



ACCELERATING SUSTAINABLE AGRICULTURE

ASAP Final Report



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ASAP promoted the use of trellising to increase the quantity and quality of grape crops in Afghanistan's prime vineyard regions, specifically Parwan, Kapisa, and Kabul.

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FRONT COVER: An employee at the Badam Bagh Demonstration Farm packhouse in Kabul displays apricots bound for export. ASAP renovated the facility to comply with international food safety standards, creating new opportunities for local traders in support of the Afghan First Policy.

ASAP

INSIDE FRONT COVER: Farmers inspect wheat in Balkh. ASAP distributed wheat seed and fertilizer to farmers through AgDepots in Balkh after a severe drought. An ASAP impact study revealed the distribution benefited 20,000 families and 5,200 hectares of farmland.

ASAP

BACK COVER: A man looks through a row of trellised grapes at Badam Bagh Demonstration Farm. The farm promotes modern methods such as grape trellising to improve productivity.

ASAP



The increase in economic activity resulting from ASAP's work benefited 1,159,430 Afghan families.

ACRONYMS

ADT	agribusiness development team
ALA	Afghanistan Land Authority (<i>Arazi</i>)
ASAP	Accelerating Sustainable Agriculture Program
AWATT	Afghanistan Water, Agriculture, and Technology Transfer Program
AWBC	Afghan Women's Business Council
CERP	Commander's Emergency Response Program
DAIL	Directorate of Agriculture, Irrigation, and Livestock
GAP	good agriculture practices
GHP	good hygiene practices
GMP	good management practices
HACCP	Hazard Access and Critical Control Points
HIPC	Hilmand Ihsan Poultry Co.
HPP	Helmand Poultry Project
MAIL	Ministry of Agriculture, Irrigation, and Livestock
NAIS	National Agriculture Information System
PRT	provincial reconstruction team
UAE	United Arab Emirates
VFU	veterinary field unit



An Afghan man smiles as he harvests tomatoes at Badam Bagh Demonstration Farm. The farm produces high-quality fruit and vegetables, including wheat, corn, tomatoes, and grapes, and has introduced new varieties of crops such as spinach and strawberries to Afghanistan.

EXECUTIVE SUMMARY

ASAP AND AFGHANISTAN'S AGRICULTURE SECTOR

Agriculture is a primary driver of Afghanistan's economic growth, providing much-needed livelihoods to the country's rural population and bountiful agribusiness opportunities for Afghanistan's entrepreneurs. In the 1960s and 1970s, the country emerged as a notable player in the world's agricultural sector, with its unique varieties of pomegranates, grapes, apples, apricots, and melons, and its large assortment of dried fruit and nuts. Situated along the famous Silk Road, Afghanistan exported more than 60 percent of its agricultural products to lucrative markets such as India, Pakistan, and the former Soviet Union during those decades.

The ensuing years of war decimated cropland and infrastructure, scattered farming communities, and shut down

export channels. Afghanistan lost its place in the international marketplace, and its agricultural sector operated at a fraction of its potential. Recognizing that agriculture is fundamental to sustaining Afghanistan's recovery and development, USAID launched the Accelerating Sustainable Agriculture Program (ASAP) in late 2006 to strengthen the country's agriculture sector and improve the global competitiveness of its agribusiness sector.

In partnership with Afghanistan's Ministry of Agriculture, Irrigation, and Livestock (MAIL), other USAID-funded programs, the provincial reconstruction teams (PRTs), the agribusiness development teams (ADTs), and NGOs throughout Afghanistan, ASAP began providing strategic support to Afghanistan's private and public sectors with the overarching goals of improving agriculture production, increasing

sales and exports of agriculture products, creating new jobs, and introducing modern agricultural technologies and practices.

The \$133 million project started in November 2006 with a focus on the country's Western, Central, and Northern regions, specifically the 19 provinces of Kabul, Panjshir, Kapisa, Parwan, Bamyan, Wardak, Logar, Ghazni, Balkh, Kunduz, Jawzjan, Faryab, Samangan, Saripul, Baghlan, Badghis, Ghor, Herat, and Farah. ASAP became a nationwide program in 2008, covering all 34 provinces, and expanded its activities in Southern and Eastern regions in 2010.

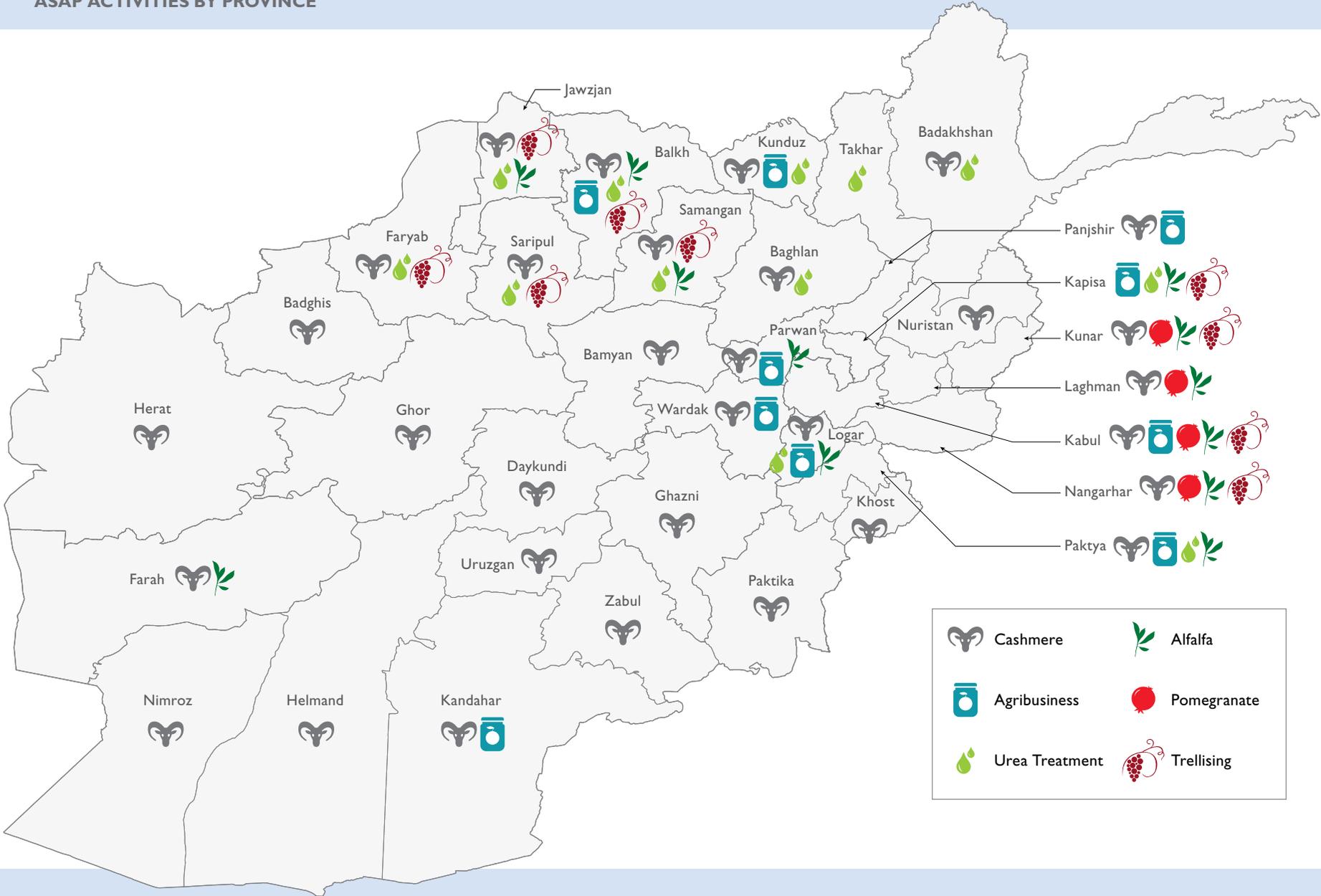
Throughout its five-year lifespan, ASAP worked in the field with herders and farmers, in major Afghan cities with local exporters and traders, and in burgeoning international markets such as India and the United Arab Emirates (UAE) to improve and expand Afghanistan's agricultural sector. ASAP boosted broad-based agricultural production by educating rural Afghans on best agricultural practices, including grape trellising and drip irrigation, and by providing the nation's farmers and herders with high-quality inputs and services such as agrochemicals, certified seeds, medicines and vaccines, and cashmere harvesting combs. ASAP increased Afghanistan's sales and exports by building the capacity of Afghan companies so they could be more competitive in the global marketplace and by creating modern processing facilities to add value to agricultural products. ASAP opened up new markets by linking

