| Islamic Investment and Finance Cooperative | 1138 | Financial Intermediary | 0 | 0 | 0 | 37 | x | | >30-40% |
| Ghoryan Women Saffron Association | 117 | Herbs and Spices | 6.6 | 40 | 99 | 36 | x | | |
| Apple Association | 38 | Fruit Crops | 0 | 12 | 36 | 23 | x | | >20-30% |
| Kunar Farm Service Store | 630 | Ag Inputs | 4.85 | 20 | 20 | 22 | x | | |
| Helmand Farm Service Store | 1489 | Ag Inputs | 4.05 | 20 | 20 | 22 | x | | |
| ANSOR | 4270 | Grain | 0 | 12 | 16 | 17 | x | | >10-20% |
| Shir Ali Yaqoobzada Co. Ltd. | 0 | Fruit Crops | 20.25 | 16.8 | 117 | 14 | | x | |
| Habib Omid | 600 | Animal Fibers | 20 | 15 | 12 | 12 | | x | |
| Afghan Rice Mill | 111 | Grains | 0 | 12 | 10 | 11 | | x | |

*Zeros represent data process in progress or indicator does not apply to loan account.

While trading companies wait for credit periods of weeks after shipping—typical periods range from 3 to 6 weeks in these markets—ADF loans are used for traders to pay farmers for their supplies. Paying the farmer immediately is a must for exporters not to lose opportunities to spot markets. Local, spot or wet markets can be advantageous to farmers in that they work on a cash basis with suppliers, but tend not to reward the top quality that has made Afghanistan's fruits, vegetables and nuts famous. India and other export markets recognize some Afghan products as superior to those of other origins, but these markets do not work on a daily cash basis. Without ADF cushioning these credit periods, Afghanistan's top quality products would continue to be traded by several levels of informal local and Pakistani intermediaries in spot markets.

One example of this quality recognition was shared by the Afghanistan Almond Industry Development Organization (AAIDO) representatives who reported that prices in India for Afghan almonds are at least three times higher than prices for California almonds. Dr. Wakil Farmers' Association representatives provided information that Afghan sweet cherries in India cost five-fold more than sweet cherries from other origins. Pistachios, raisins, apricots and apples shipped from Afghanistan are among the world's most coveted, recognized for their superior taste. But payment terms offered to the rest of suppliers still apply. Thanks to ADF, the possibility for traders to withstand these credit periods and paying farmers with loan money have contributed to expanding their trade volumes.

As discussed in the case of potatoes, local markets reach seasonal price shocks that are detrimental to farmers. Agro-processing can be a solution in certain commodities. Transforming raw materials into other products is not alien to the Afghan agricultural sector. Processing is already successfully financed by ADF in wheat, rice, honey, fruits, nuts, and other products. The assumption too often used is that farmers can develop the interest, scale, and skills to take part in processing, but that is not easy. If we look at examples where ADF is already working with processors, none of these actors are farmers or at least they do not depend on farming as a major source of income. If we look in the opposite direction, not many farmers are participating in processing, with the exception of those who are big enough to hire farm managers to look after their land and crops.

Why is that? Part of the answer is that different business instincts, training, and scale of resources are needed to operate and be successful in this node. It can take years of experience and significant amounts of capital to succeed in processed food product markets. The case of Hariwa Habibzada illustrates this point.

Hariwa Habibzada is a progressive company run by young and senior Afghan entrepreneurs with over ten years of accumulated experience in the dry fruit and nuts subsector. Their business connections expand to India, the United Arab Emirates, Turkey, and other countries in the north. Before being granted their first loan for $273,000 by ADF, Hariwa Habibzada was able to trade from 30MT to 40MT of nuts and dry fruits per year using its own capital.

The company's business model was based on cash purchases of fresh and dry fruit in Herat; the fruit was then sold to buyers in India with credit periods ranging from one week to one month, sometimes longer. While the quality found in Herat for items such as raisins and figs is acceptable, customers abroad kept asking for the different product mixes with famous Kandahar fruits and nuts. Kandahar dry fruits are renowned in regional markets for their size, color, and sweetness, meaning that in general they fetch higher prices to exporters.

Hariwa Habibzada's potential to supply a larger amount of high-quality dry fruit from Kandahar (with complementing volume from Herat) was significantly limited by lack of capital. Doing business with Kandahar traders implied an advanced payment of 50% and the next 50% due within the following twenty-five days. With wholesale prices of dry fruit ranging from $5,000–5,500/MT, Hariwa Habibzada could not afford to do this alone. ADF evaluated the case and granted them the first loan. Options were explored with different markets in Mumbai and Deli with very positive results. Today, with only 50% of the loan disbursed, the company is planning to ship 130MT of dry raisins and figs (already 100MT more than in 2011) for a market value of approximately $800,000, and expected profits of $33,000. This year looks promising for Hariwa Habibzada, as they have increased the size of their business, providing employment for five more women who sort fruit by color and size and who handle consumer-ready packaging featuring a colorful design that complies with India's packaging regulations.

The company employs mainly women who now hope to be employed from June to February.

The reviews the company has received from current clients in India have led to the recent negotiation of a purchase order for 150MT ($960,000 in value). The need to increase the amount of working capital has motivated Hariwa Habibzada to apply for a second loan, even though 50% of credit remains to be drawn from its first loan. If granted, the company will increase purchases from Kandahar (as well as from Herat) following similar credit guidelines described above while also offering advanced payments to farmers who have proven to be suppliers of consistent, high quality products.

It is noteworthy that those loan accounts at the bottom of the table have also done well. Their performance at this level has to do with specific product and industry characteristics. For instance, Habib Omid, a supplier of cashmere, continues to brush 200 grams of product per goat, and no evidence of significant increases in herd sizes was found. This performance means that such farmers have improved their business, motivated by immediate payments for their cashmere. That could lead to acquiring more goats, but a direct increase in income was not documented. The Habib Omid company, on the other hand, has been able to invest more money in cashmere purchases, deal with longer credit periods, and deal with price differences in better ways now that it has ADF financing. The company's income will be significantly increased next year, as ADF financing has made it possible for them to free up capital to finance a yarn production line—a $0.5 million investment.

