

Asian Development Bank Rural Business Support Project (RBSP) Afghanistan

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Photo by Ruvan Wijesooriya



MINISTRY of AGRICULTURE,
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ROOTS of PEACE

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Abstract	This report is the final report submitted by the consulting organization, Roots of Peace, to update ADB on the progress of the Rural Business Support Program (RBSP) being implemented in Afghanistan in cooperation with the Islamic Republic of Afghanistan, Ministry of Agriculture, Irrigation and Livestock. This report covers the period from November 10, 2007 through September 30, 2011.

This publication was produced for review by the Asian Development Bank. It was prepared by Roots of Peace. The author's views expressed in this publication do not necessarily reflect the views of the Asian Development Bank or the Ministry of Agriculture, Irrigation and Livestock.

BEFORE



AFTER



The old oil processing and the new technology, Mazar-e-Sharif. Photos by Ruvan Wijesooriya.

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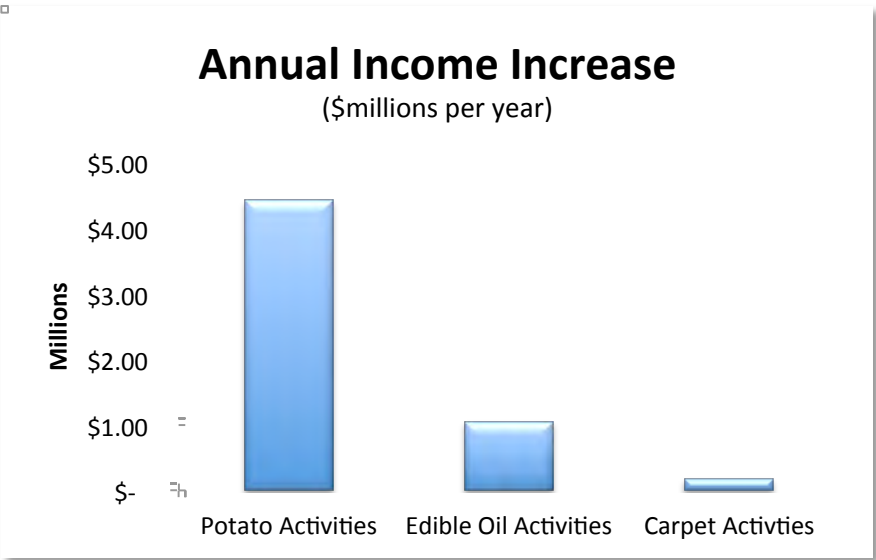
Farmer on his new potato cellar under construction in Bamyan, 2011, Photo by Ruvan Wijesooriya.

1. Executive Summary

Afghanistan has an agriculture-based economy that needs to grow and sustain rural development. Through the decades of war and pestilence, the agricultural economy in Afghanistan has withstood the onslaught of rural infrastructure destruction, tree clearing, livestock slaughtering, and agricultural crop and market disruptions. Since 2003, the growth in the agricultural economy has been steady and broad-based. As irrigation infrastructure and agricultural markets get rebuilt, the resilient Afghan farmers have adapted more commercial crops into their farming systems and have linked closely with local traders. The agri-business that is reaching into the rural areas of Afghanistan is gaining traction and becoming more and more sustainable. The Afghan farmers are responding to rural agri-business opportunities by investing in their own value-added, post-harvest activities.

With the aim of supporting rural business development in Afghanistan, the Asian Development Bank funded the \$18 million, three-year Rural Business Support Project (RBSP). The RBSP’s objective was to sustain the increase in farm incomes in four rural districts in four provinces (Bamyan, Balkh, Nangarhar, and Kandahar) by enabling farmers, agro-processors, and traders to engage in profitable production, processing, and marketing activities. To achieve this objective, the RBSP, jointly coordinated by the Ministry of Agriculture, Irrigation, and Livestock (MAIL) as the Implementing Agency, the Ministry of Finance as the Executing Agency, and Roots of Peace, the Consultant, technically, organizationally, and financially assisted about 10,000 stakeholders involved in agri-business development in 12 rural districts in Bamyan, Balkh, and Nangarhar provinces. Kandahar was not included because of the insecure situation in the province.

The RBSP framed its methodology on three agricultural commodity value chains, potato, edible oil, and wool/carpet value chains. These value chains were selected based upon the investment opportunities and recommendations from pre-feasibility assessments of the most competitive value chains in the three targeted provinces. In Bamyan, the potato and the wool/carpet value chains were developed. In Balkh, the edible



oil and the wool/carpet value chains were developed. In Nangarhar, the edible oil and the wool/carpet chains were developed. The RBSP professional staff, including those based in Kabul and those based in the DAIL provincial offices, used pilot and 50% equity, agri-business investments in appropriate technologies, on-farm crop demonstrations, field days and extension services, training workshops, and organizational (cooperative) development to stimulate significant value chain development among the Afghan stakeholders. The pilot, agri-business investments, including modern, small-scale, potato storages, tractors

and farm implements, edible oil processing and packaging equipment and machinery, spinning wheels, vertical, and steel looms, allowed the Project beneficiaries (value chain stakeholders) organized into small Cooperatives to understand and use the technologies before investing themselves in these technologies. Once the Project's stakeholders decided to invest, the RBSP provided a 50% equity transfer to the investing stakeholder to promote the investment. With the strong support of the DAIL provincial offices and the MAIL, the equity transfers were done fairly and in a completely transparent manner.

The investments in agri-business coupled with the on-farm demonstrations, field days and extension services, training workshops, and cooperative development assisted the 10,000 value chain stakeholders in increasing their incomes by over \$6 million during the Project period. The increase in the incomes of these stakeholders were a direct result of, for example, increased production and productivity of potatoes, oilseeds, edible oil, spun wool, and carpets, adding value to their agricultural products by storing potatoes and oilseeds in efficient storages and by de-linting cottonseed before processing, marketing sorted and graded potatoes, and in improving and expanding marketing channels by using blow mold packaging for the edible oil processed.

Along with the increase in incomes, the Project's beneficiaries (value chain stakeholders) have invested over \$5 million of their own capital resources in the 1086 potato storages, 20 four-wheel tractors and farm implements, land, perimeter walls, electrical hook-ups for the oilseed storage, oil processing, and packaging facilities. These shared investments with the RBSP were done with sustainability in mind.



Because these investments lead to sustained income growth, the increased income that the stakeholders have earned during the Project period will continue after the Project for many years. Besides that, over 2,000 of the Project's beneficiaries have benefited from being members of one of the 39 potato producer, oil crop producer, carpet, or oil processor cooperatives. For example, the 20 Producers' Cooperatives (Potato or Oil Crops) in the three targeted provinces have been able to generate income from renting the RBSP-supplied pilot tractors, farm implements, and threshers to their members and also to non-members. From the income generated, the Cooperatives have purchased the proper fertilizer for their members (on credit) at a reduced price. The fertilizer at a reduced price benefits the members of the Cooperatives while the small margin (net income) that the Cooperative obtains from having provided the fertilizer on credit can be used to additional productive (income generating) purposes.

This shared investment approach among thousands of the Project's value chain stakeholders has increased the awareness and the investment attention of thousands more stakeholders. The rural business dynamics works this way – a lesson learned from the RBSP Project. There are many other lessons learned from the

RBSP, including promoting technologies that give stakeholders better and sustainable access to product markets. Those technologies that are most readily adopted are those that are within the investment horizon and capability of the stakeholders, those that do not have high barriers to entry, and those that provide significant operational improvement in cost effectiveness and/or technical and pricing efficiencies. But the lessons



from the RBSP also reveal how much further the agricultural commodity value chains have to grow, how much more the Afghan products must become competitive, and how much more support the value chain stakeholders need. Improvements in potato and oilseed varieties, infrastructure and efficiency of public utilities, and access to credit are a few of the most urgent requirements for insuring sustained rural business development.

2. Project Description and Changes in Approach

2.1 Project Description

The Rural Business Support Project (RBSP – “Project”) was approved in December 2006 for \$18 million to be implemented over three years. The Project closing date was originally 30 November 2010, but was extended to 30 September 2011. The Executing Agency was the Ministry of Finance and the Implementing Agency was the Ministry of Agriculture, Irrigation, and Livestock (MAIL). Roots of Peace, hereinafter referred to as the “Consultant”, was the implementing consulting organization that mobilized in November 2007, the time of commencement of the RBSP project activities.

2.2 Project’s Objective

The Project’s original objective was to sustain the increase in farm incomes in four rural districts in four provinces (Bamyan, Balkh, Nangarhar, and Kandahar) by enabling farmers, agro-processors, and traders to engage in profitable production, processing, and marketing activities. The Project’s original design called for the establishment of four rural business support centers to house a vertically integrated value-added agro-processing plant, with participating financial institutions delivering credit and financial products, and a training and capacity development center.

2.3 Inception Report and Mission Recommendations

An Inception Report was submitted to ADB and the MAIL in February 2008. A number of commodity/product value chains were identified and proposed by the Consultants in the Inception Report. However, the identification was based on the original approach that only the targeted rural district in each province would be involved in the project interventions. The ADB Mission in April 2008 reviewed the planned expansion to multiple districts within a province and the application of a more rigorous selection process for the proposed value chains. The Mission recommended that the Project broaden the geographic coverage to include multiple districts in the targeted provinces. This required a systematic methodology for selecting the targeted districts in three provinces (Kandahar was eliminated because of security problems), consideration of value chains where there is a comparative advantage and feasible potential for adding value to the targeted agricultural commodities, and a more strategic approach to the provision of training and technical assistance.

The Mission in consultation with the MAIL and the Consultants revised the methodology in line with the Project approach to support feasible, financially viable, and sustainable rural business enterprise activities. The following selection process was recommended:

- Initial identification of potential priority value chains in the targeted provinces; pre-feasibility assessments of the value chains, constraints and opportunities covering production, input/output services, post harvest/storage/ processing, farm based linkages, and an initial market assessment;
- Selection of target districts; and
- Based on the identified key constraints/gaps in the value chain which provide higher returns, undertake as part of the pre-feasibility a more detailed needs assessment (by province) of potential interventions, covering input supplies, business and technical services (training assessment), credit

(supply and demand), infrastructure and institutional (producer and trader groups and associations, private sector and Government agencies) and links to existing projects/ programs.

The Mission also recommended that the credit component be designed to provide Microfinance Support Finance Afghanistan (MISFA) with a line of credit for on-lending through its partner microfinance institutions (MFIs) and Small and Medium Enterprise (SME) banks in the Project provinces for agribusiness loans to project clients who require loans of up to \$30,000. In an effort to expand the availability of, and the range of agriculture-oriented credit, the Project will undertake two applied research efforts. During the life of the project a feasibility study on Sharia law compliant loan products for farmers was to be undertaken. In addition, the development of a microfinance loan guarantee mechanism will be considered. Equity transfers of up to 20% could be made available to Project clients for a given investment, if sufficiently justified.

The MAIL Coordinating Committee requested a more focused approach to the selection of the commodity value chains, and the adoption of interventions that are clearly delineated in terms of targeted outputs that would not overlap or duplicate activities in other ongoing projects. In response to the ADB Mission's Aide Memoire of April 13, 2008 and the request from the MAIL, key portions of the Inception Report were revised.

3. Project Methodology, Work Plan, Baseline Survey, Environmental Assessment

3.1 Methodology

The methodology mentioned in the revised Inception Report included the recommended selection process. As per the revised Inception Report, potential priority value chains in the targeted provinces were identified in April 2008 through prefeasibility assessments of the value chains that had the greatest potential in each province. Prefeasibility assessments were made by the Consultant in the targeted provinces to identify potential priority value chains, to select the most appropriate districts for targeting Project interventions, and to make recommendations (based on constraints and opportunities) on Project interventions. At least two commodity value chains were identified in each of the three provinces as the top priority chains for Project interventions. At least three districts in each of the provinces were identified based on having adequate targeted commodity supply, rural infrastructure, and linkages to markets (see Table 1).

Table 1. Targeted Provinces and Districts, Value Chains Assessed and Selected

Province	Value Chains Assessed	Value Chains Selected	Districts Selected
Bamyan	Potato, Wool/Carpet	Potato, Wool/Carpet	Bamyan Center, Yawkalang, and Shiber
Balkh	Edible Oil, Wool/Carpet	Edible Oil, Wool/Carpet	Dehdadi, Balkh, Shulgara, Nahre Shahi, Dawlatabad
Nangarhar	Edible Oil, Dairy, Garlic, Wool/Carpet ¹	Edible Oil, Wool/Carpet	Rodat, Behsoud, Sukhroud, Batikot

The Consultant submitted the prefeasibility assessments and a proposed 2008 Work Plan (with technical activities by value chain) to ADB and PSC/MAIL (see Annex 1). The potential priority value chains, the proposed project interventions, and the proposed targeted districts in Bamyan, Balkh, and Nangarhar provinces were presented to and reviewed by the Project Steering Committee (PSC), chaired by Mr. Azizi, Deputy Minister of Irrigation of MAIL, and comprised of representatives from MAIL, MRRD, and the MOF. The PSC approved the potato and wool/carpet value chains in Bamyan province, the wool/carpet and edible oil value chains in Balkh, and the edible oil value chain in Nangarhar. The RBSP presented the justification for working on the dairy (milk) value chain in Nangarhar on numerous occasions to MAIL and the PC during 2008. The garlic value chain was not approved by the PSC and MAIL. MAIL then decided that the World Bank –funded, Horticulture and Livestock Project, not the RBSP, would work on the dairy (milk) value chain. In 2009, the wool/carpet value chain was approved in Nangarhar. The targeted districts in each province that were identified by the Consultant were approved by the PSC.