local exporters and traders with international buyers in countries ranging from Pakistan to the United Kingdom, and by promoting Afghanistan's excellent produce and cashmere at trade fairs and bustling fruit and vegetable markets abroad. With each farmer it trained and every business deal it forged, ASAP laid the groundwork to improve Afghanistan's agriculture sector and contribute to the country's economic recovery.

While a market-driven private sector leads the development process, ASAP understood that a healthy and supportive public sector accelerates that growth. ASAP worked hand-in-hand with MAIL and its Directorate of Agriculture, Irrigation, and Livestock (DAIL) based in the country's provinces to enhance the capacity of government employees to offer agricultural services and to make the policy and regulatory environment more conducive to private-sector initiatives. ASAP often operated in the background, offering crucial support to MAIL in leading high-profile initiatives such as international agricultural fairs, thereby increasing confidence in the capabilities of the Afghan government.

To target farmers and herders, agribusiness entrepreneurs, government employees, and local women who are important to Afghanistan's agriculture sector, ASAP focused on seven key pillars: agricultural productivity; livestock productivity; research, demonstration, and training; agribusiness trade; agribusiness investment; MAIL advisory ser-

ASAP ACTIVITIES BY PROVINCE





VFU staff members examine a cow's teeth. ASAP provided equipment and training to help support the VFUs so they could operate as sustainable businesses that benefit local herders.

vices; and gender. These components worked together to support MAIL's objective as stated in its National Agricultural Development Framework: "Economic growth and food security depend upon natural resource management, increasing agricultural production and productivity, improved physical infrastructure and market development. This is the path to poverty reduction, licit crops and national security. This is the mission of the Ministry of Agriculture, Irrigation and Livestock." ASAP also played a major role in supporting the U.S. government Agriculture Assistance Strategy, which has two primary goals: increased agricultural sector jobs and incomes,

and increased confidence of Afghans in their government.

Agricultural productivity. To increase the quality and quantity of Afghanistan's fruit and vegetables, ASAP established a network of private rural farm stores called AgDepots, which sell high-quality farm inputs and extension services to local farmers. In conjunction with the AgDepots and with support from partner organizations, ASAP promoted new products and technologies — including grape trellising, flexi-flume irrigation, and laser land leveling — to introduce farmers to improved agricultural methods and boost their productivity. ASAP also es-

tablished demonstration plots to train farmers on proper agricultural methods and spread good agricultural practices (GAP).

Livestock productivity. In an effort to increase livestock productivity, ASAP supported a network of veterinary field units (VFUs), private businesses that provide medicines, vaccines, and animal health services to herders in rural communities. With the assistance of the VFUs, the project launched a nationwide campaign to raise awareness of the value of cashmere and introduce goat herders to proper harvesting methods. ASAP also strengthened the cashmere value chain to allow the smooth flow of cashmere from herders to local traders to international buyers.

Research, demonstration, and training. ASAP established the Badam Bagh Demonstration Farm in Kabul to showcase new agricultural technologies, better crop varieties, and best practices to increase productivity and build the capacity of farmers, MAIL staff, and others across the country. In addition to creating a national center for demonstration and training, ASAP extension workers traveled to the field to spread knowledge of agricultural best practices. ASAP housed all field-tested training materials in an online repository for easy access by MAIL and other agricultural stakeholders.

Agribusiness trade. ASAP worked with farmers, traders, and exporters to add value to Afghan produce and to link them with local and international buyers to facilitate the sale and export

of their agricultural products. It held international agricultural fairs in Afghanistan and facilitated the participation of Afghan traders in international trade shows abroad to promote produce and link buyers and sellers. After discussions with MAIL led to the conclusion that a unit specializing in training farmers, processors, and marketing companies was vital to address increasing food safety standards in international markets, ASAP created Afghan Good Agricultural Practices (AfghanGAP). ASAP also supported the Afghan First Policy by paving the way for local producers and traders to supply the military, international agencies, and local markets serving the expatriate community and the growing Afghan middle class.

Agribusiness investment. ASAP worked with Afghan business partners to increase agribusiness investments and establish new agribusiness facilities. With project support, Afghanistan now boasts a state-of-the-art juice concentrate facility, a cold storage facility, and a cashmere dehairing facility that is boosting cashmere exports, and a modern pack house that complies with international food safety standards and is opening up new opportunities for Afghan traders in support of the Afghan First Policy.

MAIL advisory services. ASAP provided technical assistance to MAIL to build capacity and increase agribusiness investments through a variety of initiatives, including supporting the Afghanistan Land Authority

(ALA), also known as Arazi, to streamline leasing procedures for government-owned land. ASAP also developed the National Agriculture Information System (NAIS) to improve access to agriculture data and promote planning by MAIL and projects focused on agriculture. ASAP transitioned NAIS in February 2010, and the system now operates in all 34 provinces under MAIL's Management Information System Department.

Gender. ASAP worked to provide local women with more opportunities that enabled them to become part of the development process. With MAIL's gender policy as a guiding framework, ASAP developed and enhanced women's agricultural and business skills, and increased their contribution to the household economy and the economy at large.

From training farmers and herders in the field to working with international buyers and foreign governments to gain access to lucrative markets, ASAP strengthened Afghanistan's agricultural sector. It trained 516,429 farmers, herders, businesspeople, and government staff on best agricultural practices, food safety requirements, and business skills. Through regular training and demonstration sessions, ASAP introduced 17 new technologies to Afghanistan, ranging from grape trellising and laser land leveling to the use of cold storage and fruit processing. It facilitated sales worth \$29,015,952, including farm and livestock services and inputs from AgDepots and VFUs, in the local

market and supported exports worth \$28,259,904, including fresh fruit, dried fruit, nuts, and cashmere, to India, Pakistan, the UAE, the United Kingdom, the Netherlands, Kyrgyzstan, Norway, Iraq, and other countries. The increase in economic activity resulting from ASAP's work created 7,948 full-time equivalent jobs, improved 22,754 hectares of farmland, and benefited 1,159,430 Afghan families.

Throughout the project, ASAP included MAIL and DAIL officials in its capacity-building efforts in order to enable them to continue activities after project closeout. These efforts centered on boosting crop and livestock productivity, increasing sales and exports, and developing the expertise of ministerial staff. When ASAP ended technical activities in August 2011, it had built the capacity of MAIL and DAIL to guide and assist agricultural development over the long run.

As a result of almost five years of intensive, continuous, and targeted training, ASAP was able to lay the groundwork for the sustainability of project activities and to complete the "Afghanization" of the project. ASAP transferred its core activities (e.g., AgFairs, Badam Bagh Demonstration Farm, and the Badam Bagh packhouse) to ministerial control and built the sustainability of private enterprises (e.g., AgDepots and VFUs) so they continue to operate as profitable enterprises. With MAIL as a driving force, ASAP will continue to influence Afghanistan's agricultural economy far into the future.