## AGGREGATE-LEVEL IMPACT

USAID has been a leader in facilitating agricultural credit in low-income countries since the 1950s. India, Brazil, Pakistan, and Thailand are examples of nations that attribute their progress in rural development to increased agricultural credit. The appeal of agricultural credit programs leading to aggregate impact is well known. Within two years of operation, ADF is already having success with its credit programs. Reaching farmers, ADF formal credit improves cash flow among value chain links. It influences value chain dynamics and partners' behaviors. The most outstanding examples of its aggregate impact are detailed here:

## REACHING THOUSANDS OF FARMERS WITH FORMAL CREDIT

Informal moneylending in rural Afghanistan long had great importance to Afghan families. Unfortunately, the impact of this moneylending in boosting agricultural production, facilitating the adoption of new technologies, or expanding the growth of value chains is limited. Seen as a high-risk activity by bankers worldwide, agricultural credit has been for decades—and continues to be—the subject of much policy debate. Negative experiences with high default rates outnumber agro-industry credit success stories. ADF's trifling default rate, therefore, places this institution in a different category. Much effort was done to ensure lending performance and that this performance stays at the highest standard. Additionally, ADF's impact at the farmer level and at the value-chain level has expanded productivity and net income generation in an unprecedented manner.

ADF gives Afghan farmers and agribusinesses a new, credible credit source. Expanded production increases the market cash flow of traders, which in turn positively impacts other on-farm and off-farm activities. Examples are discussed below.

From an aggregate standpoint, ADF has given thousands of commercial farmers the possibility of accessing formal credit. ADF applies formal banking loan practices to address risk, no matter the scale of the loan applicant (e.g., requirements of collateral, references, company net worth assessments, etc.). Since the process of loan evaluation is strict and time consuming, not all farmers who have access to ADF can be screened in the same manner. Using large farming and processing operations as loan brokers has been a win-win alternative to reach small- and medium-scale commercial farmers indirectly.

Some of the most pertinent examples come from companies such as Kunar Farm Stores (KFS). Before its ADF loan, KFS was only able to finance a portion of its clients' credit needs, and only for a thirty-day period. After ADF loans, the share of input costs for the average farming client (with land averaging 20 jerib) covered by KFS is 70%, and the credit period is extended until the end of the season. According to a KFS representative, the average net income for the 2011 production season was estimated at $170/jerib, or $3400 for a 20-jerib farm.

At this level of financing, the positive repercussions of increasing the share of production costs covered by formal credit resulted in more than one benefit: One, the farmers' ability to tend crops with better and more timely applied inputs led to higher productivity and the expectation of increased income. Two, by using fewer personal funds to finance inputs, key KFS representatives reported that farmers had the ability to spend money on other concerns, such as buying more livestock and, in general, using money to improve their standard of living.

A household consumption study would be ideal to provide further evidence on this claim. For now it can safely be expected that the impact of this formal money borrowing activity on consumption is positive and substantial.

## SUPPORTING TRADING COMPANIES SO FARMERS CAN BE PAID ON TIME

The promise of higher-paying markets outside Afghanistan is seldom faced by Afghan farmers with disbelief due to the credit periods formal foreign markets impose on exporters as product is moved through large wholesale and retail networks. Because Afghan farmers cannot afford to wait long for payment even if the delayed income from exports will be great, a cash-based local, spot market is often the best option, even though local prices can be abysmal.

Revisiting the Hariwa Habibzada example, the company would not have been able to more than double its exports this season without ADF's loan financing. ADF's loan allowed the cash purchase of the dry fruit from Kandahar and Herat.

There are other examples from different subsectors that have experienced similar positive effects. The case of Habib Omid detailed how ADF cash allows cashmere producers to be paid immediately for greasy cashmere instead of waiting for clients in China to pay for the finished product months after processing—China is a major cashmere importer and processor, and it is a major exporter of finished cashmere goods. With an estimated yield of 200g per goat per year, farmers have earned $25/kg the same day they bring the cashmere to Herat. If markets behave as expected, farmers will receive up to $30/kg this year. This ready cash allows farmers to improve their household finances and many acquire seed and other inputs for agricultural production or to purchase more livestock.

As these two examples show, reliance on informal financing will not have the same effect, because it tends to be short-term (often thirty days). It is not adequate to sustain the challenges of growing a business. ADF's longer-term credit is adaptive; it has the ability to create new agriculture financial models with high product- and market-specificity, following each value chain's own product-market cycle and profit thresholds.

The need for agribusiness finance from the farmer down to other actors is poised to grow rapidly following ADF examples. Different models can be employed to reach farmers indirectly. Variations are being designed to address the inherent risk in agriculture. While less risk is always desirable, ADF should not merely support basic farming activities. It must also target more initiatives linked to processing, but processing where perishability and market price fluctuations are manageable.

## INFLUENCING VALUE CHAIN DYNAMICS IN MAJOR FOOD COMMODITIES

When credit results in increased competitiveness while still achieving high consumer satisfaction, the aggregate impact can be measured by the economic value created for all the value chain actors. Value chains are, in sum, about who produces the highest quality at the lowest cost with a certain consumer in mind. Since it is difficult and expensive for agricultural producers to know what consumers want at the end of the chain, learning from those who are one or more steps closer to consumers is the next best thing.

This concept leads to the channel captain, an almost-ignored value chain concept that dates from the years when the performance-structure-conduct (PSC) paradigm was the tool to assess markets and market opportunities. A channel captain is the most powerful value chain actor, the one who often decides product specifications. The value chain channel captains targeted today by ADF are easy to spot. No influencing of the value chain can take place unless this actor is involved.

How can this channel captain influence be accomplished? First, a well-informed credit entity can choose to work with the most promising value chains to impact specific sectors of the country's economy. In doing so, working with the most important food commodities can lead to benefits for producers (e.g., large numbers) and consumers (e.g., favoring food security), as long as the channel captain is willing to invest in more efficient arrangements while keeping prices competitive. Second, choices can be made in a coordinated fashion to support parallel industries to these major food commodities. The combined effect of these choices can have long-lasting, nation-wide impact in addressing bottlenecks to increased productivity and production costs while also influencing the behavior of the channel captain. ADF is almost aligned with this purpose. A few details explained below.

The three largest ADF loan accounts invest in Afghanistan's major food commodity—wheat. The largest of these deals with certified wheat seed production, responding to strategic investments in coordination with the Ministry of Agriculture, Irrigation, and Livestock. The second- and third-largest accounts deal with flour processing. These cases offer a wealth of information on how Afghanistan can gain market share in food commodities. Imported wheat has been dominant for decades, much to the detriment of local Afghan suppliers. By supporting the two largest Afghan flour mills—there are twenty in Afghanistan—the influence of upstream and downstream actors in this chain has significant impact on wheat farmers. Future results promise to be remarkable.