¹ Concept Note prepared and submitted to MAIL.

3.2 Initial Project Planning and Operations

3.2.1 Work Plan and other Planning Documents

Based on the recommendations in the value chain prefeasibility assessments, the proposed 2008 Work Plan was developed. The proposed Work Plan identified the projected Project activities by Component (value chain, credit, project management, and monitoring and evaluation) from 1 April until 31 December 2008 and included the expected output from the Project's activities. The Consultant submitted the proposed 2008 Work Plan, the proposed Implementation Schedule for the entire Project period (see Section 5), the Flow of Funds Agreement, and the Procurement Plan to ADB and to PSC/MAIL. The proposed Work Plan and the proposed Implementation Schedule were then presented and discussed with the ADB, MAIL, and the PSC. In addition, the Core Budget for the Project of \$3.6 million for the Afghan calendar year from 21 March 2008 to 20 March 2009 was developed in detail and submitted to the ADB and to MAIL.

3.2.2 Financial Accounts

The Project's financial accounts were established and provided timely updates on the Project finances, the Imprest Fund was set up in the Ministry of Finance, the procurement process of Project vehicles and motorcycles was initiated, reimbursements for out-of-pocket expenses were submitted to ADB by the Consultant, and an advance upon submission of the Inception Report was provided to the Consultant.

3.2.3 Project Implementation Unit and Project Steering Committee

The Project Implementation Unit was established and belatedly staffed inside the MAIL, the Implementing Agency. The Project Steering Committee was formed in June 2008 with Dr. Azizi, Deputy Minister of Irrigation, as the Chairman. The PSC provided, through multiple meetings, guidance and support to the Project.

3.2.4 Consultant Team and Project Offices

Most of the Management Team of the Consultant was on the ground beginning April 2007. The Project's central office was located in Kabul with provincial offices located in the compound of the Department of Agriculture, Irrigation, and Livestock in each of the provinces, Bamyan, Balkh, and Nangarhar.

3.2.5 Baseline Survey

As part of the monitoring and evaluation activity in the 2008 Work Plan, a Baseline Survey was designed to establish initial conditions against which the impact of the completed RBSP Project would be compared. In July 2008, the Survey was bid out to qualified organizations that have experience designing, organizing, conducting, and evaluating such surveys. OSDR was awarded the contract for conducting the baseline survey. In September (2008) three surveys were conducted including questionnaires for village data, for socio-economic data of households, and for processor and trader information. In each province, the OSDR Team Leader met, first, with the RBSP Provincial Value Chain Manager and the Head of the Government Provincial Agriculture Department and explained the survey methodology to them. After that, the OSDR survey team went to the various districts to meet the Government Extension Department to discuss the survey and to select 15 villages in each district to be surveyed. In each village the survey team attended a village elders meeting and interviewed them in order to collect village data. The survey team interviewed 15% of individual households in these villages. Three team leaders, twenty male surveyors, and three

female surveyors interviewed, in total, 2326 households, 150 village leaders, and 167 processors/traders in 3 districts in Nangarhar province, 4 in Balkh province, and 3 in Bamyan province. Data entry and analysis were completed in October and a final report of the baseline survey will be submitted at the end of November 2008.

3.2.6 Initial Environmental Examination (IEE) Report

As per the ADB Guidelines, a Rapid Environmental Checklist was completed by Dr. Mark Ritchie, Environmental Specialist for the RBSP, based on the evidence of the Inception Report and value chain pre-feasibility studies. Also, an examination of case studies of actual value chain processing operations in Afghanistan and a scoping study of the main expected impacts were completed. In common with most agro-processing projects, the RBSP was judged to be intermediate in its potential impacts between a Category A project having significant adverse impacts and a Category C project without adverse impacts. The impacts of the proposed activities are deemed to be site-specific and none should be irreversible. Therefore, the RBSP Project was classified as a Category B Project, requiring preparation of an Initial Environmental Examination (IEE) and a Summary IEE. RBSP, as currently formulated, was not regarded as a sensitive Category B project, because the nature and scale of the impacts arising from proposed agro-processing activities and infrastructure did not meet the criteria for such a designation set out in the ADB Guidelines.

In the IEE report, it was recommended that the site-specific environmental mitigation procedures should be based on generic guidelines to be designed by RBSP which will set out environmental safeguards and mitigation measures which are to be incorporated in tender documentation and in design and works contracts for the design and construction phase of any new facility, and also for the operational phase of the same facility.

3.2.7 Grant Implementation Manual

The Grant Implementation Manual was prepared and submitted to ADB on 8 March 2008.

3.2.8 Credit Line

The RRP originally proposed that the RBSP would directly subsidize credit suppliers' activities. Potential existing financial institutions would be invited to submit written proposals describing their offerings. Proposals would be evaluated and the Preferred Financial Institutions selected. The PFIs would receive a 100% grant transfer at 0% interest from the RBSP for direct lending to a borrower identified and selected by the RBSP. The ADB Mission in April 2008 explained "this proposed modality would not be satisfactory to ADB as it would undermine the existing nascent financial system and would be fraught with potential poor governance considerations".²

Instead, the Mission recommended that the credit component be designed to provide MISFA (Microfinance Investment Support Facility for Afghanistan) with a line of credit for on-lending through its partner microfinance institutions (MFIs) and Small and Medium Enterprise (SME) banks in the Project provinces for agribusiness loans to project clients who require loans of up to \$30,000. RBSP staff would provide brokerage services to project clients, including an initial screening of business plans, introducing the client

² ADB, Aide Memoire, Inception Mission, 4-14 April 2008.

to an appropriate PFI, as required. For the post harvest, processor and marketing enterprises seeking support the Project would contract Business Development Services (BDS) firms to prepare business plans for the clients. The Consultant has followed this approach.

Based on projected investments by beneficiaries in the selected value chains, total micro and SME financing needs were estimated at about \$2.1 million. A credit line of \$2.1 million from the RBSP has been discussed with MISFA for on-lending to its partner MFIs and SME financial institutions in the targeted provinces (Bamyan, Balkh, and Nangarhar). An MOU between the MAIL, MOF, ROP, and MISFA that describes the mutual understanding the organizations desire concerning the administration and management of the microfinance component of the RBSP is about to be signed. An On-lending Agreement between the MOF and MISFA is being developed that would describe, among other things, how the credit line of \$2.1 from the RBSP would be administered by MISFA.

4. Opportunities for Value Chain Interventions

The implementation plan for value chain interventions followed the recommendations in the prefeasibility assessments, each of which provided an in-depth investigation into the development and investment opportunities. The development and investment opportunities for each value chain were as follows:

4.1 Potato Value Chain

In the potato value chain, the opportunities identified and assessed included increasing potato production and productivity, supporting producer groups and association development, improving and expanding potato storage, exploring processing options, strengthening and expanding marketing channels, orienting the stakeholders to credit, and capacity building of DAIL professional staff. More specifically,

- In production and productivity, the RBSP will collaborate with FAO National Seed Program to install on-farm seed variety validation trials and demonstrations. The FAO research trials failed to produce any new releases. Based on best practices, RBSP will provide seed and ware production training to participating farmers through NGO or private sector agriculture extension services under contract with the RBSP. This will include short-course training, field demonstrations, and systematic visits by extension staff to provide technical backstopping to production activities.
- In supporting producer groups and association development, the RBSP will promote the development of producer groups or associations through a series of targeted training and exchange visits with established groups/associations for those who demonstrate high interest in organizing. RBSP staff will arrange meetings in which the financial institutions will present their loan programs to the farmers.
- In improving and expanding potato storage, the RBSP will facilitate the construction of 500 individually owned potato storages, each with a storage capacity of 25 mt.
- In exploring processing options, the RBSP will engage a consultant to conduct a feasibility study (i) to examine the feasibility and methodology of branding Bamyán potatoes and (ii) to identify feasible potato processing alternatives for Afghanistan.
- In strengthening and expanding marketing channels, the RBSP will convene an annual marketing workshop for stakeholders, particularly for seed growers, ware potato producers, and merchants. The Project will initiate at least one marketing visit to Pakistan to explore the feasibility of exporting seed potatoes to Pakistan and of increasing the amount of ware potatoes exported to Pakistan.
- In orienting the stakeholders to accessing credit, the RBSP staff will arrange meetings in which the financial institutions will present their loan programs to the farmers. Financial institutions will provide assistance with construction financing.
- In capacity building of DAIL professional staff, the RBSP will involve DAIL provincial and district-level staff as collaborators in Project activities.

The harvest dates and flow of ware potatoes was described in the potato prefeasibility (Table 2).

Table 2. Harvest Dates and Flow of Ware Potatoes in Afghanistan and Pakistan, 2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
HARVEST TIMES												
Pakistan Harvests 75% of Its Potatoes												
Jalalabad Harvest												
Kahmard-Bamyan Harvest												
Laghman, Baghlan Harvest												
Shibar & Bamyan District Harvest, Bamyan												
Yawkalang Harvest, Bamyan												
PRODUCT FLOW												
DOMESTIC												
Bamyan Potatoes available to Kabul/North												
EXPORTS												
Bamyan Potatoes available to Pakistan												
IMPORTS												
Potatoes Imported from Pakistan if Afghan potatoes unavailable												

Source: Kabul/Bamyan Potato Traders

The prefeasibility assessment also estimated the market flow of Bamyan potatoes during the calendar year to markets in Afghanistan and Pakistan (Table 3).

Table 3. Amount and Flow of Bamyan Potatoes to Markets (estimated in 2007/2008)

Month	Flow From Bamyan to Kabul & Pakistan (metric tons)	Flow From Bamyan to the North (Mazar, Kunduz, Takhar, Baghlan) (metric tons)
Oct	30,000 (of this 15,000 MT to Pakistan)	15,000
Nov	24,000 (of this 15,000 MT to Pakistan)	12,000
Dec	15,000	7,500
Jan	10,000	5,000
Feb	6,000	3,000
March	10,500	5,250
April	7,500	3,750
TOTAL	103,000	51,500

Source: Kabul/Bamyan Potato Traders and Torkham Customs.

In terms of potato prices, several sources referred to in the prefeasibility study indicated that for the previous three years (before 2008), producers received 50 Afs per ser (\$143/mt) at harvest. During these three years, producers received around 80 Afs per ser (\$229/mt) if they were able to save their potatoes for two-three months after harvest and sell at that time.³

The prefeasibility study projected that from all Project interventions in the potato value chain, the total estimated increase in revenue would be \$3,875,200/year or \$7,750,400/2 years.

4.2 Edible Oil Value Chain

In Balkh and Nangarhar, the prefeasibility assessments focused on the numerous small-scale processors who have the greatest opportunity to expand their sales while purchasing more oilseed from the producers. The opportunities presented were similar for Balkh and Nangarhar and were as follows:

- For producers to increase their yield of oilseed crops by producing more oilseed on irrigated land, now that the return to their investment in production inputs is potentially much higher.
- For producers and/or processors to take advantage of off-season prices by storing their oilseeds.
- For oilseed processors to intensify their production of edible oil and possibly invest in modern equipment that allows them to substitute significantly more domestically produced edible oil for imported edible oil.

³ Source: Global Partners, Bamyan.

- For processors to package and brand their edible oil to add value to their product.
- For banks and microfinance institutions to develop appropriate loan products to serve the needs of the oilseed processors and oilseed producers participating in this value chain.
- For value chain stakeholders to access loans from banks or microfinance institutions.
- For processors to develop and implement an effective marketing program as the basis for the expansion of this industry.

To give further evidence that the opportunities represent priority implementation activities, the following information was gathered in the prefeasibility assessments.

- The estimated production of oilseeds in Balkh (cotton, sesame, flax) and Nangarhar (cotton) was about 5,100 mt and 2,750 mt, respectively.
- The estimated production of oil by small-scale oil processors in Balkh and Nangarhar was a total of about 2,830 metric tons, including 2,450 mt (+ 30 mt from NAPCOD) and 320 mt (+ 30 mt of refined oil from Jalalabad Olive Oil Processing plant), respectively. The 40 and 4 (12 total only 4 operating) small-scale processors in Balkh and Nangarhar, respectively, were operating only 3-6 months of the year and were marginally profitable businesses.
- In 2008, the demand for edible oil in Afghanistan was estimated at about 11 kilograms per capita per day. For the whole of Afghanistan, the estimated consumption of edible oil was about 300,000 metric tons. The local production of 2,830 metric tons of oil in Afghanistan represents only 1% of the total consumption.
- In 2008, the wholesale prices for unrefined, locally processed cottonseed oil and imported palm oil were \$1,120/mt and \$1,880/mt, respectively.
- The prefeasibility assessments projected that from all Project interventions in the edible oil value chains in the two provinces there would be an increase in income to the stakeholders of about \$327,200.