KEY ACCOMPLISHMENTS

\$14 million

Through technical support, road shows, commercial missions, and international trade fairs, ASAP opened the international retail market for Afghan produce at supermarkets like Wal-Mart, Carrefour, and Spencer's in India, the UAE, and Pakistan. ASAP facilitated the first legal exports of apples to India and melons to the UAE. In total, ASAP paved the way for about \$14 million in exports and \$2 million in local sales.

\$2 million

With ASAP support, MAIL and the ALA signed a five-year lease in May 2011 that allowed a private investor to use the Bolan Poultry Farm's land in Helmand province. USAID agreed to transfer ownership of the equipment so the investor could operate the farm, which produces eggs and layer and boiler chicks for local farmers, as an independent, sustainable enterprise. The facility has the potential to generate \$2 to 3 million in annual sales.

534,500

ASAP held 11 AgFairs with MAIL to promote Afghanistan's produce to the world and boost exports. The AgFairs drew 534,500 local visitors and generated an estimated \$4,037,829 in actual business deals and \$49,289,411 in potential business deals. In addition, 250 participants from Argentina, Turkmenistan, Kazakhstan, Pakistan, India, the United States, China, the Netherlands, and the United Kingdom attended the fairs.

526,908

ASAP distributed 526,908 pomegranate saplings to 3,579 farmers, covering more than 964 hectares in some of the country's prime pomegranate growing regions to encourage the growth of high-value, high-quality pomegranates. ASAP conducted frequent training sessions, distributed fertilizer, and provided alfalfa seed to promote intercropping that would generate additional income for farmers.

466,721

ASAP trained 466,721 goat herders nationwide, about 21 percent of whom were women, on the value of cashmere and proper harvesting methods. It supplemented practical training in the field with 402,462 pieces of extensional materials and 250,000 radios that allowed the herders to listen to educational messages on livestock productivity.

\$82,432

ASAP forged a partnership with the AWBC that allowed its female members to harvest and sell produce from Badam Bagh Demonstration Farm on the local market. Since the partnership began, AWBC has earned more than \$82,432, provided incomes to 892 women, and benefited 3,464 families. AWBC used profits from Badam Bagh produce to train local women on how to make handicrafts and process food.

13,000

ASAP's cash-for-work projects in Balkh employed 13,000 people, improved water management along 106 kilometers of canals, and reforested 500 hectares of state-owned land with pistachio trees. The project distributed 1,000 metric tons of wheat seed and 1,600 metric tons of fertilizer to 20,000 farmers, and 3,400 metric tons of animal feed to 13,000 livestock owners after a drought decimated wheat crops in 2008.

3,365

ASAP and MAIL created AfghanGAP to train farmers, processors, and food marketing companies to meet international food safety standards. Inspectors trained 3,365 farmers, exporters, MAIL and DAIL staff, and students; inspected about 10 companies; and assessed 3,000 hectares of land. AfghanGAP is preparing Afghans for globally recognized certifications to open markets and support the Afghan First Policy.

915

ASAP's cashmere value awareness campaign and efforts to strengthen the country's value chain from herders to international buyers resulted in the harvest of approximately 915 metric tons of cashmere, exported at a value of \$12,295,200.

KEY ACCOMPLISHMENTS

888

ASAP taught 888 farmers how to grow alfalfa for nutritious livestock fodder. The farmers planted a total of 272 hectares of alfalfa. In another effort to boost the production of high-quality fodder, ASAP trained 19,461 farmers to treat wheat straw with urea to increase its protein content and create nutritious feed.

450

ASAP supported 450 VFUs that have generated \$12,821,340 in income and administered 30,750,604 vaccinations and 19,795,162 treatments to livestock. With ASAP's support, Nangarhar University opened a modern veterinary clinic that is training veterinary students and providing services to an estimated 1,100 livestock owners.

370

ASAP established a network of 370 AgDepots in 26 of Afghanistan's 34 provinces, with each AgDepot reaching an estimated 1,500 farmers. ASAP's network of AgDepots sold \$10,271,315 in agricultural supplies, reaching a total of 550,000 farmers nationwide. In an effort to strengthen the AgDepot businesses, ASAP established 20 regional AgDepot associations.

300

ASAP established more than 300 demonstration plots across Afghanistan and linked them to the AgDepots to be used as agricultural extension venues. ASAP trained thousands of government employees, agricultural students, and other agricultural stakeholders at the demonstration plots to teach them proper agricultural practices and improve agricultural productivity.

240

ASAP trained 240 Afghan women on how to knit high-quality clothing from cashmere that they can sell to high-end U.S. clothing retailer Kate Spade. Under the supervision of a production quality-control manager who has worked with big clothing retailers in the United States, the participants received training on how to knit hats, scarves, and mittens according to Kate Spade's design specifications to sell in its 2011 fall line.

19

ASAP established NAIS to collect, consolidate, augment, and map data to promote more effective agricultural planning in 19 provinces. NAIS now operates in every province under MAIL's Management Information System Department.

5

ASAP rebuilt the Badam Bagh Demonstration Farm and transformed the land into a demonstration site, training venue, and research center. During the past five years, ASAP has built the capacity of Afghan farmers, students, and government staff who came to Badam Bagh Demonstration Farm to learn about better agricultural techniques, modern technologies, and new crops.

4

ASAP led four major trellising projects in grape-growing regions. More than 1,000 grape farmers converted more than 211 hectares of bush vineyards to the modern trellising system, doubling the yield and improving the food safety of their grape crops.

In coordination with MAIL, ASAP established the ALA to speed the leasing of government-owned land and spur agribusiness investment. ALA now maintains a detailed inventory of public land that includes information on location, size, and price, delivers the leasing service in a cost-effective and timely manner, and assumes responsibility for supervising compliance with lease contracts.

ASAP renovated a packhouse at Badam Bagh Demonstration Farm to meet international food safety standards. The only one of its kind in Afghanistan, the packhouse is Hazard Analysis and Critical Control Points (HACCP)-compliant. Afghan traders and producers use the packhouse to sort, grade, and pack fresh fruit and vegetables for export and to supply the Afghan police and army.

ASAP provided technical assistance, training, world-class equipment, logistical support, and market linkages with farmers and international buyers to help establish the Omaid Bahar Fruit Processing Facility, a state-of-the-art operation in Kabul that is exporting fresh fruit and juice concentrate and selling juice on the local market.

ASAP partnered with the University of California at Davis to develop the Afghanistan Agriculture Knowledge Bank, an online repository of agricultural extension materials concerning key crops. ASAP shared the repository with other agricultural projects and successfully transitioned it to MAIL to further disseminate the information. In another effort to boost farmers' productivity, the project established a soil laboratory in cooperation with Balkh University and the USAID-supported AWATT. ASAP linked the laboratory with the AgDepots to provide farmers with soil testing to select appropriate crops and fertilizer for specific soil types.

ASAP worked with the Hirati Cashmere and Skin Processing Plant to create Afghanistan's first modern cashmere processing facility in Herat, the center of Afghanistan's cashmere industry. Machinery provided by ASAP cleans and removes coarse hairs from the cashmere, increasing the product's value in international markets. With the support of ASAP, Afghanistan is now exporting dehaired cashmere for the first time.



Workers at Badam Bagh Demonstration Farm harvest vegetables. The produce is cleaned, sorted, graded, and packaged at the farm's modern packhouse, established by ASAP.