## THE CASE OF SAYED JAMAL FLOUR MILL (SJFM)

Lessons learned from today's experiences shed light on how much influence ADF has in modifying the structure of existing value chains that have high growth potential. How to foster a greater number of formal relationships between farmers and processors is a challenge worth addressing, since such relationships lead to better terms for suppliers. The Sayed Jamal Flour Mill (SJFM) provides an important example of this challenge.

With a $1.98 million loan, SJFM processes 180MT of wheat per day, seven days a week, 360 days a year (the mill closes five days per year in honor of Ramadan). This production amounts to 64,800MT/year, with a market value of unprocessed wheat of about $19.5 million and annual sales of processed wheat totaling about $23.3 million (mainly in Mazar-e-Sharif and Kabul). This mill is the channel captain. Over 50% of its throughput is imported from Kazakhstan and Uzbekistan for grain quality reasons, while the rest is sourced from local growers.

Afghanistan's wheat comes from valleys and highlands. The array of varieties is well-adapted, but climatic conditions and access to inputs affect the size of grain, the thickness of the bran, and the percentage weight of the endosperm (or starch) that is converted to white flour. In terms of grain-to-flour conversion rates, SJFM reports 87% for Afghan wheat and 92% for wheat imported from countries to the north. Since wheat prices from both origins are comparable at $300/MT delivered at the mill, the preference for imported wheat is driven by the conversion to final product. Regardless of the apparent disadvantage to buying local product, flour producers cannot rely solely on imported wheat because import politics, country stability, and climatic factors inside and outside Afghanistan can affect the continued supply to the mill.

The Afghan wheat channel captain is thoroughly versed in the potential problems associated with importing wheat. With flour mills needing high asset-specificity and a good throughput level to operate profitably, the mills are as dependant on farmers as the farmers are on the mills.

With this co-dependency, the opportunity to modify how the value chain engages farmers under stronger, mutually beneficial relations must be promoted. One example of these modifications is contract farming, which moves transactions between buyers and farmers from implicit/informal to explicit/formal, and from spot sales and volatile prices to seasonal or long-term contracts with prices that are more stable. Sometimes the incentives do not exist to turn informal relationships into formal ones.

If the chain works on verbal agreements, there is no need to make that relationship more formal. Nevertheless, ADF can represent a strong incentive to modify these dynamics with the combined effect of different loan accounts working in the same sector. For example, if farm stores provide access to fertilizers to the Afghan Seed Organization (ANSOR) seed multipliers, the links between input suppliers and grain farmers are positively affected. Further downstream, if farm stores and machine manufacturers help farmers produce higher volumes at lower costs, the more attractive farmers become as a source of procurement to SJFM. If this mill has an influence with ANSOR and with farm stores in selecting which varieties farmers receive under contract farming under specific agro climatic conditions, the percentage of imports can go down.

ADF influence is evident in that the credit provision came from the same source, even though each actor gets a separate loan. Several nodes are affected, but the value chain dynamics are underpinned by the channel captain's incentive to ensure its supply, thus affecting all loans along the value chain.

This influence has not been by design, but it illustrates how it can be done in similar food and non-food subsectors. Once value chain nodes are connected and influenced, the next step is to address complex business issues associated to wheat and flour with value in mind. ADF's capacity to provide credit can lead to a resource-based strategy covering yet more nodes in the value chain.

Why pay attention to full-resource-based strategies if every loan seems to be working fine separately? Because some value chains are too important and deserve a more encompassing strategy before they are shocked by potential externalities (exacerbated conflict, drought, etc.). The example of SJFM deals with wheat production in Afghanistan, characterized by several inefficiencies that could be better addressed in a coordinated manner with the market using full-resource-based strategies. For instance, a key informant might report that wheat productivity in Kirgizstan and Uzbekistan is three times higher than in Afghanistan. Controlling for similar agro ecological conditions, it can be determined if access to improved seed varieties and fertilizers is responsible for the difference in yield and quality. How can these inputs reach more farmers with the right agro ecological conditions? What can be done for prices to give the incentive for farmers to organize in mass to meet SJFM's demand?

With Afghan wheat remaining largely uncompetitive in comparison with neighboring countries, the question of whether Afghanistan should be producing wheat is often asked. Nevertheless, the value chain is large, it is conscious of the importance of low-cost bread for every rural and urban household, and Afghan farmers do not have a full palate of alternatives to use their land.

A full resource-based strategy can lead to value-thinking assessments, with specific actors identified to take action, whereas the current actors may not have the incentive to participate. For example, the SJFM realizes that the company is not equipped to reach and deal with thousands of individual farmers to build a stronger supply base. Even if the company had a list of enough farmers, it lacks the resources to invest in trucks and to organize the logistics to pick up the grain, to perform quality checks, and to deliver the grain to the mill on a routine basis. On the other hand, farmers sell a metric ton of wheat at $270 to informal collectors who then sell it to the mill at $300. The SJFM knows that it costs only $8 per ton to bring the grain from their catchment area to the mill. If a partner with enough trucks would be willing to contract with the mill for a fixed price of $15/MT to check quality, pick up the grain, and deliver it to the mill, the price offered to farmers could go up by $10/MT, while the flour mill saves $5/MT. If a farmer has 20 jerib of land his output would be roughly 20MT. Under this arrangement, the farmer ends with $200 more at the end of the season while the flour mill saves $5/MT. If 50% of the annual wheat throughput is sourced under this arrangement, the mill's annual savings can be $162,000/year (32,00MT x $5.00).

While this scenario was discussed with the key representative from SJFM, it is important to realize that certain bonding factors are needed to broker these changes. These bonding factors could be transparent information and the availability the credit services ADF is providing, with the goal of increasing the net income of all actors. If ADF leads the

Potato growers from Bamyan province delivering produce to wholesalers

discussion and defines what performance parameters need to be attached to the sector, agricultural credit can be better orchestrated, targeting different value chain nodes so that the final outcome is scalable at the aggregate level. This work has started, and it needs further support. Generating industry debates by key around this analyses could be a series of next steps. In closing this section about wheat and SJFM, it important to remember that many development initiatives are meant to work with value chains and markets.

However, the sheer magnitude of supply-side challenges faced by traders and by poor, dispersed farmers end up taking most of the time, resources, and attention. In influencing value chains to generate the highest aggregate impact ADF has played a big role, but that role can be enhanced if awareness of the full scope of actors is done at a higher level with the impact data ADF is now able to access, compile and analyze.