4.3 Wool/Carpet Value Chain

In Bamyan, Balkh, and Nangarhar, the prefeasibility assessments focused on the wool spinners, carpet weavers, carpet cut and wash operators, and carpet traders. The opportunities for increasing incomes of these value chain stakeholders were presented and prescribed for implementation. The opportunities presented were similar in Bamyan, Balkh, and Nangarhar and were as follows:

- Increase quantity of hand-spun wool in Afghanistan by introducing and testing spinning wheels
- Facilitate establishment of facilities utilizing improved technologies for washing/drying/storing wool
- Grade and brand Afghan wool
- Facilitate establishment of a medium-size facility to produce naturally-dyed hand-spun yarn
- Boost motivation for weavers to produce high-quality carpet by facilitating loom ownership, providing targeted training to improve weaving skills, facilitating weaver access to higher-quality inputs, and initiating an association-based quality improvement and control program
- Provide opportunities for several artisans to further develop their design expertise through regionally-based training

- Develop Afghanistan-based design services to collect market information about designs and colors for Afghan merchants/weavers
- Explore feasibility of Computer Assisted Design technologies to speed-up design drawing and copying process
- Assist existing, organize new associations to strengthen trader/weaver capacity to produce, negotiate, and market
- Develop groups/associations to empower weavers to advocate for better wages, working conditions, and/or to initiate direct marketing
- Broker linkages among weavers/merchants and credit suppliers
- Facilitate establishment of medium to large-scale facility providing fee-based quality finishing including labeling services to production units, traders, and associations
- Assist merchants to initiate/improve direct marketing activities including website development, linkages to international web-based marketing, inventory management, branding, sea and air shipping, and customs clearance procedures
- Facilitate Afghan participation in international trade shows
- Strengthen merchant capacity to articulate market issues and concerns to related national agencies and government



Mr. Kundozi inspecting potato cellar construction in Bamyan.



Partially constructed potato cellar in Bamyan, 2011.

To give further evidence that the opportunities represent priority implementation activities, the following information was gathered in the prefeasibility assessments.

- In 2008, the wool spinners spun about 0.5 kilogram of wool per day by hand and did not have mechanical spinning wheels
- Carpet weavers were not aware of the quality of the various quality of spun wool since they were typically provided the carpet inputs by the carpet traders
- Carpet weavers were not aware of the carpet designs which sold best in international markets nor were they aware of the procedures to follow when putting together new or original designs
- Carpet weavers in the three provinces rented looms which decreased their net income from weaving or used wooden looms which warped and led to flawed carpets
- The potential demand for cut and wash facilities in Balkh beyond the 5,000 square meter capacity that exists was estimated at 55,000 square meters per month⁴. The cut and wash facilities in Nangarhar were even more limited. There were no cut and wash facilities in Bamyan
- Few carpet traders in the provinces had successfully marketed their carpets internationally (beyond Pakistan)
- The websites of the carpet traders were rudimentary and ineffective in carpet marketing
- The carpet traders had little opportunity to directly show their carpets to international buyers since international buyers were not coming to Afghanistan and Pakistan.

⁴ MRRD. 2007. *Feasibility Study for Carpet Subsector Plan: Operationalizing Cut and Wash Facilities. Subsector Analysis and Business Plan Development/ North and Northeast/Economic Viability and Technical Feasibility.*

5. Implementation Plan and Results

Based on the decisions of the PSC and the MAIL, the proposed 2008 Work Plan was revised and subsumed under an Implementation Plan, a portion (the interventions without the timetable) of which is presented below (Table 4). The Implementation Plan is based on the interventions (and indicators) that were taken from the proposed 2008 Work Plan and the Implementation Schedule. The Implementation Plan has been appended with the results of the Project. There are four Components to the Plan, including the Value Chain Development, Credit, Project Management, and Monitoring and Evaluation. The interventions identified along with the indicators were presented by the Consultant at the PSC meeting and reviewed by the PSC, MAIL, and ADB.

- In the first Component, most of the interventions involved technical assistance and training from the Consultant in partnership with the MAIL. Many of the interventions and the indicators were developed with the assumption that value chain stakeholders would invest in productive assets given technical assistance from the Consultant and MAIL. Initially, the ADB agreed to a 20% equity contribution from the RBSP on each investment by the value chain stakeholders that were assisted by the RBSP. This implied that value chain stakeholders would put up the 80% by means of getting credit through the Project's credit line established through MISFA. Regarding a couple interventions that involved business development services (BDS), it was assumed that there were viable private companies that provided BDS.
- In the second Component, the \$2 million credit line with MISFA was contingent on a contract being signed between the Islamic Republic of Afghanistan and the MISFA.
- In the third Component, it was assumed that the PIU would have an effective Project Director who would be responsible for the overall coordination of the RBSP activities with all Government Ministries and agencies, the ADB, the Consultant, and important stakeholders. It was further assumed that the Project Director would direct, together with the Finance Officer of the PIU, the use of the core budget, including the procurement of goods and services and the credit facility with MISFA.
- In the fourth Component, it was assumed that the monitoring and evaluation of the Project would be a shared partnership with the Consultant.

The results as given in Table 4 are discussed in Section 7.

Table 4. Implementation Plan, Indicators, and Results

Component	Intervention (Indicator)	Results
I. Value Chain Development		
A. Potato Value Chain (Bamyan Province)		
Seed and Ware Potatoes	1. TOT government extension & project staff Best Practices (#34)	Over 40 Train the Trainers trained including Government & Project Staff
Seed and Ware Potatoes	2. Train producers in Best Practices (5800 potato producers receive extension assistance)	4273 potato producers received potato production and harvesting best practices training
Seed and Ware Potatoes	3. Organize Potato Producer Associations (4 seed potato and 4 ware potato farmer associations, 4 in Bamyan, 2 in Yakawlang, and 2 in Shiber)	8 Potato Producer Cooperatives organized
Seed and Ware Potatoes	4. Organize and conduct on-farm demonstrations and field days (24 on-farm demonstrations and 24 field days conducted)	29 On-farm demos and field days organized and conducted, resp.
Seed and Ware Potatoes	5. Collaborate with FAO to establish virus testing laboratory (1 virus testing lab constructed and facilitated in Bamyan)	No virus testing laboratory was established by FAO

	potato producers linked to credit)	conditions; no BDS was provided
Seed and Ware Potatoes	7. Train producers in sorting and grading potatoes (500 ware potato producers trained in sorting and grading potatoes)	1411 potato producers trained in sorting and grading potatoes
Ware Potatoes	8. Conduct feasibility study on large-scale storage of ware potatoes	Large scale potato storage reported infeasible by the RBSP Potato Specialist
Ware Potatoes	9. Find investors for 2 large-scale potato storage	N/A
Ware Potatoes	10. Assist 2 investors in accessing credit for investment in large-scale storage	N/A
Seed and Ware Potatoes	11. Train producers and large-scale storage operators in construction/management of storage (25 potential or existing storage operators trained in large-scale storage operations)	N/A
Seed and Ware Potatoes	12. Link producers/traders to credit for storage (500 producer linked)	30 Producers/traders were linked to First Microfinance Bank and to the USAID-funded ACE (credit) Project
Seed and Ware Potatoes	13. Assist producers in storage of potatoes (40 seed potato producers assisted in seed potato storage construction)	16 pilot potato storages and 1084 equity (50%) potato storages constructed
Seed Potatoes	14. Train producers in marketing (40 seed potato producers assisted in seed potato	Over 100 producers trained in marketing seed and ware potatoes by the Extension Workers after the potato harvest in 2010

	marketing)	
Seed and Ware Potatoes	15. Assist marketing associations in potato marketing and market expansion (assist 2 marketing associations)	Eight Potato Producer Cooperatives were assisted in potato marketing by regular visits by the extension agents
Seed and Ware Potatoes	16. Conduct national potato value chain market opportunity workshop	Planned in September 2011
Ware Potatoes	17. Conduct market assessment on large-scale ware potato export (1 market assessment on large-scale ware potato export)	The RBSP and MAIL met with the Tajik potato promotion organization at the 2010 Kabul Ag Fair, where the RBSP had a booth with the produce from the Producer Cooperatives on display. The Tajiks were interested in the Bamyan Potato Producer Cooperatives providing 10,000 metric tons of ware potatoes to Tajik potato traders. The deal was followed up by the RBSP, however, the Tajiks did not respond back with a firm order.
Ware Potatoes	18. Integrate potato marketing strategies with large-scale potato exporters to access new or expand existing export markets	N/A
B. Carpet Value Chain (Bamyan, Balkh, and Nangarhar)		
Carpets	1. Conduct required feasibility/environmental impact studies	IEE completed in 2008
Carpets	2. TOT government extension & project staff in wool processing & weaving best practices (34 trained in each province)	The RBSP's Wool Specialist provided TOT Training in wool processing and weaving best practices 373 trainees. The trainees included Government and RBSP Extension Agents, leading carpet

		weavers, NGOs involved in the wool/carpet value chain, et.al.
Carpets	3. Train weavers in Best Practices (300 weavers in Bamyan, 300 weavers in Nangarhar, and 1000 weavers trained in Balkh)	1895 carpet weavers were trained through special training programs on best practices and when visited by extension agents
Carpets	4. Organize Carpet Weaver Associations (5 weaver associations organized in each province)	16 Carpet Cooperatives organized (3 each in Bamyan and Balkh and 10 in Nangarhar)
Carpets	5. Assist weavers in accessing quality inputs & spinning wheels (150 weavers in Bamyan and Nangarhar and 200 weavers in Balkh assisted)	300 carpet weavers (100 per province) received carpet inputs (30 kg spun and dyed wool and 6.6.7 kg cotton thread); 327 (127 in Bamyan and 100 each in Balkh and Nangarhar) wool spinners received mechanical spinning wheels; 161 weavers in the three provinces accessed steel carpet looms
Carpets	6. Train wool producers and weavers in the use of spinning wheels (150 wool spinners and carpet weavers in Bamyan and Nangarhar, and 200 in Balkh trained)	Training of the spinning wheel recipients (#327) took place when the spinning wheels were distributed and on follow up visits made by the extension agents
Carpets	7. Assist wool producers in establishing wool drying and storage facilities (at least 2 producers in each province assisted)	No wool drying and storage facilities were established because the amount of wool available locally was too small
Carpets	8. Assist weavers in obtaining current, market-driven, carpet designs (150 carpet weavers in Bamyan and Nangarhar and 200 in Balkh assisted in obtaining the designs)	Carpet weavers were able to obtain designs at the carpet design training workshops (each for 2 weeks) that were held for 60 carpet weavers (20 in each province).
Carpets	9. Assist investors in establishing wool scouring	No wool scouring facility was established because the approval

	facility (4 investors in Bamyan and Nangarhar and 5 in Balkh assisted)	from ADB for the International Wool Specialist came too late to be able to procure, import, and install the equipment
Carpets	10. Assist investors in establishing cut/wash facility (1 in each province)	Early in the RBSP project many cut and wash facilities were put in by the private sector in Mazar and Jalalabad. Many of these cut and wash facilities brought in machinery and equipment to more efficiently cut and wash the carpets.
Carpets	11. Train cut and wash operators in cut and wash technologies to produce carpets according to international demand (10 in Bamyan and Nangarhar and 25 in Balkh)	No training took place because many experienced Afghan cut and wash operators with experience processing carpets for international markets returned to Afghanistan from Pakistan and were working in the carpet cut and wash industry
Carpets	12. Link weavers/investors to credit (150 weavers linked in Bamyan and Nangarhar and 200 in Balkh)	A meeting with the local microfinance institutions was held in each province with the 30 or more value chain stakeholders in order to discuss the terms and conditions of the loans available.
Carpets	13. Integrate appropriate environmental mitigation measures for wool scouring and cut and wash facilities	N/A
Carpets	14. Train staff and weavers/traders on carpet drying, inventory management, branding, customs clearance, and marketing by air and sea (10 traders in Bamyan and Nangarhar and 20 in Balkh assisted)	The RBSP extension staff assisted the 300 carpet weavers that received carpet inputs in getting their carpets cut, washed, and dried after they had made carpets using the pilot carpet inputs from the RBSP; the RBSP assisted 12 carpet traders prepare for the trip to Hanover Germany for the Domotex Carpet Exhibition in 2009; RBSP staff conducted a Carpet Marketing & Strategy National Workshop In Kabul to orient over 60 attending carpet weavers/traders in the situation and outlook for carpet marketing

Carpets	15. Assist carpet exporters in developing websites to advertise Afghan branded carpets (10 traders in Bamyan and Nangarhar and 20 in Balkh assisted)	The RBSP Website Design Specialist trained three Afghan carpet design trainees in website designing for carpet marketing; 10 carpet traders were assisted with their websites
Carpets	16. Link Afghan carpet exporters to international markets through the AgNet website developed by ASAP (10 traders in Bamyan and Nangarhar and 20 in Balkh assisted)	Afghan carpet traders were not linked through the AgNet website but rather through their individual carpet trader websites.
Carpets	17. Assist the carpet traders in presenting marketing issues to national export promotion agency and relevant Ministries (10 traders in Bamyan and Nangarhar and 20 in Balkh assisted)	At the Carpet Marketing and Strategy Workshop (October 2010), more than 25 carpet traders had a full afternoon session to present their trade and marketing issues to the representatives of the Export Promotion Agency of Afghanistan (EPAA), MoC, and MAIL.
C. Edible Oil (Balkh and Nangarhar)		
Edible Oil	1. Train project and government extension agents and project association development staff in all aspects of oilseed production, handling, storage, and marketing (34 in each province)	Conducted two formal “train the trainers” training programs to over 40 trainees in Balkh and over 40 trainees in Nangarhar. The trainings were conducted by Afghan nationals (including Mr. Jalil (Oil crops Specialist) and Nangarhar University Agriculture Professors. RBSP staff provided additional training to Government and project staff.
Edible Oil	2. Train farmers in sesame (and other oilseed) best production practices (1700 in each province)	4532 oil crop producers trained in oil crop production best practices
Edible Oil	3. Conduct on-farm demonstrations on sesame and other oil crop production (6 in each province)	131 on-farm demonstrations of oil crop best practices (67 in Nangarhar and 64 in Balkh) for various oil crops, including sesame, flax, cotton, sunflower, safflower