CHAPTER ONE

AGRICULTURAL PRODUCTIVITY

AGDEPOTS

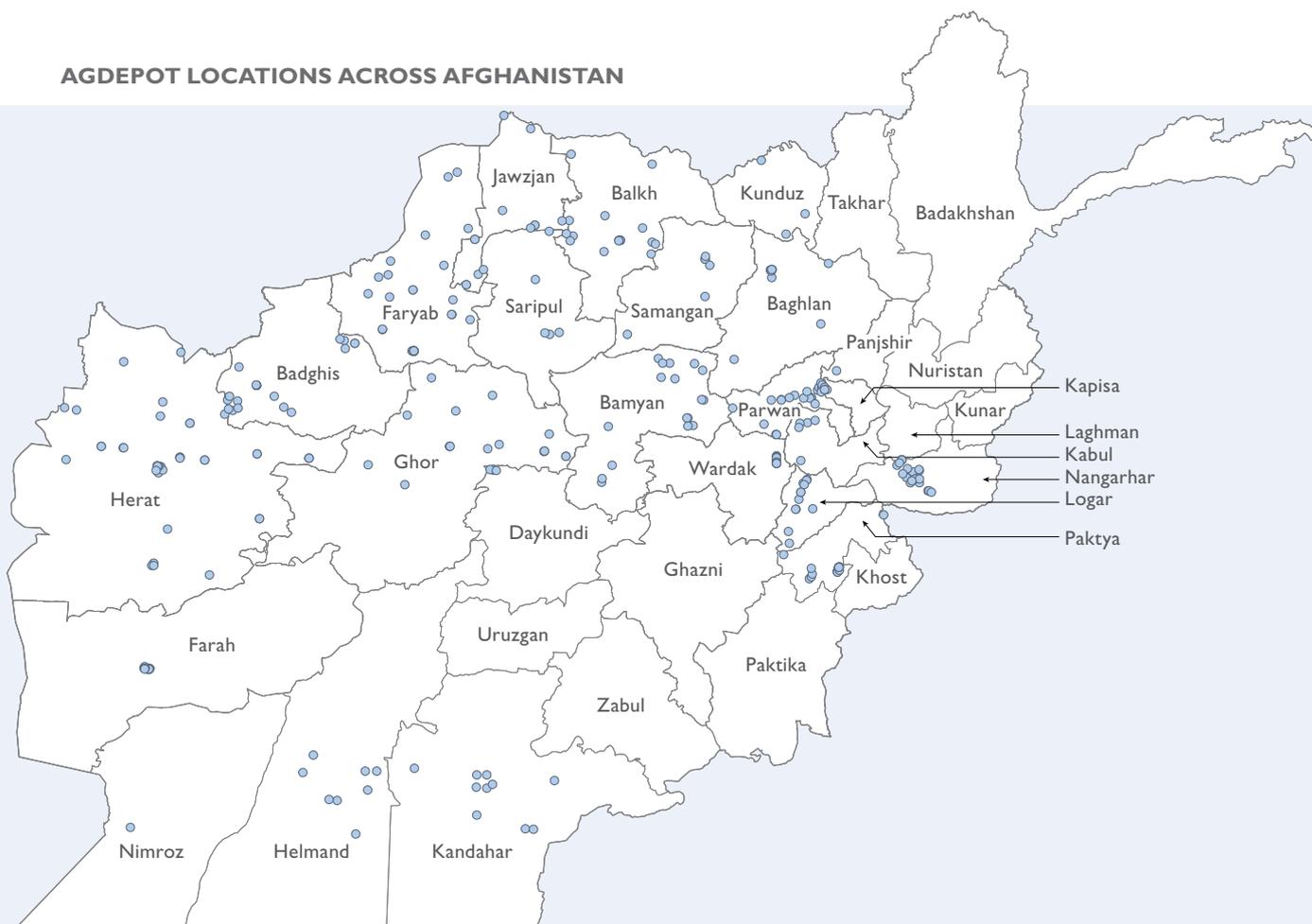
Though Afghanistan's farmers have the benefit of fertile soil and a temperate climate, they have had difficulty acquiring the high-quality agrochemicals, seeds, and modern agricultural equipment for growing healthy crops. Because approximately 80 percent of Afghans work in the agriculture sector, the lack of such modern supplies has hindered productivity and income opportunities for much of the population. ASAP began working with Afghan entrepreneurs in late 2006 to establish AgDepots. These small, privately owned rural farm stores sell an array of products, including agrochemicals, seeds, fertilizers, tools, and machinery, and promote diverse modern agricultural practices (e.g., grape trellising, improved irrigation systems, and laser land leveling) to local farmers.

From project start through 2008, ASAP established 300 AgDepots

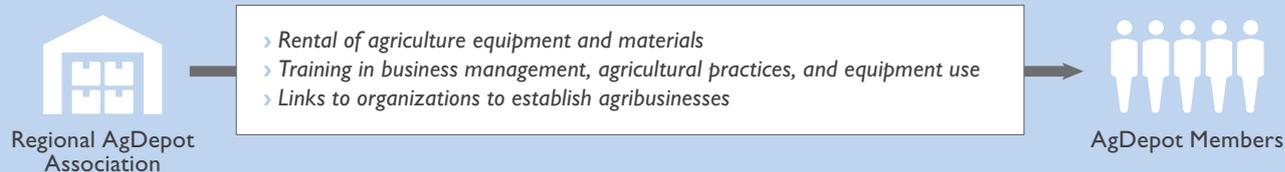
in the 19 provinces included under its original mandate in the Northern, Western, and Central regions. ASAP began expanding this network in 2010 by establishing 70 more AgDepots in the southern and eastern provinces of Nangarhar, Laghman, Kunar, Paktya, Helmand, Kandahar, and Nimroz. By project end, ASAP had established a network of 370 AgDepots in 26 provinces, with each location reaching an estimated 1,500 farmers.

In total, ASAP's network of AgDepots sold \$10,271,315 in agricultural supplies, reaching 550,000 farmers nationwide. As a testament to the success of the AgDepot model, neighboring Tajikistan established nine AgDepots in the capital, Dushanbe, and nearby villages after participating in Afghanistan's international agricultural fairs and seeing the AgDepots at work.