PART II:

# MAXIMIZING ADF IMPACT

## PLANNING CONSIDERATIONS FOR THE NEXT TWO YEARS

### Demand-side opportunities for credit provision

Over the past few years Afghanistan agribusinesses have witnessed the highest rates of countrywide urbanization. With this phenomenon comes an unprecedented demand for food from farmers, processors, and distributors. This effect has been felt by Afghanistan's southern neighbors, which are seeing on-going demographic explosions in their urban centers. The demand comes mainly from non-food producers whose changing lifestyles (and, in general, increasing incomes) are constantly reshaping their tastes and preferences. Pressure on governments to hold down prices of everyday commodities such as wheat, rice, and potatoes is strong in populous, under-developed economies. But consumers who are employed, better-off, and slowly joining the middle class succumb to the convenience of processed foods such as juices, packaged dairy products, and, lately, prepared meals and street food. As more women join the workforce, the amount of money spent on convenient, prepared food increases.

Learning from similar cases documented around the world—particularly in emerging economies—the private sector will need to invest millions of dollars in increasing farm productivity, storage, processing equipment, and distribution networks to satisfy the demand of sprawling urban centers. Presently, shops such as Finest in Kabul have started growing from being a one-floor grocery to a two-floor store. It is not clear how many resources these companies invest in researching their next move to achieve growth. Nevertheless, if experience in other developing countries is any reference, supermarket companies have a complete understanding of how urban centers grow and how city policies affect the distribution of classes by neighborhoods and zones.

Is ADF up to speed on how such changes represent opportunities for farmers and food processors?

Not yet, but perhaps it is time to invest some grant money in evaluating how Kabul and other cities demonstrate the speed consumer preferences are evolving across different economic strata. Consumption of prepared food (e.g., pizza, fried or roasted chicken) exemplifies how Afghan urbanite taste buds have changed over the last few years.

Are these food items or their ingredients already covered by ADF clients? Yes, and that is why this consideration matters.

With the help of ADF, the private sector in Afghanistan needs to understand these changes in minute detail. As is the case in many other countries, investments in productivity are important, but it is equally crucial to develop the potential of the private sector to invest in storage, processing, packaging, and distribution networks. The role of financial systems in supporting this development is critical in pairing existing land and labor resources to meet consumers' needs all the way to retail stores.

ADF should be poised to support agribusinesses that understand these dynamics and that can provide their own share of resources. A method needs to be put in place so that new agribusiness ideas are promoted and more loan packages are facilitated. This is not a reference to businesses in an embryonic stage (like the examples of business incubators). Rather, it is a recommendation to identify successful business ideas that can be scaled up and diversified vertically down to other nodes and horizontally across nodes to involve more participants.

Feasibility studies and market-potential assessments are two additional ideas that can be financed by the existing grant mechanism to shed light on good opportunities and attract private sector participation. Not engaging actors downstream in the value chain means continuing to push for higher outputs, outputs forced through a market bottleneck. If that is the case, the result may be lower commodity prices, post-harvest losses, and overall discouragement of farmers and entrepreneurs.

Some loan accounts are already feeling the consequences. Season Honey is one example. As long as honey (a raw material) is the major product and not energy drinks with honey as the major ingredient, we will see Red Bull and a few other imported energy drinks satisfying the hunger that urban and rural markets are developing for these items.

## Trying to see beyond the obvious

With a countrywide mandate, ADF has been able to favor a broad array of clients in most regions of the country. It has been relatively easy to pinpoint where the most likely users of agricultural credit are by noting the production pockets for major food commodities (Bamyan potatoes, Wardak apples, etc.). However, a more detailed categorization of potential agricultural credit users in both traditional and innovative work areas has to be developed by learning from the existing, positive examples gleaned from the first two years. Samsoor Ban is one of these positive examples. It is no secret that the company goes on-site to introduce modern technology to farmers who will then use the improved techniques to better use inputs and tools, allowing them to sell their products to a bigger market.

The role of companies such as Samsoor Ban cannot be understated. Their access to local and international information helps them make better decisions about where to invest—or where not to invest.

Agro-ecological conditions to produce high quality outputs certainly matter, but the buying capacity of markets and the existence of actors to move a product seamlessly to the consumer is a work of strategy, access to information, and collaborators. Selecting a number of leaders from successful companies and using them as sounding boards to analyze innovative credit ideas would be beneficial. In addition to ADF's established loan evaluation process, future decisions of what projects are granted with ADF loans could use expert opinions from successful entrepreneurs.

One example illustrates the need for additional opinions based on strong local knowledge. Finding marketing and processing alternatives for Bamyan potatoes has been discussed for several years. Adding other nodes and actors to the potato value chain is necessary to avoid market saturation in certain months. However, the answer is not only in access to storage rooms. The answer is in defining the scale and location of the storage rooms and determining how new actors (i) ensure the most efficient transportation; (ii) maximize value addition to compete; and (iii) favor (whenever possible) more involvement of Afghan producers at commodity prices that satisfy their costs while allowing healthy margins. Foreign consultants may bring significant know-how from abroad, but the local knowledge of why certain things work or do not work has been missing. It is possible that private sector leaders in companies like Samsor Ban and others could provide answers to strategic questions. They might have ideas that would save money by helping to avoid mistakes—for example, the construction of large, unsustainable facilities that end up being unused.

ACE has been careful so far to pick winners based on a thorough loan application evaluation. As the number of applications rises and as they increase in complexity and specificity along different value chain nodes, expert local opinions may work in a project's favor.

## Where else to invest next?

It is hoped that the years ahead will continue to see progress in security and in the enabling environment Afghan agribusinesses need to thrive. Urban markets are demanding processed and convenient foods. Therefore, supporting these sectors to reach higher levels of output is key. It must be done in a step-by-step fashion, keeping in mind how ADF can positively influence resource-based strategies. With higher emphasis on specialization and, when possible, vertical coordination/integration, different nodes can be targeted closer to the consumer that will balance efforts on increasing outputs. This will as well help expand the number, scope, and scale of market-channel alternatives.

## Focusing on lower cost production inputs

At the input level, it has been widely documented that investments in seed and fertilizers are the largest expenses when generating higher productivity and output. Historically, input markets play the most important role in helping farmers attain productivity. Yet the rising cost of inputs and the decreasing price of commodities may discourage higher investments in input procurement. Because of the cost associated with bringing heavy inputs near the farmers' locations, an investment in improving the national logistics of distributing farm inputs can be outlined. One example that has worked in countries with similar distances as in Afghanistan (like Kenya) is increased importation of bulk fertilizers close to the major production pockets of different major crops. By the time a 42kg bag of fertilizer reaches Kunar Farms, for example, the cost build-up attributed to logistics can be close to 50%, particularly if it was imported from Pakistan.