Edible Oil	4. Project supported BDS firms assist investors in accessing credit for sesame production inputs (800 in Balkh and 1375 investors in Nangarhar)	Not implemented
Edible Oil	5. Assist in organizing 3 sesame (oil crops) producers associations (one in each district) in each of the provinces (total 6)	12 Oil Crop Producers' Cooperatives organized, including 4 in Balk and 8 in Nangarhar (at least one in each district)
Edible Oil	6. Assist producers and producer associations in establishing oilseed storage facilities (3 storages in each province)	Two pilot oilseed storages, each 1,000-metric ton capacity, constructed by the RBSP for the two Oil Processors Cooperatives
Edible Oil	7. Assist producers in accessing loans on stored oilseeds (20 producers assisted in each province)	A meeting with the local microfinance bank was held in each province with the value chain stakeholders in order to discuss the terms and conditions of the loans available.
Edible Oil	8. Train producers in cleaning, grading, sorting, storage, and marketing of oilseeds (800 trained in each province)	4,532 oil crop producers trained in post-harvest and marketing best practices
Edible Oil	9. Assist producer associations and individual producers in linking directly to small scale processors (3 producer associations and 50 individual farmers linked to 10 processors in each province)	The RBSP extension agents linked the members of the 12 Oil Crops Producers' Cooperatives to the 2 Edible Oil Processors' Cooperatives in Balkh and Nangarhar (a total of # producers were linked to 37 processors in the Cooperatives)
Edible Oil	10. Assist producer associations and individual producers in marketing sesame seeds in regional markets (3 producer associations and 50	This was not done because no markets for sesame were found that had commercial potential

	individual farmers linked to markets in Balkh province)	
Edible Oil	11. Assist small-scale processors upgrade and expand their processing technologies and capacity utilization (10 small-scale processors assisted in each province)	The RBSP provided two Edible Oil Processors' Cooperatives, composed of 37 small-scale oil processors, with 5 oil processing (3 in Balkh and 2 in Nangarhar) and 2 packaging units (one for each Cooperative), oil filters, and neutralizers. In addition, the RBSP built buildings to house the oil processing units, the cotton de-linting machinery, and to store the oil seeds that the Cooperatives purchase.
Edible Oil	12. Contract with BDS providers to provide training on business planning and in assisting small-scale processors in accessing credit for upgrading processing equipment and/or machinery and for working capital (10 small-scale processors assisted in accessing credit for equipment/machinery and 4 in accessing credit for working capital in each province)	No contracts with BDS providers were signed.
Edible Oil	13. Install pilot, modern, small-scale, edible oil processing equipment and machinery as a business incubator for training small-scale processors (1 set of modern small-scale processing machinery and/or equipment installed in each province)	The RBSP provided two Edible Oil Processors' Cooperatives, composed of 37 small-scale oil processors, with 5 pilot oil processing (3 in Balkh and 2 in Nangarhar) and 2 pilot packaging units (one for each Cooperative)
Edible Oil	14. Train small-scale processors in efficient use of modern processing equipment and machinery (20 small-scale processors in each province)	An experienced international edible oil specialist hired by the RBSP team trained the 37 oil processors. In addition, a technician from GOYUM Screw Press, the supplier and installer of the oil processing equipment, trained the processors on operating the machinery and equipment. The technician from Skillcraft, the supplier and installer of the blow mold packaging

		equipment, trained the processors on operating the equipment.
II. Credit		
Credit	1. Award and negotiate contract with MISFA for MFI and SME lending and exit strategy	An on-lending Agreement was signed between the Islamic Republic of Afghanistan and the Microfinance Investment and Support Facility for Afghanistan, Limited (MISFA). However, no credit line was provided to MISFA by ADB.
Credit	2. Introduce MFIs to potential producer clients	A meeting with the local microfinance institutions was held in each province with the value chain stakeholders in order to discuss the terms and conditions of the loans available.
Credit	3. Coordinate the development of equity transfer guidelines	Equity transfer guidelines were first developed for 20% equity transfer to qualified (and selected by lottery in many cases) value chain stakeholders. After no stakeholders were willing to invest (in, e.g., potato storages) with the 20% equity transfer from the RBSP, ADB agreed to 50% equity transfer from RBSP to stakeholders for on-farm investments (such as, potato or oilseed crop production, potato storage, tractors)
Credit	4. Coordinate with Value Chain Manager re equity transfers to large borrowers	The RBSP did not -work with any large borrowers.
Credit	5. Work with MISFA and large lenders to create new products - including loan guarantee mechanism for MFIs	Initially, a budget of \$230,000 was made available for funding this with MISFA. However, it also was dropped along with the credit line by ADB.
Credit	6. Assess credit needs of farmers, processors, and traders	A total of about \$2.1 million of credit for value chain stakeholders was projected by the RBSP. More specifics on the total credit needed were formally presented to ADB and the PSC. The need for \$2 million of projected credit by the value

		chain stakeholders served as the basis for the \$2 million credit line that was agreed to by the Afghan Government and the MISFA.
III. Project Management		
Project Management	1. Complete Revised Inception Report	Submitted to ADB in May 2008
Project Management	2. Work directly with the Project Director on all coordination activities with the Government	The ROP Management Team worked directly with the Project Director of the PIU.
Project Management	3. Set-up Provincial Office & Hire Staff	After considerable renovation in each office, the provincial offices were based in the DAIL offices. The provincial offices were opened and Roots of Peace hired staff in 2008.
Project Management	2. Carry-out Project Finance/Accounting Activities	The Finance Manager, the Project Accountant, the Finance Assistant, and the Roots of Peace's Home Office Finance Department managed the RBSP Project financial and accounting activities.
Project Management	3. Facilitate National Project Steering Committee Meetings	The RBSP Management team facilitated 6 Project Steering Committee (PSC) meetings. After the 6 th meeting, the ADB decided to have Coordination meetings instead between MAIL, ADB, and RBSP.
Project Management	4. Complete Procurement	The RBSP procured over \$10 million of project related assets, and goods and services.
Project Management	Identify potential BDS providers in each of the provinces	No DBS program was implemented.

Project Management	Train the BDS providers in agriculture/agribusiness project financing	N/A
Project Management	Collaborate with ASMED in capacity building for investors	No collaboration took place.
Project Management	5. Prepare and Submit Reports - Annual Budgets	Annual budget reports for both the ADB and the MAIL were prepared and submitted each year.
Project Management	6. Prepare and Submit Reports - Progress Reports	Monthly progress reports were prepared and submitted to ADB.
Project Management	7. Prepare and Submit Reports - Interim Report	Three Interim Reports were prepared and submitted to ADB.
Project Management	8. Prepare and Submit Reports - Impact Assessment Report	An Impact Assessment Report was prepared and submitted by the International Monitoring and Evaluation Specialist, a short-term consultant, contracted by the RBSP. The Final Report also includes a Project Impact Report.
Project Management	9. Prepare and Submit Reports - Project Completion Report	A Project Completion Report will be submitted upon completion of the RBSP Project.
Project Management	10. Facilitate External Project Audit	An audit by Abbott Gulf Limited was completed each year.
Project Management	11. Evaluate Project Staff	The evaluation of the Project staff will be completed before the end of the Project

IV. Monitoring and Evaluation		
Monitoring and Evaluation	1. Establish M&E Framework	The M&E framework was discussed with the ADB and the PSC and MAIL. The indicators for monitoring and evaluation were derived from the prefeasibility assessments and incorporated into the work plans and implementations plans.
Monitoring and Evaluation	2. Tender a Baseline Survey and have it conducted	A baseline survey was completed in 2008.
Monitoring and Evaluation	3. Discuss the M & E methodology with the stakeholders in each district	The M&E methodology was discussed with the Value Chain Managers and professional staff in each province.
Monitoring and Evaluation	4. Develop the implementation plan for the M&E	The M&E Manager completed the implementation plan.
Monitoring and Evaluation	5. Train the Project staff on the M&E implementation and reporting system	The RBSP M&E Manager and Officer trained the Project staff on the implementation plan.
Monitoring and Evaluation	6. Conduct regular monitoring and evaluation fieldwork with regular reporting of results	This was done by the RBSP M&E Manager, Officer, and provincial extension workers
Monitoring and Evaluation	7. Conduct impact surveys twice during project	One impact survey was conducted in October-December 2010.

6. Additional Interventions to the Implementation Plan and Results

6.1 First Component – Value Chain Development

The first Component of the Implementation Plan was revised during the course of the RBSP Project, especially during the extension period until 30 September 2011, in order to include additional value chain interventions that expanded the value chains. Those additional interventions included more pilot and equity transfer activities, as well as more shared investment from the stakeholders. These additional interventions, funded through the core budget, are described below (Table 5).

Table 5. RBSP’s Additional Planned Interventions and Results, 2008 – 2011

Value Chain	Intervention (Indicator)	Results
Potato Value Chain (Bamyan)	1. Pilot 4-wheel tractors (60 hp) and accessories, including 7 farm implements (8)	In 2010, each Producers’ Cooperative (of the 8) was given a tractor and accessories
	2. Equity tractors and accessories (20)	In 2011, 20 Potato producers invested in the tractor and 5 farming implements with the RBSP providing 50% equity
	3. Pilot threshers (8)	In 2011, each of the eight Producer’s Cooperative was given a thresher
	4. Pilot wheelbarrows (154)	In 2009, 154 wheelbarrows given to potato producers
	5. Subsidized inputs for potato production costs (50% equity transfer)	In 2010, 1411 potato producers given 50% equity transfer payment (~\$300/producer) on the cost of production for 0.4 hectare of potatoes
	6. Pilot shops on top of potato storages (3)	The ADB provided an NOL. The MAIL Engineering Department is preparing the required sketches and design for the tender.
Edible Oil Value Chain (Nangarhar & Balkh)	1. Pilot tractors and accessories (12)	In 2010, each Producers’ Cooperative (of the 8 in Nangarhar and the 4 in Balkh) was given a tractor and accessories (12)
	2. Pilot threshers (12)	In 2011, each Producers’ Cooperative (of the 8) was given a thresher (12)
	3. Wheelbarrows granted to producers (571)	In 2009, 204 wheelbarrows given to Nangarhar oil crop producers and 367 given to Balkh producers
	4. Subsidized inputs for oilseed production costs (50% equity transfer)	In 2009, 1000 cotton producers in Nangarhar received 50% equity transfer payment (~\$300/producer). In 2010, 2000 cotton producers in Nangarhar and 2000 oil crop producers in Balkh received 50% equity transfer payment

		(~\$300/producer) on the cost of production for 0.4 hectare of oil crops.
	5. Cotton de-linting machines for the Oil Processing Cooperatives (2)	Procured and in the process of being delivered; one for each of the Oil Processors' Cooperatives.
	6. Cotton de-linting machines for each of the Oil Crops Producers' Cooperatives (12)	Twelve are in the procurement process.
Livestock value chain (Kabul and regional cities)	1. Conduct prefeasibility of slaughterhouse development ⁵	In 2008, a team of five consultants completed a prefeasibility for livestock slaughterhouses in Kabul and regional cities.

⁵ As part of the Agriculture Marketing Infrastructure Project of the Asian Development Bank

6.2 Second Component – Credit

An On-lending Agreement was signed between the Islamic Republic of Afghanistan and the MISFA. The ADB, however, decided not to fund MISFA with (a) a credit line targeted for potential investors in RBSP-supported value chain interventions (b) nor the research work on Sharia-compliant and agricultural loan products. This meant that would-be investors in RBSP-supported value chain interventions would not have access to loans from MFIs that were recipients of the RBSP-funded credit line to MISFA. This meant that more of the RBSP interventions would need to be part of the pilot or 50% equity transfer program.

6.3 Third Component – Project Management

There were several administrative and management modifications that impacted the implementation of the RBSP Project. The PIU was not established before the start date (10 November 2007) of the RBSP. The first Project Director was not hired and in his working station until about one year after the start date. The first Project Director was not effective in carrying out the Terms of Reference of the Project Director, including, but not limited to, organizing the PSC and the meetings of the PSC, assisting in getting the DAIL to provide office space for the RBSP provincial staff, facilitating the credit line with MISFA, assisting in the procurement of core budget-funded goods and services, etc. He resigned in 2009. The Finance Officer of the PIU was not hired until 2009. He was effective in getting the MAIL and the MOF to approve core budget-related expenditures. However, since it took until 2010 before the new (Interim) Project Director was hired and working, the Finance Officer was not directed by a Project Director. Finally, when the new Interim Project Director was hired, the procurement that was done under his direction was poorly done and most of it cancelled. He, then, was moved out of the Project Director's position. The Project Director position then remained vacant again spring 2011 when the present Project Director was hired. The Consultant and the Consultant's procurement staff did most of the core budget procurement in 2009 through early 2011. The Project Implementation and Coordination Unit Director of MAIL were helpful in approving the procurement items during this time.

6.4 Fourth Component - Monitoring and Evaluation

The Consultant's Monitoring and Evaluation Manager and/or Officer was regularly involved in monitoring, evaluation, and reporting of the RBSP's field activities. The MAIL was helpful in inspecting many of the procured items (buildings, equipment, and machinery) that needed MAIL approval before they could be officially handed over. In the original monitoring and evaluation implementation plan, two monitoring and evaluation reviews were planned. However, this was changed to one Project Impact Assessment in October-November 2010. The Consultant hired an International Monitoring and Evaluation Specialist. He Impact completed an Assessment Report in December 2010. The report was completed very professionally and provided vital information on the results of the project.

7. Results, Impact, and Expansion of Investment in Sustainable Activities

The methodology adopted for assessing the results was robust since it assessed impact experienced by the value chain participants and the various segments of the value chain, as well as the relevance and efficiency of the interventions to increasing incomes and their sustainability.