AGDEPOT LOCATIONS ACROSS AFGHANISTAN



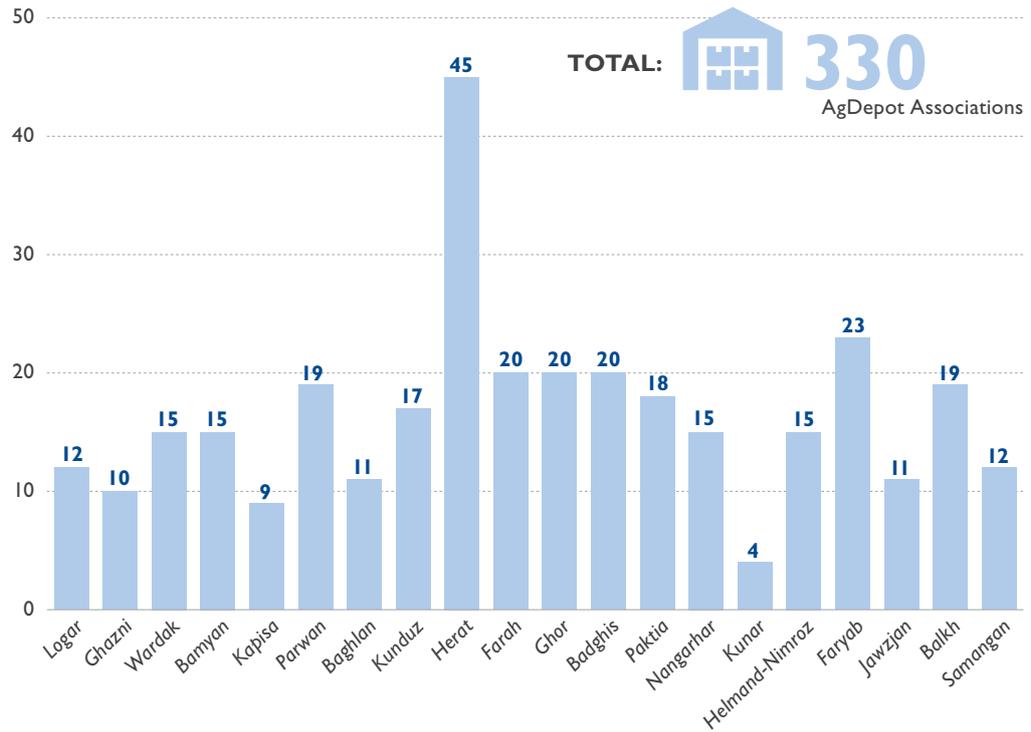
REGIONAL ASSOCIATION SUPPORT TO AGDEPOT MEMBERS



Dr. Shafiq, who operates an AgDepot in Balkh province, said AgDepots were good “because they are located close to farmers and allow them to buy quality agricultural products that will help them make more money through their crops.” Dr. Shafiq reported he averaged about 500,000 Afghanis, or about \$10,000, in

gross sales each month and, with ASAP’s support, expanded his services to include new products such as animal feed and pomegranate saplings. Haji Mohammad Yosuf, a customer at Dr. Shafiq’s store, said, “AgDepots are really important for us. I hope to get more harvest from my land by using the AgDepot products.”

ASAP'S UREA TREATMENT PROGRAM



ASAP provided every AgDepot with start-up equipment and conducted training on its proper use and maintenance. To help store owners expand their services and improve sustainability, the project provided many AgDepots with useful items, including grape trellising posts, wheelbarrow power sprayers, two-wheel tractors, vegetable seeders, laser land levelers, flexi-flume irrigation systems, and alfalfa bale presses and pelletizers. It trained AgDepot owners on proper agricultural practices so they could, in turn, train their customers. To build the sustainability of the AgDepots as private enterprises, ASAP trained the AgDepot entrepreneurs on launching a business, business skills, inventory control, bookkeeping, money management, marketing, and communications. The project also linked the AgDepots and MAIL's Extension Department to

more than 300 nationwide demonstration plots it helped establish so owners and MAIL could demonstrate new technologies and build the capacity of farmers.

To strengthen the AgDepot network, ASAP established and registered 20 provincial AgDepot associations, which are helping improve AgDepot businesses by providing owners access to training, business services, and agricultural products and inputs. The project provided training and agriculture equipment to the associations, which lease the products to the AgDepots to allow them to diversify their services and generate additional income.

FODDER PRODUCTION

ASAP provided farmers with technical assistance and inputs so they could grow alfalfa for high-quality fodder to increase



A farmer examines his crop of alfalfa grown with USAID support. USAID is providing farmers with certified alfalfa seed and training in alfalfa production.

SNAPSHOT

Farmers Grow High-Value Fodder Crops

Afghanistan suffers from a shortage of fodder crops that is preventing the country's farmers from realizing the full potential of their livestock and improving their livelihoods. The solution may lie in the production of alfalfa, which is widely recognized as an important crop for its resilience, yield, and use as high-protein and high-fiber feed for farm animals.

USAID is implementing a fodder program in various provinces throughout Afghanistan to increase production of alfalfa and to create agribusiness opportunities in the crop, and farmers are beginning to reap the benefits.

"I have already harvested my alfalfa field six to eight times this year, and it is still growing, so I hope to have three more harvests as well," said Said Shah, a farmer from the Charkh district of Logar province in eastern Afghanistan.

Shah is part of USAID's program to help more than 800 small- and medium-scale farmers to plant a total of almost 250 hectares of alfalfa on their farmland. In close coordination with Afghanistan's Ministry of Agriculture, Irrigation and Livestock, USAID is providing all of the farmers participating in the program with certified alfalfa seed and training on commercial alfalfa production. Farmers are trained on proper seed bed establishment, fertilization, irrigation, harvest and post-harvest handling, and processing.

USAID also provides the farmers with vouchers that allow them to purchase items like fertilizer through their local AgDepots, which are USAID-supported farm stores, at a reduced price. In return, the farmers are expected to keep their plots open for visiting group members to encourage others to grow the valuable crop. Farmers will also be provided with access to balers and pelletizers that will allow them to open up agribusinesses with their alfalfa crops.

"The farmers of Logar are very happy with the assistance," Shah said. "We hope to get more assistance and training so we can continue with development of our agriculture."

ASAP'S ALFALFA PROGRAM

Province	Participating Farmers	Total Hectares Planted by Farmers
Balkh	72	31.5
Jawzjan	35	15
Samangan	21	6.5
Saripul	96	21.9
Kunar	122	27
Nangarhar	106	28.6
Kapisa	8	1.6
Logar	158	47.1
Parwan	25	8.4
Wardak	49	11.7
Paktya	47	12.4
Laghman	39	8.3
Kabul	12	2.9
Farah	98	50
Kandahar	10	8.4
TOTAL	898	281.3

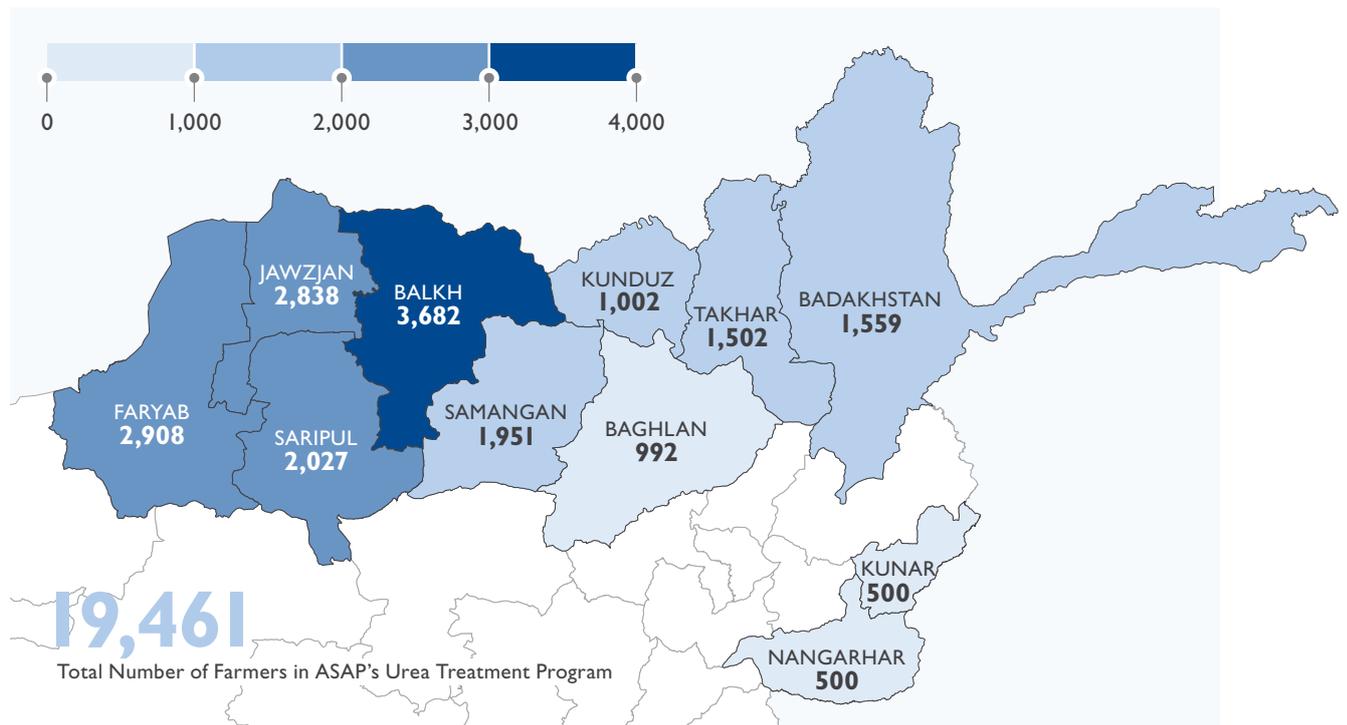
livestock health and sustain animals during the winter. Primarily a feed for dairy cows, alfalfa is also appropriate for other farm animals, including horses, beef cattle, sheep, chickens, and turkeys. It is recognized as one of the most important crops because it can adapt to a wide range of climates, produce nutritious animal feed, increase soil nitrogen, and reduce soil erosion.