It is important to keep in mind that farmer access to inputs at competitive prices depends entirely on the business environment in which the farm stores operate. If the farm stores are isolated from efficient input procurement networks, the high prices transmitted to farmers are equally non-competitive. Exploring innovative models on how increased input financing can be done should be a priority in ACE's 2013 strategy and beyond.

### Financing food processing and food logistics

The business of food processing and distribution is still underdeveloped in Afghanistan, yet, with the exception of retailing, it is the node that operates with the lowest levels of risk. One way to improve this node is to provide the knowledge and financial support necessary for successful borrowers to expand into food category management (e.g., adding similar products to their existing lines). Another possibility is identifying established food businesses interested in diversifying into other nodes of the food value chains such as storage, minimum processing, marketing, and distribution.

While making these changes, it is important that the size of markets and their profitability thresholds are understood. To illustrate this point, commodities such as wheat that are turned into processed food items such as flour will continue to enjoy high demand. However, when flour is supplied by twenty mills (as is the case in Afghanistan), the need to turn flour into something else is vital to initiate new business lines and generate new opportunities. Making ready-mixes for specific products (e.g., pizza, cookies, and local street food) or training bakers to use new recipes using byproducts like whole-grain flour would allow companies dealing with commodities to expand their business into different cycles. Ten or fifteen years ago these markets did not exist, but now they do, and Afghanistan is surrounded by other countries that are constantly looking for places to expand their reach. But they are also willing to buy what Afghanistan produces. Pakistan and India are the closest examples.

When encouraging new ventures, it is necessary to keep in mind the capacity of entrepreneurs to jump into new ventures. In the case of Bamyan potato cooperatives, the idea to lead these ADF clients to gradually expand downstream in the value chain has been discussed for several years. But while several initiatives point to the need for storage capacity and other capital-intensive possibilities, lenders seem to forget three things about Bamyan producers: They are farmers who (i) do not have sophisticated business skills, (ii) are six hours from a major urban center, and (iii) are totally isolated during most of the winter. To work their way down to the consumer, Bamyan producers need partners.

with sales this year of just $50,000—if the invoices are good, factoring can provide needed relief.

While there is practically no knowledge of similar services available in Afghanistan for other industries, a grant with a commercial bank can be initiated where, for example, ADF can put in $500,000 with the bank putting in another $500,000, for an initial factoring fund of $1M. The risk of factoring, once the accounts receivable are sold to the bank, is the bank's alone, but factoring services can also be designed with different risk mitigation methods. The co-investment of an initial factoring fund should provide the banking partner with the confidence and motivation to try the concept. As might be expected from a banking sector poorly experienced in agribusiness, only certain products will be selected for this service. In general, those products will be the least perishable items such as nuts, dry fruits, spices and juices non-perishable items such as cashmere.

This paper's author suggests investing grant funds to delve further into this topic and to hire the qualified personnel to examine factoring services in the Afghan context and with Afghan clients in India as an exploratory activity. The expert should propose other financial products that could be adapted to the Afghan agribusiness environment targeting account receivables of ADF clients with documented financial success.

**Engaging other financial institutions in lending to agribusinesses**

ADF's original assumptions departed from a holistic development strategy for supporting agricultural modernization with profound changes on incomes, employment, food security and national prosperity. Originally, the funds were planned to be managed by intermediaries to deliver the services in the field in an on-lending fashion. Such intermediaries would be other financial institutions such as banks, credit unions and microfinance institutions (MFIs). They could be non-financial institutions such as co-ops, farm stores, agriculture depots, food processors, and other informal providers of finance. Within its first three months, ADF established a functional office engaging all the intended partners except for the formal on-lending intermediaries. Two years into the program, ADF has enough success stories to share with the formal banking sector that should lead banks to explore their own agribusiness initiatives.

During the inception of the project, the formal banking sector expressed several reasons for their lack of involvement in agribusiness. Basically, the banks saw agriculture's riskiness without seeing the upside. No one can fault the banking sector in Afghanistan for choosing to stay within more manageable, less risky credit markets such as construction, trade of goods and services, and urban centers. Nonetheless, the role of private banking is pivotal to the continued development of Afghanistan and the time is right to convene meetings with commercial bankers to share how ADF is succeeding in moving an ambitious loan portfolio with an extremely low default rate.

One of the lessons ADF learned is the creation of CMUs If learning the ropes in agribusiness takes a special set of skills where commercial banks may not have an edge-

Wheat fields of ACE/ADF clients in Surkhrod district of Nangarhar province

CMUs are the solution to fund small, low-cost units that have the minimum expertise to understand agribusiness. CMUs are a tailor-made remedy to fill the knowledge gap between agricultural cycles and business relationships. To put it simply, CMUs enabled ADF to provide financing to reliable, non-financing institutions that showed the capacity to provide farmers with formal lending. In harmony with Sharia lending practices, CMUs located at AAIDO, ANSOR, and EFGA have made it possible for over 6,200 farmers to access formal credit services. Commercial banks could do the same while ADF is still around to coach them on the process. The ADF's loan repayment performance is so high that it should be the starting point of a conversation with private bankers, since it will prove how successful agribusiness lending can be.

PART III:

# IMPROVING ADF'S M&E SYSTEM IN PLACE

## ANALYZING STREAMLINED APPROACHES TO M&E

One of the tasks of the ADF's midterm impact evaluation was to examine the M&E system to identify strengths and weaknesses in data collection processes. Several strengths were identified in the system: First, the project has a comprehensive Program Monitoring Plan (PMP) that fulfills USAID's results framework requirements. Second, through periodic written reports and the sharing of electronic files it became evident that the M&E team has the needed capacity to carry out the daily M&E work. Third, despite the significant amount of work to deliver timely monthly and quarterly reports, the M&E team has been able to process data for over 14,000 direct and indirect beneficiaries in all loan accounts.

While the strengths greatly outnumber the areas needing improvement, some recommendations are worth formulating to improve the team's capacity to report on impact with stronger internal validity. These recommendations address the difficulty of collecting data in a country with many areas that are dangerous for data collectors and technicians. Therefore, improvements to existing procedures have to be mindful of what is possible in the field.

The recommendations are concentrated to achieve two major objectives.

- To profit more from the body of information collected by other program components as loans are evaluated and approved.
- To promote a rapid assessment of impact per loan account (agribusiness case studies), incorporating value chain analyses and guidelines from the USAID's results framework. Results can then easily be put into summaries for full project reporting and analysis.

It is hoped that the value of these recommendations will be useful to the M&E team beyond the current approach established in the PMP plan approved in October 2011. Because of the typical annual reviews of PMPs, learning how to simplify M&E techniques while still improving data reliability is important. As the M&E team gets ready for the second half of the ACE project, this information should be useful and timely. At the very least, this section should provide an account of the approach taken to establish the impact attributed to ADF loans for a sample of loan accounts, and it should deliver some insights for the team to construct its own how-to processes to document impact for cases located in dangerous regions.