The full description of the impact of the value chain activities and the increased income and investment from each of the activities is estimated by value chain in the sections below. In some sections, the impact was projected because the production results of potatoes and oil crops were not determine-able until late September/October 2011.

7.1 Potato Value Chain

The value chain activities have made an impact in increasing the area of potato cultivated, increasing the potato yield, increasing in number and investment in potato storages and investment by producers in potato , reducing postharvest losses, increasing income of potato producers, increasing income of Cooperatives, etc. Some of the highlights of the value chain development since 2008 were as follows:

- The results from the past two years' potato value chain activities indicate an increase in incomes to RBSP beneficiaries (potato farmers and traders) of about \$4,430,520 (\$1,635,830 in 2010 and \$2,794,690 in 2011).
- During the Project period, the RBSP demonstrated best practices through its on-farm demonstrations, field days, and extension services. The area of potato cultivated (versus wheat) increased from <50% to >60%. The yield of potato increased by about 14.4% since 2009, that is, at least 2 metric tons per hectare.
- Since 2008, the production and productivity of potatoes in Bamyan has increased. Production, according to the MAIL statistics, increased to 213,000 metric tons in 2010.
- In 2010, potato prices at farm gate averaged about \$206/mt at harvest and about \$276/mt after storage. The price of potatoes has increased over the years, but the increased margin for storing potatoes has remained about the same. Note that Pakistan, which is deficit potatoes in October and November, continues to have strong interest in buying Afghan potatoes in October and November.⁶
- The RBSP assisted in the formation of 8 Potato Producer Cooperatives. The Cooperatives were registered, elected officers, established by-laws, etc. The Cooperative leaders and members received technical and administrative training. The Cooperatives were strengthened by the RBSP with a tractor and farm implements, including a wheat thresher.
- During the Project period, the RBSP facilitated the construction of 1,100 potato storages with a capacity of 25 mt.

▫ *Participating Farmers increased their income:*

• *14% due to increased yields*

• *34% due to post-harvest improvements*

⁶ Based on inquiry from potato trader in Lahore, Pakistan (2011).

- The RBSP hired an international potato specialist to train potato farmers on potato production and post-harvest best practices and to examine large-scale storage. Large-scale storage was deemed infeasible because the potato farmers did not want their potatoes stored off their farm and because the cost of cold storage of potatoes in Kabul in large-scale facilities with forced air produced by generators was prohibitive.
- The RBSP organized a meeting with over 50 stakeholders and First Microfinance Bank. The meeting gave the stakeholders an opportunity to understand what credit was available and under what terms and conditions.
- The RBSP worked closely with the DAIR Director, Department Heads, and Extension staff in carrying out all value chain activities. The RBSP also trained the Government extension agents in field days and other training venues.

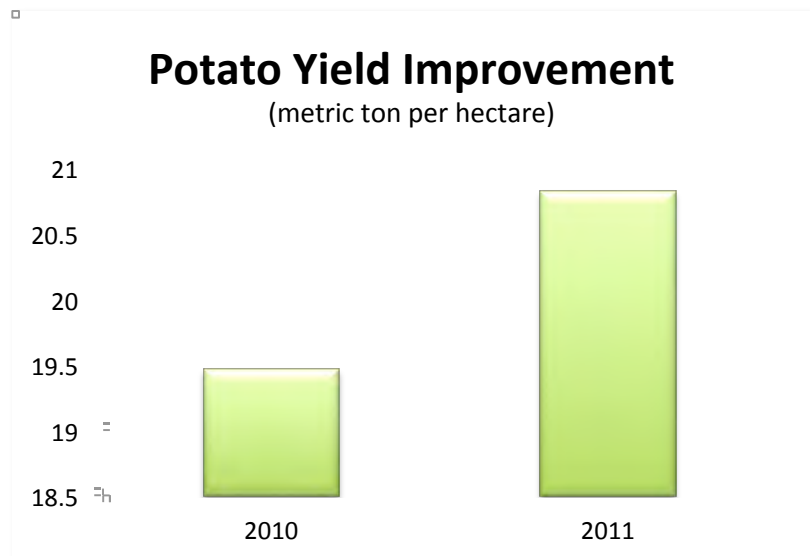
More detailed information on the impact of the value chain interventions is described below.

7.1.1 Increased potato growing area from wheat

In Bamyan in 2011, the increase in potato growing area was from 60% of total cultivated area in 2010 to at least 65% of total cultivated area. The increase of 8.33% resulted in an additional 107.47 hectares of potato-cultivated area by the 1411 RBSP-supported producers in 2011. Since 2009, there was about a 19% increase in the potato-cultivated area by the 1411 farmers. The additional area of potatoes is projected to result in an increase of 2091.36 additional metric tons of potatoes (at 19.46 mt/ha) with a value (at the 2010 average farm gate price of \$206.50/mt) of \$431,867. The equivalent value (at \$200/mt) of wheat produced (at 2.5 mt/ha) on the 64.48 hectares was projected to be \$32,240. The net increase in the value of the additional potatoes over wheat was projected to be \$399,627.

7.1.2 Increased yield of potatoes (extension TA, on-farm demos, field days)

As a result of the RBSP providing regular extension services to the 1,411 farmers that RBSP has been supporting, the average yield of these farmers is projected to increase in 2011 by at least 7% more than the average yield of the 1,411 farmers in 2010. The increased yield (from 19.46 mt/ha to 20.82 mt/ha) will result in about 1919 additional metric tons of potatoes produced by the 1411 farmers. The value (at the 2010 average farm gate price of \$206.50) of the 1919 additional potatoes is projected at \$396,265.



7.1.3 Increased potato prices

We project that the prices at harvest time and off-season will not increase from 2010.

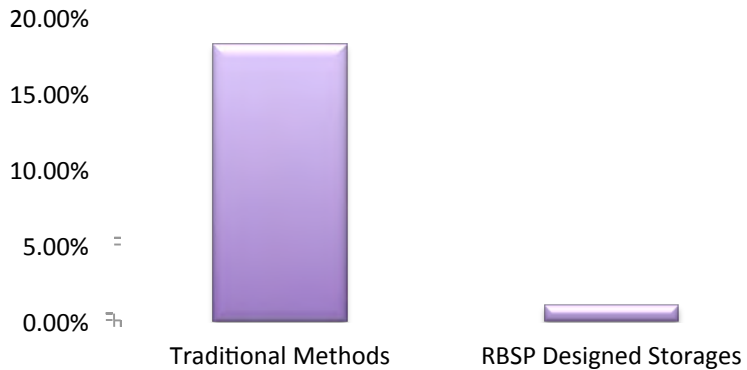
7.1.4 Increased modern potato storages and reduced postharvest losses

In 2011, the RBSP assisted 535 potato producers in constructing modern potato storages. The additional modern storages will result in much lower postharvest losses of potatoes by these producers during the winter months. The decrease in projected postharvest losses from 18.4% (based on surveys of farmers' storage results storing potatoes in traditional potato storage) to less than 1% (mostly due to shrinkage from moisture loss) is projected to save about 1815 mt of potatoes from reduced losses (assuming an average of 19.5 mt of potatoes are put into each modern storage after harvest). The 1815 mt of

potatoes represent an increase in income to potato farmers of \$500,940 (based on a potato price after storage of \$276/mt).

Besides the newly constructed 535 storages, there are the other 565 modern storages that were constructed since 2008. These continue to provide improved storage with reduced losses down to 1%. The total savings from the reduced losses in the 565 storages is projected to be \$529,030.

Post-Harvest Losses
(% of total crop lost during storage)



BEFORE

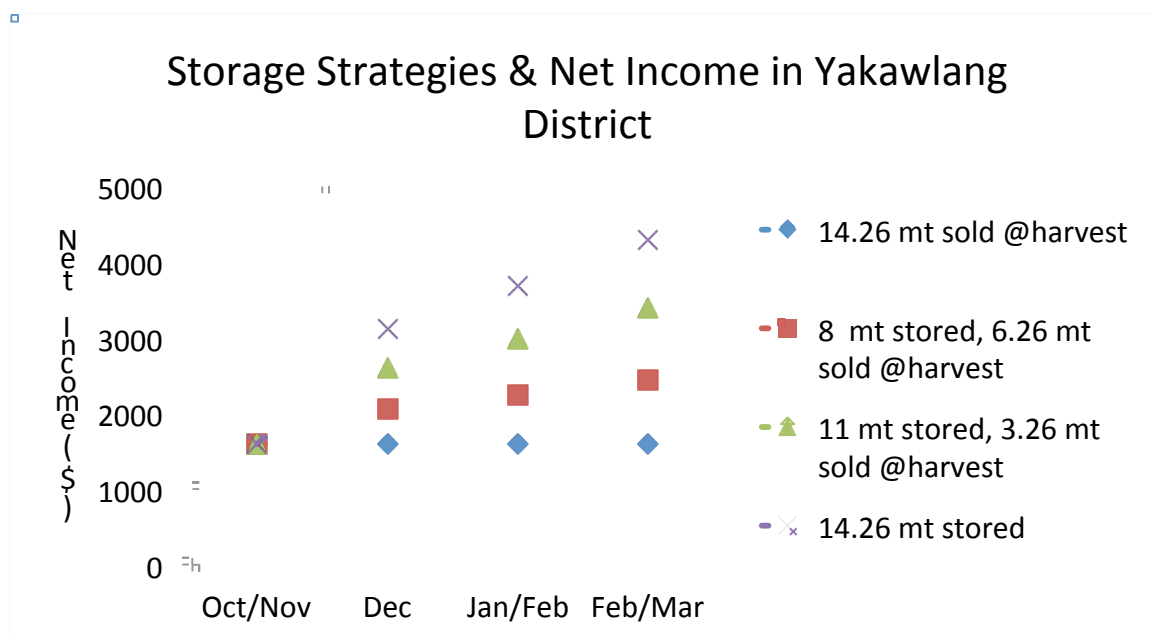


AFTER



7.1.5 Increased income from higher prices after storing ware potatoes in modern storages

Bamyan potato farmers have used their traditional storages for, primarily, storing their seed potatoes until the following planting season. With only about 1.6 mt of seed potatoes traditionally stored by each potato producer, the modern storages have provided the producers the assurance that their ware potatoes can be stored with only shrinkage losses and can be sold at a significantly higher price (21%-66% higher price with the average about 34%) after storing during part of the winter. In 2010, the average price received by farmers for stored ware potatoes was about \$276/mt). The increase in incomes (about \$69.50/mt of stored potatoes) to the 1100 potato farmers with modern storages storing 17.9 mt more potatoes than in traditional storage was projected at \$1,368,455.



7.1.6 Increased income generated by Cooperatives

The Potato Producers' Cooperatives, with a total of 171 members, have been renting (in April-December) their tractors and accessory farm implements and threshers to their members and, in some cases, to non-members. In 2010 seven of the eight Potato Producer Cooperatives generated an average net income of \$2100/Cooperative. In 2011, the seven Cooperatives generated an average of \$435/month/Cooperative⁷. The Cooperatives used the income generated to purchase urea fertilizer (and cement in the case of one Cooperative) for members of the Cooperatives. One Sadeqat Potato Producers' Cooperative used its tractor rental income to buy over \$18,000 of fertilizer for its members. The fertilizer was provided to the members on credit. The Cooperatives received a net income of \$0.20/bag to \$1/bag of fertilizer purchased and supplied.

7.1.7 Increased investment in potato storages, tractors, and oil processing facilities

Potato producers have invested \$4,000 (50% of total investment – with the other 50% invested by RBSP) in each of the 535 potato storages constructed in 2011. The total investment by farmers was \$4.4

⁷ Data through May 2011

million over the program period. The producers have also invested \$7,000 (50% of the total investment – with the other 50% invested in by RBSP) in each of the 40 equity tractors and farm implements. The total investment was \$280,000. The members of the two Edible Oil Processing Cooperatives have invested approximately \$400,000 in the edible oil processing facilities, land, perimeter wall, electrical connections, etc.

7.2 Edible Oil Value Chain

The value chain activities have made an impact in increasing the area of oil crops cultivated, increasing the yields of oil crops, increasing the storage of oil crops, equipping the Processors’ Cooperatives with cotton de-linting equipment, increasing the investment in oil processing facilities, increasing income of oil crop producers, increasing income of Cooperatives, etc. Some of the highlights of the value chain development since 2008 were as follows:

- The results from the past two years’ edible oil value chain activities indicate an increase in incomes to value chain stakeholders (producers and processors) of about \$1,047,410 (\$720,192 in 2010 and \$327,218 in 2011).
- Since 2008, the production of oilseeds in Balkh and Nangarhar has increased by 76% (principally cotton) and 116% (all cotton), respectively. The oilseed yields have increased 73% (principally cotton) and 73% (all cotton), respectively.
- The additional 30 metric ton capacity of the pilot screw presses and facilities provided by the RBSP to the Oil Processors Cooperatives in Balkh and Nangarhar is projected to add about 3,900 metric tons of edible oil on the market once additional refining equipment is added. This is just over 1% more oil to substitute for imported oil.
- In terms of prices, the farm gate price of cottonseed has increased from of different types of edible oil have increased since 2008. In 2008, the estimated return to cotton cultivated land was about \$431/hectare. The total revenue and total costs from cotton production was about \$1,087/hectare and \$656/hectare, respectively. In the crop year for 2010, the estimated return to cotton cultivated land was about \$1,345/hectare. The total revenue and total costs from cotton production was about \$2,185/hectare and \$840/hectare, respectively.
- Pilot oilseed storage facilities (1000 metric ton capacity facilities) have been built at the oil-processing site of the Oil Processors Cooperative.
- The RBSP assisted the two Oil Processing Cooperatives in Balkh and Nangarhar in establishing pilot oil processing and packaging facilities. The oil processing facility in Balkh is located on land bought by the Edible Oil Processors’ Cooperative. The facility in Nangarhar is located on land acquired by the Oil Processors’ Cooperative in an industrial park about 10 kilometers from Jalalabad. The two Cooperatives have invested a combined \$400,000 of their own members’ money in the land, perimeter walls, the electric hook-up, etc., of the facility.