ASAP worked with 898 farmers who planted 281.3 hectares of alfalfa in Balkh, Jawzjan, Samangan, Saripul, Kunar, Nangarhar, Kapisa, Logar, Parwan, Wardak, Paktya, Laghman, Kabul, Farah, and Kandahar provinces. ASAP included MAIL and DAIL staff in the training to build

their capacity to provide similar training courses. In coordination with MAIL, the project distributed more than 9,500 kg of imported improved alfalfa seed, more than 34,000 kg of diammonium phosphate fertilizer, and almost 20,500 kg of urea fertilizer through a voucher system in partnership with the AgDepots. All farmers were trained on proper seedbed establishment, fertilization, irrigation, and harvest and post-harvest handling and processing.

ASAP also laser leveled 12 alfalfa demonstration plots and provided the owners with seed and fertilizer through a voucher system. In return, the demonstration plot owners kept their plots open for

ASAP'S UREA TREATMENT PROGRAM



LIVESTOCK OWNER BOOSTS MILK PRODUCTION WITH UREA TREATMENT

Rahmadullah Noori, a farmer and livestock owner, is seeing an increase in milk from his cows after participating in an ASAP initiative that aimed to boost production of fodder. Noori grows barley, wheat, vegetables, and alfalfa, and owns four cows and 40 sheep in the village of Sharak in Nare-e-Shahi district in Balkh province. His milk production usually decreased over the winter as his cows struggled to find food and maintain their weight. However, after feeding his cows straw treated with urea, daily milk production increased by up to 50 percent.

"There was a significant change in lactation, and I noticed an overall improvement in the cows' health," Noori said.

ASAP provided Noori with plastic sheeting, a voucher to buy 4 kg of urea from an AgDepot at 15 percent of the actual price, and the training to properly treat the straw. Noori dug a pit and lined the hole with the plastic sheeting. He then placed a layer of straw along the bottom of the pit and sprinkled a mixture of urea and water over it. He stepped on the straw to ensure it soaked up the urea, and repeated the procedure until he had filled the pit with 100 kg of straw. He sealed the mixture in the plastic sheeting; 30 days later, the straw was ready to be used as fodder for his cows.

Noori said many farmers were asking him about his urea-treated straw because they saw the improvement in his cows' health and milk production. "I have no doubt this will spread across Afghanistan," Noori said. "It's obviously benefiting me. My relatives see it, and their friends see it, and their relatives see it, and that's how word spreads."

visiting group members. Depending on location and climate, the alfalfa farmers can expect four to six cuttings per year for three to five years if they maintain the crop according to the recommended practices provided by ASAP's master trainers. Furthermore, farmers can get high-quality services and inputs in support of increased alfalfa production from AgDepots and VFUs.

In another effort to boost the production of quality fodder, ASAP trained 19,461 farmers, as well as MAIL and DAIL staff, to treat straw with urea to increase its protein content and create nutritious feed for cows. The majority of Afghan farmers feed their livestock untreated straw, which causes the animals to lose weight because they cannot extract enough energy from the straw. The urea breaks down the straw's lignin, a complex chemical compound that livestock cannot digest, and increases the crude protein in wheat straw up to 14 percent, which increases milk production by 25 to 30 percent. ASAP distributed 257,592 square meters of plastic and 17,928 kg of urea in support of the project, which produced 64,398 kg of

urea-treated wheat straw that was fed to approximately 400,000 animals.

GRAPE TRELLISING

Afghanistan has some of the sweetest varieties of grapes in the world, but the traditional method of growing grapes in bushes near the ground has resulted in poor quality and yield. ASAP promoted the use of trellising to increase the quantity and quality of grape crops in Afghanistan's prime vineyard regions, specifically Parwan, Kapisa, and Kabul.

ASAP led four major trellising projects in grape-growing regions, including one project supported by the Bagram ADT and the Commander's Emergency Response Program (CERP). In total, ASAP reached 1,007 grape farmers and assisted in converting almost 212 hectares of vineyards to the modern trellising system in Kabul, Parwan, and Kapisa provinces.

The project provided participating AgDepots with cement trellising posts, galvanized wire, metal angle irons, wire grabbers, and augers, and developed a comprehensive set of field-tested exten-

ASAP TRELLISING PROJECTS IN KABUL, PARWAN, AND KAPISA

Project	Participating Farmers	Hectares Trellised
Trellising Project 1	203	40.55
Trellising Project 2	449	100
Trellising Project 3	55	11
Trellising Project 4	300	60
TOTAL	1,007	211.55

GRAPE FARMER DOUBLES YIELDS

After more than two decades of growing his grapes in bushes close to the ground, the traditional Afghan method, Ghulam Aeshan decided to experiment with modern trellising systems that lift grape vines several feet off the ground to increase ventilation and exposure to sunlight.

“The size and the value of the trellised grapes are double that of grapes grown using the traditional method,” said 36-year-old Aeshan, who grows grapes in Dashti Hofian district of Parwan province.

Aeshan plans to expand his use of trellising after seeing the dramatic improvement in his grape crops. He was motivated to adopt the improved trellising system after learning about its benefits — including healthier grapes and higher yields — from villagers in the nearby districts of Sarai Khawaja and Kalakan. Aeshan visited his local AgDepot and purchased 140 trellises from the owner, who also helped him install the trellising posts.

“If all grape growers adopted trellises, we could all increase the production and export of our grapes,” Aeshan said. “This will lead to more job opportunities and the development of Afghanistan’s economy.”

sion materials for the conversion of bush vines to trellis systems. The cement posts and augers were manufactured in Afghanistan to generate local employment. Items were sold to grape growers under a voucher system through the AgDepots. With ASAP’s support, AgDepot owners helped their customers, the grape growers, design and establish the trellises in vineyards. ASAP provided training to all participating farmers, AgDepot owners, and MAIL and DAIL staff, some whom were extension workers, to build their capacity on appropriate grapevine pruning techniques and proper agricultural practices for trellised grapes.

An ASAP impact study showed that farmers using trellising technology yield an average of 37.07 kg per hectare versus 19.91 kg per hectare with traditional methods, an 86 percent increase, resulting in \$7,787 of additional income per hectare of grape crops.

DEMONSTRATION PLOTS

Throughout the project, ASAP established demonstration plots and linked them to AgDepots to teach farmers and MAIL and DAIL staff how to manage orchards and vineyards, increase productivity, and bring produce up to international standards to increase sales and exports. ASAP established more than 300 dem-

onstration plots, covering fruit such as grapes, apples, apricots, and melons.