## DEALING WITH LARGE AMOUNTS OF DATA

Data gathering is a time- and resource-consuming endeavor anywhere, and it is particularly difficult in Afghanistan, where security concerns make it hard to monitor and collect data from project beneficiaries. In spite of the labor-intensive task of reporting monthly and quarterly for over 8,000 beneficiaries through different and heterogeneous loan accounts, the M&E team has to carry out a systematic account for impact indicators, particularly on jobs expressed in FTE, increased exports, increased productivity, and the overall impact on net-incomes.

While the work done so far is highly acceptable, some room for improvement exists. First, the M&E process should be made more logical and easier for the M&E team. Second, since working with strict random sampling is not possible in all areas of Afghanistan, a fine-tuned methodology for annual review of multiple case studies is needed. As mentioned before, in-depth multiple case studies can enrich the breadth of quantitative information already gathered and processed on a routine basis by the project. These two major recommendations are explained below.

## LOGIC MODELS TO EXPLAIN THE IMPACT CONTRIBUTION OF EACH LOAN

One challenge encountered across the twelve accounts reviewed in detail was the absence of logical models providing a more in-depth reflection of what was expected of each loan account in terms of impact.

On average, each loan dossier has five folders and over twenty-five different files that track of the discussions and the process from loan application to evaluation of collateral, risk management tool applications, etc. References to impact are found in more than one file, but finding a summary about expected impact of each loan account and a comprehensive model for how to measure it was missing. The PMP approved by USAID only requires information on FTE, increases in exports, and net incomes per beneficiary farmer. But working with such a heterogeneous mix of clients, subsectors, products, and nodes makes the use of the same metrics to impact cumbersome to use. The following examples demonstrate this situation.

ACE Technical Review Committee Minute: This file, which is present in all loan dossiers, only mentions a few bullet points regarding impact. Details and depth on how that can be applied, measured, and reported to and by the M&E team are missing. The PMP makes reference to each stage in the ACE implementation cycle requiring M&E tasks to be carried out by the technical staff, as well as by the M&E staff. However, the technical staff concentrates on loan qualifications and repayment performance—not on impact indicators. The excerpts below are the only references to impact for the loan accounts.

Figure 2. Javed Afghan Tresher (new loan)

Overall, the ADF should finance the loan based on the following:

- The company has a tremendous amount of experience in manufacturing and selling the wheat threshers and tractor trolleys, and has established a strong distribution network for selling its product.
- The company has a good history with ACE/ADF by utilizing the previous loan in appropriate way and also in the repayment of the loan.
- The company is growing successfully and is highly competitive with the imported threshers from Pakistan, based on the quality of the thresher produced by the company and the fact that they will be selling them on credit this coming year.
- The financial situation of the company is strong enough to support the repayment of loan.

Figure 3. Rana Seed Loan Application

Overall, it was recommended that the ADF should finance the loan based on the following:

1. The company has a team of recognized agricultural experts with the managerial capacity to make this project succeed.
2. The soybeans are available to be harvested.
3. This new venture will add to the food security in Afghanistan
4. The parent company of RANA Seed (RANA Group) will cross guarantee the loan.
5. The payment for equipment will be made directly to the supplier.
6. 177 farmers will be introduced to growing new crops which will diversify and improve their income source.

Figure 4. Hariwa Habibzada

Overall, it was recommended that the ADF should finance the loan based on the following:

1) The owner´s ample knowledge of the Indian market of dry fruit and the network of contacts he has will provide a unique opportunity for the business to increase with ADF support.
2) It is a business which provides work to women whose hand labor is important in the sorting and cleaning process.
3) The loan will support the dry fruit industry (raisins and figs), in which Afghanistan has a very good advantage, as even when comparing with the biggest producers, the Afghan product costs are lower and important markets are close to it, geographically.

Figure 5. Credit Recommendation and risk reports

**Agriculture Benefits of the loan:**

By financing the company, ADF will:

- Help modernize agriculture sector by enabling *4,500 farmers* to have access to good quality agricultural tools, inputs and fertilizers
- Will support the farmer's community with product service, knowledge and *training*
- The high quality input products supplied by Samsoor Ban will help increase farmer's *productivity*, quality of their products and increase their income
- The loan will further help a *new trend* of vendors and suppliers of high-quality products in the Afghan agriculture market

From pre-audit files

| | |
|---|---|
| Loan Impact | The company will improve the dry fruit process, increase the export and create employment. |

Figure 6. Report for ANSOR

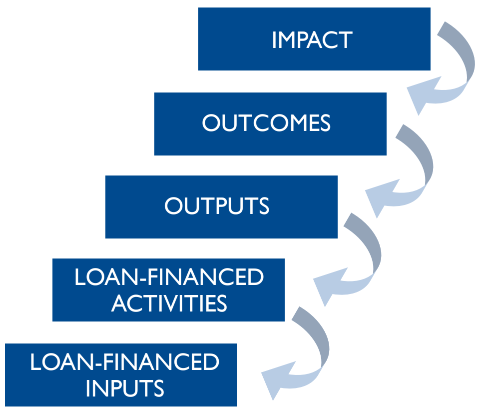
| | |
|---|---|
| | b) **Equipments**: Machineries<br>c) **Guarantor** from a registered company with ANSOR |
| **Loan Subject:** | Working Capital for ANSOR Association members: Purchase, transportation, processing, Packing and storing of seeds |
| **Loan Impact/Beneficiaries/Jobs Creation:** | To promote and develop seed industry in both national and regional level. The association provide forum for cooperation and informational exchange among seed enterprises and represent its interest to provide trading with high quality seeds. |
| **Profit/loss last/during year 2010/2011** | 13% - 15% |
| **Credit Officer Name:** | Enio and Salahuddin |
| **Internal Audit In charge:** | Abdullah Habiby |

## RECOMMENDATION:

The M&E team members participating in Credit Committee Meetings could benefit considerably by developing a logic model for every loan account at the start of the loan application evaluation. This will help the M&E team to ask lending officers to think in terms of the expected impact in a more elaborate way. This type of thinking is not currently represented in the loan files.

Regardless of what is reported to USAID under the approved PMP, expanding the type of information gathered about impact can provide important information to write better reports. It will help disseminate success stories. It will help identify ADF areas that need improvement. It is recommended that impact be thought of first, with later emphasis on activities. Formats to do this in a fast and easy manner will be given to the M&E team.