Cotton Seed Value Chain

Increased Yields	73%
Increased Incomes	116%

More detailed information on the impact of the value chain interventions is described below.

7.2.1 Increased area shift to oil crops from maize

In Nangarhar, based on a 2011 survey of 81 RBSP-supported oil crops farmers, the farmers have cultivated an average of 0.71 jeribs (0.142 hectare) more cotton than in 2010. That is an 18% increase in per farmer-cultivated area over 2010 and a 116% increase over 2008. For the 2000 farmers supported by RBSP, this increase in area cultivated in cotton would be 17.5 jeribs (3.5 hectares). The additional cotton production from 3.5 hectares of cotton would be based on 2010 average yields would be 7.482 metric tons. The value of that cotton production (versus the value of maize production) would be (based on 2010 prices of \$1326.09/mt - \$173.91/mt) \$8,621.

In Balkh, based on a 2011 survey that represents 2,000 RBSP-supported farmers, the 2,000 farmers cultivated 214 more hectares of cotton, 64 less hectares of sesame, and 208.6 hectares less flax. The increase in the area of cotton cultivated was 16% over 2010 and a 76% increase in area cultivated to cotton from 2009. The decrease in the area of sesame and flax cultivated was 35% and 18%, respectively. The decrease was due to the high variability in yield of sesame and flax (rain-fed crops) versus cotton (irrigated crop). There was a decrease of 32% and 13% in production of sesame and flax, respectively, cultivated since 2009. The additional cotton production from the 214 additional hectares would be 330.63 metric tons. The value of that cotton production (versus the value of maize production using the same prices as in the above paragraph) would be \$380,945. The decrease in the production of sesame and flax (assuming that the rain-fed land was left fallow) would be about 36.8 metric tons and 121 metric tons, respectively. The value of the sesame and flax not production would be about \$12,432 and \$40,350. The net increase in value of the projected oilseed production would be \$328,163.

The total value of the area shift to oil crops in Nangarhar and Balkh is \$336,784.

7.2.2 Increased yield of oil crops (extension TA, on-farm demos, field days)

In Nangarhar, based on the same survey of 81 farmers, the farmers are projected to increase their average yield of cotton to about 460.86 kg/jerib (2304 kg/ha). That is a 7.7% increase in yield over 2010 average yield of 427.593 kg/j (2138 kg/ha) and a 73% increase over the 2008 average yields. The value of that 7.7% increase in yield from 2010 to 2011 would be \$345,216 (1567.9 hectares x 0.166 mt/ha * \$1,326.09/mt).

In Balkh, based on the same representative survey of the 2000 farmers, the farmers are projected to have their average yield of cotton decrease to about 304 kg/jerib (1520 kg/ha). That is about a 1.6% decrease in yield over 2010 average yield of 309 kg/j (1545 kg/ha) and a 73% increase over the 2008 average yield for cotton. The decrease in value of that decrease in yield is projected to be about \$43,894. The farmers that grow sesame and flax are projected to decrease their yields from about 115 kg/j to 114 kg/j and 116 kg/j to 85 kg/j, respectively. The loss in value of that decrease in yield is projected to be about \$305 and \$4,420, respectively. The total decrease in value of the three oilseed crops is projected to be about \$48,619.

The total value of the change in yields of the three oilseed crops in Balkh is \$296,597.

7.2.3 Increased oilseed prices

No increase over 2010 is expected.

7.2.4 Increased oilseed storage

The RBSP has technically and financially supported the Edible Oil Processing Cooperatives in Nangarhar and Balkh provinces by facilitating each processing plant with 1000 metric ton capacity, oilseed storage buildings. The storages will allow the Processing Cooperatives to buy the oilseeds at harvest time when prices are relatively low and store the oilseeds until they are processed. The difference in the procurement price of the oilseeds at harvest versus 2-4 months later is projected to be about Afs 5/kg (or about \$0.011/kg equal to \$11/metric ton) lower. With 2,000 mt procured, the Processing Cooperatives are projected to save \$22,000 in 2010. The 2,000 mt would otherwise have been procured by oilseed traders.

7.2.5 Increased in income generated by Cooperatives

The twelve Oil Crops Producers' Cooperatives in Nangarhar (where Cooperative membership is as high as 818 members in the Qala-e-Haji Sahiban Cooperative) and Balkh have generated additional income from renting their tractors and farm implements to members at the rate of Afs 450/hour (\$9.78/hr) to Afs 650/hour (\$14.13/hr), respectively. In 2010, the eight Nangarhar Cooperatives generated an average net income of \$300/month/Cooperative. In 2010 (Nov, Dec) in Balkh, the four Oil Crops Producers' Cooperatives collected Afs 59,240 (US\$1288) or about \$161/month/Cooperative from leasing the Cooperatives' tractors and implements. The Cooperatives have been renting their tractors, farm implements, and threshers to members in 2011. The Nangarhar Cooperatives have been making about the same net income per month as in 2010. In 2011 in Balkh, from January-June, the four Cooperatives in Balkh collected a total of Afs 114,807 (US\$2496), with an average of \$156/month/Cooperative). The Cooperatives will be using the income generated to purchase fertilizer, seed, agricultural chemicals, and agricultural tools for their members.

7.2.6 Increase in de-linting cotton

The Edible Oil Processing Cooperatives were provided pilot de-linting cotton machines by the RBSP to assist the Cooperatives in removing the remaining lint from the cottonseeds. By de-linting the cottonseeds, the Cooperatives will be able to process more efficiently the cottonseeds. By being able to de-lint the cottonseeds themselves, the Cooperatives in Nangarhar and Balkh will be able to save an estimated \$2/metric ton of cottonseed de-linted. Each of the 12 Oil Crops Producers Cooperatives in Balkh and Nangarhar are also being given one cotton de-linting machine by the RBSP. By de-linting the cottonseeds, the Cooperative members will be able to add value to the cottonseeds they sell to the oil processors.

7.2.7 Increase in oil processing and packaging

The Edible Oil Processors' Cooperative will be able to process edible oil starting in late 2011. The projected quantity of oilseeds that will be processed and packaged by the Nangarhar Coop and Balkh Coop starting in 2011 are about 18 mt/day and 12 mt/day, respectively. The Cooperatives are projected to process edible oil for at least 6 months the first year with the processing rate to increase each ensuing year. The 30 mt capacity pilot edible oil processing plants will have processed 3,900 mt cottonseed and extracted (assuming a 14% extraction rate) about 546 mt edible oil the first year. The unrefined cottonseed oil sells (as of June 2011) at retail for about Afs 70/kg and Afs 82/kg in Nangarhar and Balkh, respectively. The local traditional unrefined oil processors obtain a profit of about \$238/mt of oil processed. Refined, imported sunflower, canola, and palm oils sell at retail for about Afs 108/kg, Afs

106/kg, and Afs 77/kg. Once additional refinery equipment is installed, refined cottonseed oil produced by the RBSP-supported Edible Oil Processors' Cooperatives is projected to sell for about Afs 85/kg (since palm oil – a less quality edible oil – sells for Afs 77/kg) and Afs 97/kg in Nangarhar and Balkh. This will lead to an increase in net income of about \$278/mt (of oil) more from processing and packaging edible oil (as compared to the existing relatively crude edible oil processing). The total return on the processing of 3900 mt of cottonseed in 6 months of operations is about \$151,788.

7.3 Wool/Carpet Value Chain

The value chain activities have made an impact in the return to and the productivity rate of wool spinning, increasing the rate and profitability of carpet weaving, increasing the efforts in carpet marketing, etc. More detailed information on the impact of the value chain interventions is described below.

7.3.1 Increase in wool spinning

The RBSP did not address the domestic wool supply situation. Most of the wool used in the carpet industry is imported from regional countries (Pakistan and Iran). The RBSP had intentions to assist Afghan traders with buying Ghazni wool, competitive quality wool produced locally that is typically bought in the largest quantities by Pakistani wool traders who are financially better off than the Afghan traders primarily since the Pakistani traders have easier access to credit. The RBSP had planned to assist the Afghan traders in accessing credit so that they could buy the wool and supply the wool spinners (with spinning wheels) supported by the RBSP. However, the RBSP was not able to implement the wool procurement activity because the Ghazni wool would have to be bought in Ghazni province, a province not included in the RBSP Project.

□ **Wool spinning wheels increase yields 4X**

327 spinning wheels and training were provided in the three provinces

The RBSP did address the wool spinning constraints of the wool spinners. The RBSP distributed 327 spinning wheels to wool spinners in the three targeted provinces. The mechanical spinning wheels allowed wool spinners to spin 2-2.5 kg of wool per day (~7 hours), about 4 times more than the hand spinning method they had used before. Many wool spinners who are members of the RBSP-supported Carpet Cooperatives spun wool produced from their own



Members of Carpet Weavers Association receiving training.

sheep. In June 2011, 16 wool spinners from two Cooperatives in Bamyan province reported having obtained and spun 630 kg (about 40 kg per spinner) from 587 sheep. In addition to their own sheep's wool, some RBSP –supported wool spinners have spun wool for wool traders for a fee up to Afs 50/kg. In Bamyan, some wool spinners have spun up to 100 kg wool (about 40 kg wool from their own sheep) with their mechanical spinning wheels. Before the wool spinners were supported by the RBSP with mechanical spinning wheels, most of the wool spinners only spun the wool that they got from their own sheep. The impact of the spinning wheels on those wool spinners that have spun wool for a fee has been increased income from spinning. The increased income from spinning for a fee is estimated at about \$60 per year per spinner. With 327 spinners, the total increase in income is estimated at about \$19,620 per year.

The RBSP intended to establish wool-scouring facilities for cleaning unspun wool the industrial way. The RBSP had recruited an international Wool Specialist to source and install the wool scouring equipment and train Afghans in operating the equipment, however, by the time ADB approved the Wool Specialist, there was not sufficient time to complete the wool scouring procurement and installation. Without a way to industrially clean the wool produced in Afghanistan, the Afghan handmade carpet industry will not be able to assure international carpet buyers of the hygiene of their carpets. In order for the international carpet buyers to meet the demand for quality-assured, handmade carpets, more and more safeguards need to be followed by the Afghan carpet weaving and processing industry. The introduction of wool scouring equipment is just one of many technological advances that need to be integrated into the industry in order to sustain the industry.

7.3.2 Increase in carpet weaving

The carpet industry in Afghanistan was hit by the worldwide recession in 2009. Since then the slow growth in the international demand for carpets has contracted the Afghan carpet industry. To jump start the weaving of carpets by the RBSP-supported carpet weavers, the RBSP assisted the carpet weavers in accessing quality carpet inputs, in designing carpets that closely matched the designs demanded by the buyers, in obtaining steel looms to replace wooden looms, in following best carpet production practices, and in carpet marketing. The RBSP provided pilot carpet inputs to the carpet weavers to give them a chance to produce a carpet(s) that once sold would give them the money to buy quality carpet inputs and repeat the process. By having their own looms versus renting



looms (for US\$4-5 per square meter or Afs800/month), the carpet weavers received more income. These interventions led to more independence for the carpet weavers. For those RBSP-supported carpet weavers that adopted the technologies and produced more marketable carpets, they increased their incomes from carpet weaving and marketing. The increase in incomes from these RBSP interventions was estimated to be about \$184,567 in 2010. This is based on the average RBSP-supported household with 4 carpet weavers making on a monthly basis between US\$90 and US\$150 in wages in Bamyan and Nangarhar and US\$135 and US\$195 in Balkh. The \$184,567 is likely to be duplicated in 2011.

7.3.3 Increase in international carpet marketing

The RBSP worked with Afghan carpet traders from the targeted provinces in accessing international carpet markets. More specifically, the RBSP helped carpet traders

- Prepare for the Domotex Carpet Exhibition in Hanover, Germany and then accompanied 15 carpet traders from the RBSP targeted provinces to the show
- Improve or create their own websites to make them more effective carpet marketing tools
- Understand the feasibility of establishing carpet warehouses/showrooms in Istanbul, Turkey.

In 2009, Peer Mohammad, RBSP Deputy Team Leader, and Qais Akbar Omar, RBSP Carpet Specialist, assisted Afghan carpet traders when they participated in the Domotex Carpet Exhibition in January 2009. Though the Exhibition provided the Afghan traders with a greater awareness of the international handmade carpet industry, the traders did not land any major deals with the international buyers at the Exhibition. This was partially due to the fact that the Afghan traders were mostly new faces on the international scene and therefore did not have buyers that had purchased carpets from them before.

In 2010, Ms. Lili Francklyn, the RBSP Carpet Website Design Specialist, trained three Afghan website specialists in designing websites for carpet traders. In addition, the trained Afghan website design specialists designed websites for 10 carpet traders or Carpet Cooperatives to better showcase and market their carpets. It will take, however, a combination of efforts in carpet marketing to get the handmade carpet business expanding in Afghanistan.