ASAP reached thousands of farmers, government employees, agricultural students, and other agricultural stakeholders with training at its demonstration plots and similar extension activities in the field. All crop-enhancement activities at the plots focused on increasing crop production and quality by teaching farmers subjects such as GAP, integrated

pest management, pruning, dormant oil spraying, intercropping, harvesting, and post-harvest management. The project linked the demonstration plots to the AgDepots and MAIL to ensure farmers had proper training and access to high-quality products and services, the AgDepots had a ready customer base, and the ministry had a place to conduct training courses. ASAP also provided training at Badam Bagh Demonstration Farm to allow thousands of farmers, students,

ASAP-ESTABLISHED DEMONSTRATION PLOTS

Produce	Demonstration Plots	Jeribs
Alfalfa	15	57
Almond	6	20
Almond, Peach	1	5
Almond, Peach, Cherry	1	1
Apple	71	92
Apricot	31	45
Apricot, Almond	8	18
Apricot, Apple	1	2
Apricot, Cherry	2	4
Apricot, Peach	6	8
Apricot, Peach, Almond	3	6
Apricot, Peach, Cherry	4	7
Cherry	1	2
Melon	12	60
Peach	6	7
Peach, Almond	1	2
Peach, Apricot	1	2
Peach, Cherry	1	1
Pomegranate	21	43
Grapes	110	57
TOTAL	302	439



ASAP promoted the growing of pomegranates, a high-value fruit. Afghan pomegranates are known for their sweetness and juiciness.

MAIL and DAIL staff, local women, exporters, and traders to see the application of modern technologies and procedures such as drip irrigation, laser land leveling, and AfghanGAP on a large-scale farm. The farm also provided an opportunity to see a packhouse that complies with international food safety standards. The approach demonstrated that improved fruit production techniques have a higher revenue potential than traditional farming techniques.

POMEGRANATE ORCHARDS

Afghanistan had thriving pomegranate orchards prior to the Soviet occupation in 1979. These

were destroyed, however, and many farmers turned to opium production to support their families. Afghanistan's pomegranates, among the sweetest, juiciest, and largest in the world, are highly sought after in international markets. They are a lucrative opportunity for Afghan farmers.

In support of MAIL's strategy to expand pomegranate production, ASAP held four *jirgas*, or assemblies of tribal elders, that attracted more than 34,000 elders and farmers in Herat, Farah, Balkh, and Kandahar provinces in 2009 and 2010. Provincial government officials, counter-narcotics officials, and community leaders addressed the *jirgas*. Tribal elders

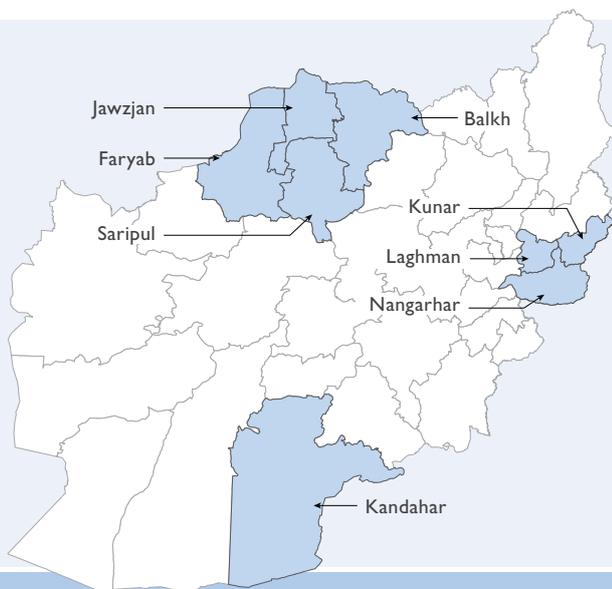
and farmers learned about the benefits of planting pomegranate saplings instead of poppy to generate a licit income and improve their livelihoods.

In addition to raising awareness of the benefits of pomegranate production, ASAP provided interested farmers with pomegranate cuttings and saplings — purchased from local nurseries — to expand their existing orchards or to establish new ones. The project distributed 526,908 saplings to 3,579 farmers, covering more than 964 hectares in some of the prime pomegranate growing regions in the North, East, and South. ASAP distributed fertilizer through a voucher system with the AgDepots and, in many cases,

provided alfalfa seed to promote intercropping that would generate additional income for farmers.

ASAP trained the farmers in the proper management of pomegranate orchards, AfghanGAP, and GlobalGAP standards to help bring the pomegranates up to export quality. The training showed MAIL, DAIL, AgDepots, international organizations such as Mercy Corps, and local pomegranate associations how to build capacity and increase coordination. ASAP linked farmers with local exporters and used its network of AgDepots to supply high-quality inputs and services to farmers and assist them with the production of healthy pomegranates. It also conducted fre-

POMEGRANATE SAPLINGS DISTRIBUTED BY ASAP



Province	Hectares	Farmers	Saplings Provided by ASAP
Nangarhar	592.6	2,432	307,500
Kunar	80	384	46,981
Laghman	94.6	338	50,567
Balkh	48.6	261	31,980
Faryab	7.2	36	4,500
Saripul	7.2	36	4,500
Jawzjan	7.2	36	4,500
Kandahar	127.3	56	76,380

TOTALS:



964.7
Hectares



3,579
Farmers



526,908
Saplings

quent monitoring visits to ensure the pomegranate saplings were growing well and that the farmers were observing and practicing the GAP the project had taught them.

CASH-FOR-WORK PROJECTS

ASAP implemented eight cash-for-work projects that have employed more than 13,000 workers and provided rural families in Balkh province with much-needed income. In partnership with MAIL, the project in 2009 coordinated with the Balkh DAIL, community development councils, the governor, and the district governor to select priority areas for cash-for-work projects. ASAP identified three main types of projects: cleaning springs, removing silt in and along the edges of irrigation canals, and reforestation with pistachio trees.

As a result of ASAP's cash-for-work projects, residents of Balkh province were able to generate an income and provide for their families. Haji Rahmat, a Balkh resident who worked to clear the Balkh canal and earned an income through the cash-for-work project, said, "We needed loans from the welfare office or from family in the past, and we had difficulty paying the money back. This year we were able to buy essential food supplies without going into debt."

The spring and canal projects improved water management along 106 km of canals in Balkh and benefited 143,800 hectares of land, much of which belongs to farmers who can now irri-

gate their crops more effectively. Workers in the reforestation program, part of wider efforts to "green" Afghanistan and help control erosion, planted 207,000 pistachio seedlings covering 500 hectares of government-owned land (120,000 seedlings on 300 hectares in Dehdadi district and 87,000 seedlings on 200 hectares in Chintal district). The local communities, which will receive income from the trees when they bear nuts, helped establish the pistachio farms and participated in irrigation.

"Before, there was nothing but dried bushes," Sayed Mustafa Agha, the head of the District Development Assembly, said. "But now we can clearly see the pistachios trees are changing the environment and will also give our community the benefits of the harvest."

ASAP supported the growth of the pistachio farms by irrigating the seedlings and providing watchmen at each plantation to protect them from animals and looters through September 2011. At closeout, the project coordinated the handover of the pistachio farm in Dehdadi, Balkh province, to DAIL, while in Chintal eight local forestry committees each received a pistachio farm.

Qader, one of the laborers who planted the pistachios in Dehadi district, said he saw two very important advantages of this project: "It will fight pollution and protect the environment, and it will create jobs and a source of income in the long term."



A man in Balkh province smiles as he prepares the land for pistachio seedlings. The trees were planted under ASAP's cash-for-work project.

EMERGENCY DISTRIBUTIONS

Northern Afghanistan, traditionally famous for producing large volumes of wheat, suffered a near disastrous harvest in 2008. Many farmers found themselves with limited food supplies for their families and were forced to sell livestock to make ends meet. ASAP responded with an effort to increase production by supplying farmers in Balkh province with high-quality fertilizer and certified wheat seed.