Figure 1 Logic Model Sequence for Loan Accounts




## QUANTITATIVE INFORMATION PLUS IN-DEPTH MULTIPLE CASE STUDIES

An important contribution of qualitative research methods such as case studies is that they can assist the M&E process in determining the why and the how of results. In the case of ADF, it can also help crosscheck secondary sources of information on yields, production costs, and other quantitative information. Many problems extant in Afghanistan make it difficult to gather this information through strict randomized samples from all regions. Equally important is the advantage to carry out detailed descriptions of non-ADF clients (i.e., controls) that can provide a thorough comparison with ADF beneficiaries working in the same industries.

No one can claim that qualitative research is better than quantitative, or vice versa. In fact, they are viewed as complementary. More than being different approaches to reporting results and impacts, the combination of both methods can lead to strengths that often render better data to describe impact in numbers, and that can also tell the story behind it. While it may be time-intensive, it is recommendable to carry out a few representative, multiple-case studies, preferably close to (or at the end of) the maturity period of loan accounts. These studies will guarantee that quantitative information has been already gathered and that business cycles are complete in order to ask specific questions about the business. It bears repeating that this strength comes primarily from its inductive approach.

Five advantages can be associated to an M&E team that becomes comfortable carrying out multiple case studies:

1. Over time, developing semi-structured interviews provides the needed intuition to understand the specifics of an agribusiness, leading to better questions and an increased capacity to understand and analyze feedback.

2. Knowledge of the particular context within which loan beneficiaries act can guide how quantitative data on the same loan accounts can be further analyzed.

3. A greater capacity to draft conclusions and recommendations on impact is acquired as relationships between the loan beneficiary and the other links in the value chain are better

understood. This gained capacity leads to better comparisons across loan accounts, and it helps summarize the global impact of the lending process.

4. While quantitative data start from gathering information on source inputs, activities, outcomes, etc., the case study methodology goes in the opposite, yet complementary, direction. The combination provides a more robust assessment process.

5. Finally, even if the case studies will not be done for every loan account, the capacity to understand causality associated with formal credit assistance is crucial for the ADF to learn more about what defines success for its varied clients.

For someone to maximize these five advantages, it is necessary for the interviewer to think outside the box. Determining whether an agribusiness makes risky decisions or whether its plans are risk-adverse takes new thought processes. The following is an example of how to frame open-ended questions in semi-structured interviews for multiple case studies that could be carried out by the M&E team. The evaluator had limited time in-country to explain this process, but was willing to delve further into this process so that the M&E team could carry out these exercises as time permits.

| Guiding Open-ended Questions | Propositions | Operationalization of propositions |
|---|---|---|
| 1. Can you tell me how your business operated without the assistance of ADF's credit? | Proposition 1: Clients are better off with ADF loans in terms of credit time, cost of credit, and period or maturity cycle of credit. | Formulate sub-questions consulting the background files prepared by the lending team where information on the company's history and intended use of the loan can be cross-checked. |
| 2. How do you compare your operations now with other similar business that do not have access to ADF loans? | Proposition 2.1: ADF clients will have cash flows that are significantly better than similar counterparts within and outside the value chain. Better-off farmers and businessmen use credit as a resource and have the choice to risk their own funding or take advantage of low-cost credit. | Get a sense for the level of wealth the client had prior to ADF loans and understand his business decision making process. How the two types of commercial farmers compare to non-ADF users (the control) will shed light on important insights quantitative methods are not able to make come to surface. Contrast this behavior with less better-off farmers but equally striving clients whose business decisions may be more conservative. |
| | Proposition 2.2: ADF clients exhibit lower levels of poverty (or higher levels of wealth) than non-ADF clients. ADF targets commercial farmers because they are expected to have the asset base to provide as collateral. This is a risk-mitigation method that is greatly responsible for the low loan default rates accomplished so far. | It is acceptable to enquire about the clients' asset base and how that predisposes him/her to have access to credit. Because of the high correlation between wealth and a person's level of education, it is also important to understand how the client is equipped to function in the value chain developing business relationships with links upstream and downstream, nationally and internationally, etc. |

| | | |
|---|---|---|
| 1. How are other asset endowments related to the success of the client? | Proposition 2.3. Successful ADF clients have a higher number of accumulated positive past experiences in business than the control | Becoming business savvy in agriculture is the result of years of experience accumulating know-how and know-who. Enquire about this experience to understand better why and how business decisions are made by the client. |
| 2. List three important aspects ADF has helped you change in your business | Proposition 2.4: Understand the leadership structure within the client | This can be measured in terms of company or group norms that are typical of closely-knit societies, particularly in Afghanistan where clans and tribes dominate a number of business and business expansion strategies. |
| 3. Enquire about the future | Proposition 2.5: ADF clients working through CMU's and other forms of organizations exhibit more group activities than the other non-client (control) and less successful organized groups. | Group activities are categorized as services or activities provided to the member base such as credit programs, collective marketing, input purchasing in bulk, labor-sharing activities, collective seedling nurseries and acquisition of services such as pest control advisors and demonstration plot hands on training |
| | Proposition 3.1: ADF clients exhibit more market linkages downstream to wholesalers and retailers and upstream to farmers, credit and input suppliers in the value chain than non-clients. | With the assistance of the value chain assessment carried out by the lending team a value stream map can be developed to understand the number of effective linkages measured in terms of existing procurement or market channels for each client. |
| | Proposition 3.2: ADF clients went through a long loan application process and are aware of the benefits of accessing the level of credit no other institution has provided for agribusiness. | Remember what the client said about his situation before the loan and how this question completes the causal effect on the impact indicators established for ADF. |
| | Proposition 3.3: If one or two cycles of ADF loans have provided x or y benefits, the client has probably reflected on what else they would like to do in the near future. | One of the goals of ADF is to expand the business of companies that are credit-worthy, have strong positive impact on other linkages and can increase in size and scope of business activities. Spending as much time as possible on this question is important for you to formulate recommendations for future action. |