This is where the relocation of the Afghan carpet traders' warehouses and showrooms in Istanbul, Turkey, comes into the picture. The feasibility for establishing Afghan carpet trading shops (warehouses and showrooms) in Istanbul was presented at the 2010 Carpet Marketing and Strategy National Workshop conducted by the RBSP. The RBSP had over 70 carpet value chain stakeholders participating. A few of the Afghan carpet traders from Mazar had already shipped by container handmade carpets to Istanbul and set up shop at the Duty Free Zone. The RBSP Carpet Marketing Specialist, Steve Landrigan, not only acknowledged that these Afghan traders had already set up, but further emphasized the need for more Afghan carpet traders to follow this lead. Many Afghan carpet traders expressed interest in setting up in Istanbul especially after Mr. Landrigan was able to convince them on the advantages of setting up in Istanbul and the feasibility of doing so.

8. Follow on Investment and Technology Development in Value Chains

8.1 Potato Value Chain

8.1.1 Seed

Improved existing or new varieties – Improved existing varieties (e.g., KCM) and new varieties of potatoes are needed in Afghanistan. Since the wars started about 30 years ago, Afghanistan has not brought in pure, certified seed potatoes to improve the vigor of existing varieties nor conducted research on potato varieties that has led to new releases. Improving yields, disease resistance, and market attractiveness are the hallmarks of any successful research program on agricultural crops. Importing pure, certified seeds or mini tubers of existing varieties of potatoes should be an immediate intervention by MAIL. Along with that, an in-depth study on the varieties of potatoes that are available internationally and adaptable in Afghanistan needs to be done. This should include the International Center for Potatoes (CIP), which has a branch office in Delhi, India. Then, those varieties that are selected need to be brought into the country following the SPS rules and regulations of Afghanistan.

Similarly, for oilseeds, the regimen should follow the importation of pure seed of oilseed varieties that are considered the best in Afghanistan. A research program that identifies the best varieties of oilseeds for adapting to the Afghanistan agro-climate and market demand should be initiated. Once identified, the certified seed of these oilseed varieties should be trialed and the best varieties released.

8.1.2 Certified seed potato producers

The general consensus among agronomists that have worked with the potato producers in Bamyan profess that the seed potato produced in Bamyan is generally clean because the potatoes do not get infested by aphids. This does not mean the potatoes are disease free. Very few potato producers in Bamyan produce for seed potatoes. Nearly all the potato producers produce ware potatoes, separate the small potatoes from the larger potatoes, and use the smaller potatoes for seed the next year. The RBSP has demonstrated to the potato producers the best practices for producing seed potatoes. There is a monetary incentive for producing seed potatoes. There are interested potato producers in Bamyan who are interested in growing for seed potatoes. These interested producers need to know what it takes to produce certified seed potatoes. The certified seed wheat producers in Afghanistan have come a long way since the early work of the USAID-funded RAMP project (2003-06) and the follow up work by FAO. The National Seed Producers Association, composed of over 90 seed producers, is an organization that has leaders that can assist the interested group of seed potatoes in Bamyan on how to certify their seed potatoes.

8.1.3 IPM, soil testing, fertilizer recommendations

The potato demonstrations in Bamyan should be more scientifically formulating, among other things, the quantity of fertilizer needed for different soil types. Potato production research on representative soils should be conducted that looks at optimal fertilization, irrigation, disease control and IPM, crop rotation, etc.

8.1.4 Grading and sorting of ware potatoes

The Bamyan potato producers are not fully aware of the marketing opportunities that exist with different grades and quality of potatoes. Even if existing varieties are improved or new varieties are introduced, the marketing of the potatoes should follow market-driven sorting and grading standards.

8.1.5 Large scale storage and forced air

Large Afghan traders, not producers, normally store potatoes in large-scale facilities. The feasibility of large-scale potato storage will become more feasible as more dependable electric power is made available in Afghan cities. At this time, the feasibility of large-scale, potato storage is also dependent on how profitable alternative uses (when not storing potatoes) of the large-scale are. An in-depth feasibility of large-scale potato (and other commodity) storage needs to be done.

8.1.6 Small scale storage, testing, and monitoring

Trying to improve the small-scale potato storage results in Bamyan needs to include regular testing and monitoring. Temperature, humidity, brix testing, etc. should be done by storage operators to not only better understand the conditions in which they are storing their potatoes but also to be able to market their potatoes at the appropriate time.

8.1.7 Price Information dissemination

The Bamyan potato producers rely to a large extent on a hand full of Bamyan and other potato traders to know what the current potato prices are in different cities. The RBSP-supported Potato Producer Cooperatives are in a position to market their potatoes when it is most profitable to do so. The RBSP is helping to set up shops on top of potato storage to serve as a pilot where market price information is disseminated from, while the shops conduct income-generating activities.

8.1.8 Bagging and international marketing

Once the Bamyan potato producers understand and practice the sorting and grading that makes economic sense, the next step for them will be to determine the feasibility of bagging potatoes in, for example, 5-kg bags. The small bags of uniform-sized potatoes are what the urban consumer prefers over loose potatoes or large gunnysacks of potatoes.

8.2 Edible Oil Value Chain

8.2.1 Seed

Improved existing or new varieties – Improved existing varieties (e.g., Acala for cotton) and new varieties of preferred oilseed crops (especially, sunflower, safflower, canola, cotton, flax) are needed in Afghanistan. Afghanistan needs to bring in pure, certified oilseeds to improve the vigor of existing varieties. Along with that, an in-depth study on new oilseed varieties that are available internationally and adaptable in Afghanistan needs to be done. Importing foundation and/or certified seeds of the existing and new varieties of these preferred oilseed crops should be an immediate intervention by MAIL. Once imported, research trials on new oilseed varieties of preferred oilseed crops needs to be conducted that lead to new releases. Improving yields, disease resistance, drought tolerance, and high market demand for edible oil and confectionary products should drive these research trials.

8.2.2 Oil seed certified producers

Once the existing varieties and/or new varieties of oil crops are imported, trialed, and released, oilseed producers interested in becoming certified seed producers will need to be recruited. The oilseed seed producers should then be in contact with the National Seed Producers Association to understand more about the certified seed policies and procedures.

8.2.3 IPM, soil testing, fertilizer recommendations

The oil crop demonstrations in Bamyan should be more scientifically formulating, among other things, the quantity of fertilizer needed for different soil types. Oilseed production research on representative soils should be conducted that looks at optimal fertilization, irrigation, disease control and IPM, crop rotation, etc.

8.2.4 Sourcing oil seeds from producers

The RBSP-supported, Edible Oil Processors Cooperatives in Balkh and Nangarhar need to closely link with the oil crop producers and their Cooperatives in order to procure and store the large quantity of oilseeds needed to keep the processing equipment running on a viable basis. NAPCOD, the French Cotton Company (formerly Spingar) that owns (partially – with the Afghan Government) and operates the large cotton processing plants in Mazar and Kunduz, has been purchasing much of the raw cotton produced by the cotton producers in northern Afghanistan. Much of the cottonseed that is separated by NAPCOD's gin is kept to supply the cotton producers the next year. The role of the Oil Processors Cooperative in Mazar needs to complement the cotton value chain activities of NAPCOD. The Oil Processors Cooperative could be a direct buyer of all the extra cottonseed that NAPCOD has after ginning. This is a viable possibility since NAPCOD produces only a minor amount (30 mt) at its factory.

8.2.5 Testing seed before processing for fatty acid, etc.

Before the Oil Processors' Cooperatives press the oilseeds, the oilseeds need to be tested for fatty acid concentration, etc., in order to know more accurately what level of processing is needed. The Cooperatives need the proper instrumentation and a laboratory to conduct these assessments.

8.2.6 Testing edible oil for contents before labeling

Before the containers of edible oil can be labeled, the edible oil needs to be tested for its contents. For this, instrumentation is needed in the laboratory.

8.2.7 Installing edible oil refining equipment

The RBSP Project ran short of time in procuring the edible oil refinery (deodorizer, bleaching equipment, etc.), bottling equipment, and conveying equipment that was needed to process the edible oil. The technical specifications for the additional equipment were prepared and GOYUM Screw Press Company in India was nearly contracted to supply the equipment but time was too short. This equipment should be procured during RBSP-2, the proposed second phase of the RBSP Project.

8.2.9 Centralizing all bottling activities among Coop members

The members of the Oil Processing Cooperatives have their own small-scale oil presses that are not equipped with efficient filters and other processing equipment. However, once the refinery, bottling, and conveying equipment is in place at the Cooperatives' oil processing facilities in Nangarhar and Balkh,

the individual members could bring their crude oil to be refined and bottled at the Cooperatives' facilities.

8.3 Wool/Carpet Value Chain

8.3.1 Improved breeding for wool

The wool industry in Afghanistan will not provide the quality and quantity of wool that is demanded by the carpet industry and other major users of wool until there are significant numbers of sheep that give high quality wool. The Ghazni wool, the best quality wool in Afghanistan, comes from relatively few sheep that are grown for both meat and for wool. A pre-feasibility study is needed to determine what are the costs and benefits of importing (semen) and producing the appropriate sheep that provide high quality wool for the wool industry.

8.3.2 Wool quality control and sourcing

As part of the determination of the wool needed in Afghanistan, an assessment of the inherent quality of the wool currently produced in Afghanistan and the wool imported needs to be done. In addition, the quality of the wool that provides the best return to the producer needs to be determined. Once these quality tests have been run, the wool that is produced and the wool that gives the best return needs to be compared. That is where the shortcomings will be observed in the current quality of wool produced in Afghanistan. The next step would be to match the quality of the wool needed with the quality of the wool produced by raising sheep of a certain type.

For sourcing wool, the RBSP planned to assist Afghan wool traders in buying raw Ghazni wool and supplying it to the wool spinners that were supported by the RBSP. However, this was not done because the buying activity would have taken place in Ghazni province, which was not a targeted province of the RBSP Project. Since most of the Ghazni wool is purchased by Pakistani traders and taken out of the country, Afghan wool traders are unable to supply large quantities of the best quality wool to the carpet industry in Afghanistan. The Afghan traders need to have the means (through credit) to buy these large quantities of Ghazni wool. The Carpet Cooperatives could contract with wool traders to have this wool purchased and supplied to them. If the Carpet Cooperatives had facilities to card and wash (scour), the Cooperatives could provide that service for their members at a fee.

8.3.3 Scouring

In addition to assessing the inherent quality of the wool needed, the cleanliness of the wool before it is used in weaving carpets, etc., needs to be assessed. Most wool produced in Afghanistan is adequately carded and washed to remove the contaminants. Consequently, the locally produced wool is spun and weaved before it is carded and washed properly. This is part of the reason why such harsh chemicals are used on carpets to wash them. To address the cleanliness of the raw wool, a feasibility of installing wool scouring facilities in Afghanistan needs to be done. Such facilities, if feasible, would produce clean wool that the users (weavers and others) would be assured of the quality. The feasibility and the potential installation of such facilities were in the implementation plan of the RBSP. However, because the approval for the feasibility and the installation was late, there was not enough time to complete the work before the Project ended.

8.3.4 Spinning

The spinning of wool in Afghanistan has been an age-old activity of the households with sheep. Hand spun or spinning wheel spun wool is considered better quality than machine-spun wool because the former wool is more tightly spun. The RBSP assisted the wool spinners by introducing mechanical spinning wheels to hundreds of wool spinners in the three provinces. However, the supply of raw wool produced in Afghanistan that meets the quality demanded of the user is very low. As a result, there is little wool spun on a commercial basis in Afghanistan. If larger amounts of high quality wool were produced in Afghanistan to meet the needs of wool users, there would be a greater need to commercialize wool spinning. Before that is likely to happen, the market demand for high quality wool will only increase if the demand for high quality, high-priced Afghan carpets increases. To increase the demand for high quality, high-priced carpets, many technological improvements in the wool/carpet value chain will be needed, including clean wool, organic dyes or dyes that are non-toxic and environmentally friendly, adherence to market driven designs, quality assurance programs, etc.

8.3.4 Carpet design institute

The RBSP extension workers in the provinces conducted 2-week carpet design workshops for members of the Carpet Cooperatives. The workshops were beneficial to the carpet weavers who have become more independent in accessing inputs, weaving their own designs, and marketing their carpets. For the hundreds of thousands of carpet weavers in Afghanistan, getting the right design and using the right quality inputs for their carpet makes a big difference in the sale-ability of the carpet. If the international carpet market turns around and the demand for Afghan handmade carpets significantly increases, the Carpet Cooperatives could consider establishing a Carpet Design Institute. The Institute would serve to train carpet weavers similar to what the RBSP did.

8.3.5 Carpet quality assurance

In some countries, such as Nepal, the handmade carpet industry has emphasized the quality assurance of their carpets. Quality assurance is a marketing method used to satisfy the customers. In order for the Afghan handmade carpet industry to thrive, the industry needs to keep up with not only the demands of its customers but also be as competitive as possible. Producing and marketing quality-assured handmade carpets is the way the Afghan carpet industry must go.

8.3.6 Carpet marketing (through websites and in Istanbul)

The RBSP assisted Afghan carpet traders in designing websites for exhibiting and selling their carpets. Even with these well-designed websites, the Afghan carpet trader is unlikely to have international buyers but Afghan handmade carpets through their website alone. The international buyers will have to meet the Afghan traders and see the carpets that they have observed on the websites. The RBSP investigated the feasibility of Afghan traders setting up carpet shops in the duty free zone of Istanbul. The number of carpets that need to be sold to be viable was determined and the results presented to Afghan carpet traders at the Carpet Marketing and Strategy National Workshop in Kabul in October 2010. International carpet buyers are expected to fly in to Istanbul from especially European countries once enough Afghan traders have set up shop. Some Afghans have already opened up carpet shops in the duty free zone in Istanbul and have shipped containers of carpets to their shops for sale. The

combination of carpet marketing websites and carpet showrooms in Istanbul is a development within the carpet industry that the RBSP has promoted and provide technical assistance and vital information.