# ANNEX

| SEPTEMBER 2012 | | | | | | |
|---|---|---|---|---|---|---|
| SUN | MON | TUE | WED | THU | FRI | SAT |
| 30 | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |

| # | Borrower | Province | Crop/Product | VC | Interview Date | Interview Location |
|---|---|---|---|---|---|---|
| 1 | Sayed Jamal Flour Mill | Balkh | Wheat | Grains | Sep 2 | Kabul |
| 2 | Season Honey Processing Factory | Nangarhar | Honey | Honey | Sep 3 | Nangarhar |
| 3 | Javed Afghan Wheat Thresher Company | Nangarhar | Ag Machinery | Grains | Sep 3 | Nangarhar |
| 4 | Afghan Rice Mill | Nangarhar | Rice Milling | Grains | Sep 4 | Nangarhar |
| 5 | Kunar Farm Service Store | Kunar | Ag Input Retailer | Farm Stores | Sep 4 | Kunar (on the way from Nangarhar) |
| 6 | Dr. Abdul Wakil Farmers Association | Wardak | Apple | Fresh and Dry Fruits and Nuts | Sep 5 | Kabul |
| 7 | Afghanistan National Seed Organization | All provinces | Certified wheat seed | Grains | Sep 5 | Kabul |
| 8 | Afghanistan Almond Industry Development Organization (2nd) | Balkh, smangan, Kunduz | Almonds | Fresh and Dry Fruits and Nuts | Sept 6 | Kabul |
| 9 | Habib Omid | Herat | Cashmere/Wool | Cashmere | Sep 9 | Herat |
| 10 | Ghoryan Women Saffron Association | Herat | Saffron | Saffron | Sep 9 | Herat |
| 11 | Tyoran Ayobi Salaughterhouse and Fridge | Herat | Chicken | Poultry | Sep 10 | Herat |
| 13 | Hariba habibzada | | Dry fruits | | | Herat |
| 12 | Bamyan Cooperatives | Bamyan | Potato | Potato | Sep 12 | Bamyan |

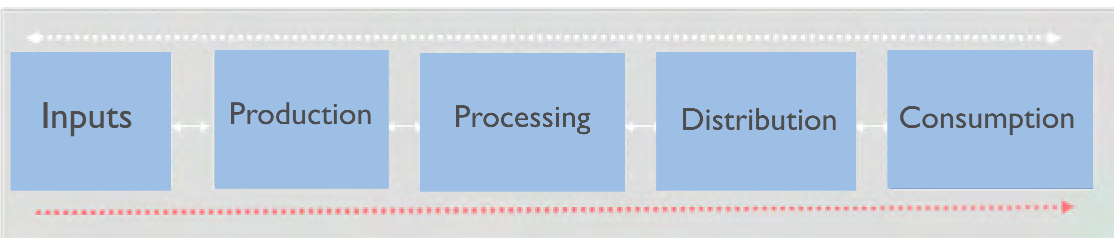
# LOAN IMPACT PROFILE SUMMARY FORM

**COMPANY**______________________________________________

**MAIN ACTIVITY**________________________________________

| Impact indicator | Before | After | Comments |
|---|---|---|---|
| Beneficiaries | | | |
| Area | | | |
| Output | | | |
| Total Revenue | | | |
| Increased Income | | | |
| Value of loan to farmers/operations | | | |
| Leveraged own resources/ farmers | | | |
| Length of lending period | | | |
| Impact on informal lending systems | | | |
| Other | | | |
| Other | | | |

Position in the Value Chain + Linkages
Where is this company now and where is it company heading?



| Impact Indicator and base formula | Applied formula from database | Source of data | Comments Impact Indicator Calculation |
|---|---|---|---|
| Household income increased as a result of ADF lending activities<br><br>Income = Total Revenue – Total Cost<br><br>10 Farm Budgets, It's better to rely on the VC guys | Household income past credit provision minus household income at baseline. Specifically,<br><br>total sales of target crop(s) **minus** total production costs (Land+ labor+inputs) for both baseline and after credit harvests. Any output used for self-consumption will not be accounted for. | M&E Surveys and secondary data sources from the VC development team (M&E does not report data on production costs so data triangulation will be needed to determine such cost per product/ region). | Total output cost of the target crop/VC is a combination of ADF contribution plus labor plus land expenses covered by the farmer. An effort will be made to calculate the disaggregation of the sources of financing for the full production costs. In the case of farmers the cost structure will be represented by jerib. In the case of other activities where there is no land cost associated, the cost will be calculated by unit of output, most likely by metric ton (e.g., honey). We may need to send some surveys to key informants in some areas. This is an annual indicator that cannot be calculated without having a strong notion of production costs. |
| Productivity increases derived from ADF's credit infusion<br><br>Productivity = Total output/area | Credit target season production of target crop(s) divided by total area of crop(s) in jeribs **minus** Baseline production of target crop(s) divided by total area of crop(s) in jeribs. | M&E database volume in Kg per crop will be used. | Farmer survey does not report area. Information on average production per jerib on a case-by-case basis will be needed through phone interviews of key-informant farmers/farm store owners. We may need to send some quick surveys via email and collect them before the end of year in order to better calculate this. |
| Full-Time Equivalent (FTE) following USAID formula | USAID formula = total number of hours divided by 8 divided by days workable in a year | M&E database has this accounted for. | |

| Impact Indicator and base formula | Applied formula from database | Source of data | Comments Impact Indicator Calculation |
|---|---|---|---|
| Ranking of VCs by top household income generator | Increase of household income gained per ADF dollar invested | M&E database, secondary sources, interviews of some cases. | |
| Ranking of VC by productivity impact | Increased output per jerib on a crop/product basis | M&E database, secondary sources, interviews of some cases. | |
| Ranking by firm level improvement and contribution to VC optimization (rise in inputs, induced technological innovation, gain in technical efficiencies) | Number of links/nodes/actors benefitted directly and indirectly | Interviews of some cases | |
| Ranking by loan turnover effect during an agricultural year | Number of times or speed at which a loan beneficiary collects accounts receivables/reinvests loan/replaces stock with new inventory | Interviews of some cases | I believe there is one or maybe two cases that will illustrate turnover effects. |

| Impact Indicator and base formula | Applied formula from database | Source of data | Comments Impact Indicator Calculation |
|---|---|---|---|
| Aggregate impact derived from access to credit | Adding, comparing and contrasting like indicators across VCs and loans | M&E database, secondary sources, interviews of some cases | |
| Major differences between with and without project situations | Comparing baseline data with credit period activities | M&E database, secondary sources, interviews | |
| Rate of leveraged funds from direct and indirect beneficiaries' own cash and alternative sources of funding to complement production activities | Amount of loan borrowed from ADF plus estimated additional amount needed to complete production/economic activity | M&E database, secondary sources, interviews of some cases. | One example of this situation is the vegetable producers who now receive inputs on credit to expand production. The cost of the production expanded in more area is partially financed by ADF with inputs, while land, labor and additional input costs are provided by the farmer. This extra area and additional output would not exist without the role of ADF and it is one of the core effects of eased credit. |

**AGRICULTURAL CREDIT ENHANCEMENT (ACE) PROGRAM**
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