9. Lessons Learned

9.1 Need to Continue Work with Groups of Stakeholders

In a relatively underdeveloped economy such as Afghanistan, the approach for industrial development must start with as much a broad-based foundation as possible. The foundation needs to include investment that leads to sustainable growth. Investment needs to come from groups of stakeholders in order to achieve the scale that industrial development requires. The RBSP's technical assistance in the potato and edible oil value chains exhibited this type of investment and involved groups of stakeholders. In the potato value chain, the most feasible investment by groups of potato farmers and traders was in small-scale potato storage. With large numbers of farmers having potato storages (with 50% of the investment coming from the farmers) that gave each of them a choice when to market their ware and seed potatoes, a significant segment of the potato supply chain was sustainably empowered. The formation of groups of potato farmers into cooperatives by the RBSP had multiple developmental benefits. The farmers as a cooperative purchased fertilizer and marketed their potatoes in higher volumes, thereby obtaining input cost savings and higher market prices.

9.2 Cooperatives Sustainable by Providing Valuable Services to Members

Cooperatives must have a way to generate income in order to reach sustainability. The RBSP identified the means by which the cooperatives could reach sustainability in the relatively short duration (three years) of the Project. The RBSP identified tractors and farm implements as a common need of the potato farmers. Acknowledging that farmers cultivated on average less than 2 hectares, the RBSP realized that a Producers' Cooperative could serve its members if the Cooperative had its own tractor and farm implements. The RBSP provided each of 20 Producer Cooperatives in 3 provinces with one tractor and multiple farm implements. The Cooperatives rented these tractors and farm implements to their members at a market price-reduced rate. With the income generated, the Cooperatives maintained the tractors and farm implements and invested the retained earnings in purchasing fertilizer for their members. By purchasing fertilizer in relatively large volumes, the Cooperatives saved the members of the Cooperatives money on the cost of the fertilizer and made a small margin on the fertilizer transaction with its members.

The RBSP has identified the marketing of the potatoes as one of the most significant concerns and risks of the farmers. To empower the farmers, the RBSP is helping establish shops (with cell phone access to daily market prices) on top of strategically located potato storages so that Cooperatives can access potato market information through a centrally located place of gathering.

9.3 Greater Likelihood of Adoption of Technologies and Expansion of Scale

Adopting technologies that give stakeholders better and sustainable access to product markets is good business. Technologies that are most readily adopted are those that

- are within the investment horizon and capability of the stakeholders
- do not have high barriers to entry

- provide significant operational improvement in cost effectiveness and/or technical and pricing efficiencies

Since there are few profitable and internationally competitive agribusinesses in Afghanistan with any scale, the highest priority value chain interventions are those that lead the primary producers to the next level downstream of added value and integration. This is done while the quality is improved and the volume of the product is enhanced. In the RBSP, modern potato storage development was the next level downstream for adding value (through off season, increased pricing) and integrating the potato producers with storage more directly to the wholesale markets in Afghanistan cities. While 1100 potato storages were being constructed in three years of the RBSP Project, the area shift from lower income producing wheat to higher income producing potatoes, the increased potato productivity, and the development of improved seed were ongoing interventions that led to more market-demand driven production practices and higher incomes for producers.

With the edible oil value chain, the oilseed producers operate far upstream from the processing of oil, the point in the value chain where the most value is added. Furthermore, in Nangarhar and Mazar, cotton is produced primarily by oilseeds farmers. This is because there are cotton processors that buy the cotton primarily for the lint. These cotton processors are able to sell the cotton internationally. The cottonseed oil produced by the small-scale oil processors is a low quality oil that sells for a relatively low price in the local market. On the other hand, the oilseed producers that produce, for example, sesame and flax in Mazar, are only able to sell the seeds to small-scale oil processors that produce a low quality oil that sells for a relatively low price compared to imported edible oil. By having assisted over 5,000 producers in increasing their productivity of oil crops, primarily cotton, and by assisting Cooperatives in establishing pilot, modern edible oil processing plants in Nangarhar and Mazar, the RBSP has stimulated the area shift from maize to cotton. The increased production of cotton will provide the RBSP-supported Edible Oil Processing Cooperatives with a significantly greater supply of cottonseed. To add value to the cotton, the RBSP has provided the Oil Crop Producers' Cooperatives with cotton de-linting equipment, which takes the remaining lint off the cottonseed so that the cottonseed can be more efficiently processed. The RBSP has assisted the Edible Oil Processors Cooperatives with the construction of seed storage facilities. The processors will be in a position to purchase and store more of the oilseeds directly from the producers, and be in a position to process oil on a continual basis without the supply constraints that the processors had previously. The RBSP has linked the Producers' Cooperatives with the Processors' Cooperatives to integrate their activities more efficiently and cost effectively.

9.4 Oilseed Production Preferences

The production of alternative (to cottonseed) oilseeds has not been adequately addressed. Presently, the cotton commodity prices are high giving oil crop producers more reason to continue to produce cotton over other oil crops. However, the cotton commodity prices are historically volatile and producers may not find cotton production as profitable as alternative oil crops in the future. The best alternative oil crops for the Afghan oil crop producers to consider are those oil crops that have a dual market, both oil and confectionary. The alternative crops that fit this criterion are sesame, flax, and sunflower. Some sesame has been exported by Afghan traders to Turkey for the confectionary trade. However, the quality and volume of these alternative oil crops that can be marketed for the international confectionary trade needs to be assessed. Meanwhile, the oil processing capability in Balkh

and Nangarhar should provide alternative oil crop producers with the market outlet they need to make informed decisions on what oil crops to produce.

9.5 Integrate Credit into Potato Storage and Oil Processing Investment

The high viability (payback in less than 4 years) of potato storage is well known within the potato industry in not only Bamyan province but in other provinces in Afghanistan, such as, Panjshir and Ghazni, where potatoes can be stored successfully. Since the beginning of the RBSP project, over 1100 Bamyan potato producers have invested at least \$4000 (of the \$8000 total investment) each in modern potato storage. The 1100 storages represent a significant percentage of the total (~5000) that are needed in Bamyan province to adequately store seed potatoes needed in the national market and ware potatoes that can be sold both domestically and internationally at higher prices during the winter months. During the RBSP project period, access to credit in Bamyan province has been limited. However, now, with the credit available from the ACE project and with more banks establishing themselves in the smaller cities, such as Bamyan City, credit for highly viable potato storages should be forthcoming.

In the edible oil processing industry, adequate margins for making a normal profit in the business are attainable if the quality, competitiveness, and the volume of the product processed is high. The edible oil value chain is poorly developed in Afghanistan. Only pilot processing and packaging facilities are operating. Though there are many constraints for the industry to overcome, there are viable developments within the industry that could propel the industry into a more viable and sustainable position. These developments include, but are not limited to, access to loans by processors for

- working capital for purchasing oilseeds both domestically and internationally
- packaging and labeling the edible oil
- working capital for marketing the edible oil, assuming there is a delay in receiving payment.

The credit that is needed for these developments can be sizeable. Purchasing, for example, 1000 metric tons of cottonseed costs about \$760,000. For example, the Oil Processors' Cooperative in Mazar, which has 18 mt capacity oil processing machines and equipment, would need to buy 1000 metric tons of cottonseed to process cottonseed oil for about 2 months.

9.6 Need Improved and Certified Seed to Grow Consumer Preferred Product

Bamyan potato industry has not upgraded its existing potato varieties nor has it introduced tested seed potato varieties that would improve the competitiveness of Afghan potatoes. Bamyan potato producers have a tremendous opportunity to become the primary supplier of quality and clean seed potatoes in Afghanistan. To become such a supplier, the potato market needs to drive the type and quality of potato produced. Afghan consumers prefer potatoes that are not blemished, smooth, and are good tasting when boiled and served in a sauce. Afghans also prefer potatoes that make good French fries. These two types of potatoes, each with its own market demand, should be the target product types for the potato

producers. The RBSP is demonstrating a couple of recently trialed potato varieties, Mulva and Laura. These potato varieties, among many other potato varieties, need to be trialed and demonstrated before certified and released to potato producers.

In addition, tissue culture of potatoes needs to be done to produce uniform quality mini-tubers/seed potatoes. The MAIL of the Government of Afghanistan has had tissue culture facilities, erstwhile to produce seed potatoes, since 2005 under the USAID-funded RAMP Project. Since the completion of RAMP in 2006, these facilities have not been used for the desired purpose of mass production of seed potatoes or any other seed.

In the oilseed industry, some work has been done in introducing Spanish varieties of cotton. The RBSP has demonstrated one of these Spanish varieties. However, the Acala cotton variety has been the dominant variety cultivated in Afghanistan. The cotton that is called Acala in Afghanistan has not been properly maintained with quality seed production. The Acala cotton in Afghanistan has deteriorated over the last few decades in Afghanistan and needs to be replaced with more pure and modern Acala seed stock.

9.7 Free and Fair Trade Policies with Pakistan

The greatest threat to the continued industrialization of the potato value chain in Afghanistan is Pakistan's potato trade policies towards Afghanistan. Pakistan is a formidable competitor for Afghan potato producers. Pakistan supplies Afghanistan with potatoes starting as early as December and until September. Although Afghan producers fare well in supplying their potatoes also during the December – March period, the ubiquitous Pakistan potatoes supplied during this period keep a lid on prices. If Pakistan supplies increasingly more potatoes to Afghanistan during the winter months, potato prices during the winter could fall back to near harvest time price levels making less incentive for Afghan potato producers to store their potatoes. At this point, also, Pakistan potatoes are preferred by Afghan potatoes because the Pakistani potatoes show few if any blemishes and are smooth.

The Afghan potato industry needs to become more competitive. Developing a quality product is one of the first steps that Afghanistan needs to take. While becoming more competitive, Afghanistan needs to have a free and fair trade policy with Pakistan. In the recent past, Pakistan has subsidized the cost of trucking agricultural produce into Afghanistan. This is not a free and fair policy.

9.8 Carpet Value Chain Issues

As a result of the worldwide recession in 2009 and the slow growth since then, the carpet value chain is suffering from decreased demand for handmade carpets. In some major markets, such as New York City, the carpet inventory in some handmade carpet showrooms is close to two years' worth. In addition, the poor security situation in Afghanistan and Pakistan has kept would be international carpet buyers from visiting these countries. Afghan carpet traders have not had much business success when making appearances at major carpet trade shows in Western countries because they lack the necessary negotiating skills and are relatively new faces in the international scene. As a result, the Afghan carpet traders have also reined in their investment in carpets and have been unwilling to pay the weavers the

prices they used to get for weaving carpets when the international demand for Afghan handmade carpets was better. Despite the depressed international market for handmade carpets, the RBSP has assisted the various stakeholders in the value chain. The RBSP's interventions have been described in an earlier section of this report. However, in terms of lessons learned, the many constraints that previously existed in the value chain have been exacerbated with the poorer market conditions. Starting downstream, at the interface of the Afghan carpet trader with the international buyer, the RBSP investigated the idea of establishing an Afghan carpet outlet in the duty free zone of Istanbul, Turkey. By bringing their carpets to Istanbul, Afghan carpet traders would be able to attract international buyers to view their carpets and make deals. A few Afghan carpet traders had already set up their warehouses in the duty free zone of Istanbul. However, the international buyers were not interested in coming to Istanbul until there were many more Afghan traders set up in the duty free zone to give the buyers the large selection of carpets they were looking for. The establishment of a large group of Afghan carpet traders in Istanbul will take time. Meanwhile, the already operating Afghan traders in Istanbul need to be able to make money to stay in business. If the depressed demand for handmade carpets persists too long the Afghan traders in Istanbul may not be able to remain viable for too long.

Moving upstream in the value chain, the Afghan carpet cut and wash businesses have made slight technological advances (use of water vacs) in the way in which carpets are washed. The advances have not necessarily improved the carpet quality. At the carpet weaver level, where the RBSP has provided significant assistance, the RBSP-supported carpet weavers have been able to improve their carpet quality by using steel looms and improved carpet inputs. The carpet weavers have also received training in carpet design and marketing. With the assistance of RBSP, the carpet weavers have not only been able to get higher prices for their carpets but they have also become more independent from the carpet traders who previously provided them carpet inputs and took their finished carpets for minimum wages. Further upstream, many wool spinners were assisted with mechanical spinning wheels by the RBSP. The wool spinners, although able to spin four times the amount of wool in a day with the spinning wheels, were not able to access raw wool frequently enough to give them a regular stream of income. The wool traders typically supplied spun wool to the carpet weavers. The wool industry is underdeveloped in Afghanistan. The opportunity that does exist is for wool spinners to access the Ghazni raw wool, a high quality Afghan produced wool. To access this wool, an interested Afghan wool trader could invest (with credit) in large quantities of the Ghazni wool when it is available each spring and sell the wool to wool spinners.

9.9 Lessons Learned – Administrative & Management

The PIU, with Project Director and Finance Officer, needs to be established before the Consultant is hired in order to get a head start on organizing the Project Steering Committee, arranging for project headquarters and provincial project offices, establishing the Imprest Fund, and procuring project vehicles, computers and other office equipment, and other project items.

9.10 Lessons Learned – Financial

The approval process for core budget expense items needs to be streamlined to allow the implementation to be timely, the procurement to be done efficiently, and the subcontractors to be paid as per contract.

The contract variations took a long time to be approved by ADB/COSO. Average approval of contract variations was over 10 months. Delays in the approval of contract variations handicapped the implementation of ADB Projects. ROP assumed large risks in continuing implementation without waiting for final approvals from ADB on the contract variations. Without this aggressive approach by ROP, the program objectives could not have been achieved.