Local Afghan community development councils identified the neediest farmers and issued vouchers that allowed them to purchase the wheat seed and fertilizer at their local AgDepots. ASAP distributed 1,000 metric tons of irrigated and rainfed certified wheat seed and 1,600 metric tons of fertilizer to 20,000 farmers in six districts ahead of the winter of 2008. In 2009, the

project conducted an economic impact study that surveyed 247 families or plots that received the seed. The wheat seed resulted in a bumper crop, generating \$1,846,000 in incremental sales and 1,020 full-time equivalent jobs. The distribution benefited 20,000 families and 5,200 hectares of farmland. ASAP also distributed 3,400 metric tons of animal feed in Balkh province during the year to help livestock survive the harsh winter, benefiting about 13,000 farmers.

Din Mohammad, a resident of Sarasyab in Balkh province's fertile Sholgara district, was one of the farmers who received wheat seed and fertilizer. "[In 2008] we faced a shortage of food, especially wheat," he said. "We had to sell our sheep, camels, cattle, and donkeys in order to buy wheat and flour. [In 2009] we harvested far more wheat and kept the surplus for our family's use."

ASAP CASH-FOR-WORK PROJECTS IN BALKH

District	Village(s)	Description	Projected Beneficiaries	Impact by Hectares	Laborers	Labor Days	Full-Time Equivalent Jobs	Wages (\$)	Units/Km
Shulgerah	Baba Ewaz, Khoja Sekander	Cleaning springs and ditches	1,217	1,540	1,216	30,490	117	152,450	14 springs
Nahre Shahi	Syagerd	Removing debris from canal bank	1,770	4,000	763	19,838	76	99,190	5 km
Nahre Shahi	Syagerd	Removing debris from canal bank	1,770	8,000	1,007	26,125	100	130,625	11 km
Balkh	Khasapaz, Plasposh	Removing debris from canal bank	1,414	56,000	1,414	36,764	141	183,820	7.5 km
Kholm	Chatgary, Sayghani	Cleaning springs and ditches	249	32,400	194	5,863	23	29,315	5 springs
Kaldar	Bozareq, Qaraja, Tazareq, Aregh ayaq	Removing debris from canal bank	3,174	15,000	3,169	81,382	313	406,910	24 km
Dehdadi, Nahre Shahi	Baba Yadgar; Sardarake Tokhta	Removing debris from canal bank	1,943	60,800	121	52,934	204	264,670	11.5 km
Balkh, Dawlatabad	Bande Qalacha, Bande Temour, Qaraghojla	Removing debris from canal bank	3,252	24,800	3,003	129,597	498	647,985	47.6 km
Dehdadi	Uch Tapa	Planting pistachio saplings	30,000	300	311	6,791	26	33,955	297 hectares
Chamtal	District center	Planting pistachio saplings	12,700	200	462	3,770	15	18,850	174 hectares
			57,489	203,040	11,660	393,554	1,513	1,967,770	



Afghan men rehabilitate a canal in Balkh province under ASAP's cash-for-work project, which increased water for irrigation and reforested barren land. The project employed more than 13,000 people.





Herders learn how to harvest cashmere from their goats using combs provided by ASAP under its cashmere value awareness and harvesting campaign.

CHAPTER TWO

LIVESTOCK PRODUCTIVITY

CASHMERE VALUE CHAIN

Cashmere goats dwell in the Central Asian highlands, including Afghanistan. Though it is estimated that 90 to 95 percent of Afghan goats produce cashmere, only a small portion was being harvested each year. Many livestock owners were unaware that cashmere could be sold and exported to make luxury clothing such as shawls, scarves, and sweaters. ASAP implemented a nationwide cashmere value awareness campaign to teach herders the value of cashmere, proper harvesting methods, and how to sell the cashmere to VFUs and local traders to generate an income.

ASAP trained approximately 466,721 goat herders nationwide, about 21 percent of whom were women. The project used a cascading training program in which master trainers first trained a select group of field trainers who,

in turn, spread across the country to train herders. In 2010 alone, ASAP reached 240,234 herders in all 34 provinces using this cascading system.

ASAP supplemented practical training in the field with 402,462 pieces of extensional materials and 300,000 radios that allowed the herders to listen to educational messages on livestock productivity. Acknowledging that a large portion of the rural population is illiterate, ASAP broadcast radio messages that promoted the National Cashmere Association (which the project established) and educated herders across the country on the value of cashmere, proper harvesting, sorting and grading methods, and storage. ASAP also distributed 497,693 combs to encourage that method of harvesting, not the traditional method of shearing, which dramatically reduces the value of the cashmere. The project

SNAPSHOT

Businessman Sees “Revolution” in Afghan Cashmere



Abdul Basir Hotak, owner of Afghan-Macau Cashmere and Skin Processing Company, examines Afghan cashmere. Hotak said the quality of Afghanistan's cashmere has improved dramatically with USAID training provided to local herders.

Abdul Basir Hotak, the owner of the Afghan-Macau Cashmere and Skin Processing Company, is witnessing the birth of a vibrant industry that could make Afghanistan a world player in the production of luxury clothing items.

“A revolution in the cashmere sector is happening in Afghanistan,” said Hotak, whose company exports up to 350 metric tons of cashmere annually to make expensive clothing.

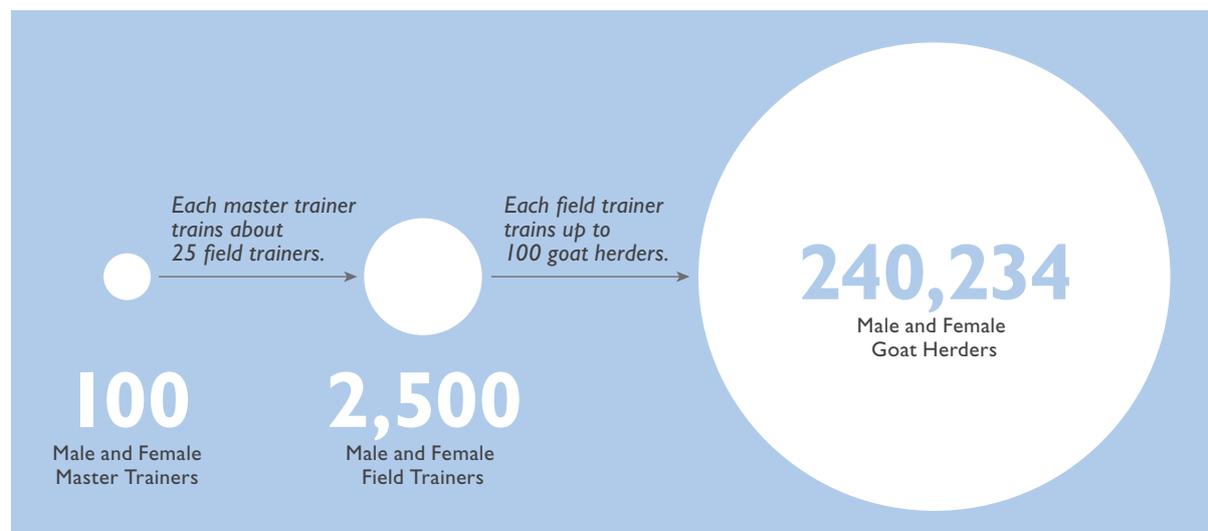
With USAID support, Hotak attended an agricultural trade fair in Tajikistan last August and showcased samples of his country's cashmere at the Afghanistan booth, which also featured sweaters and scarves made from local cashmere. The booth received third place out of more than 60 booths, and Hotak scored a \$100,000 business deal with a Tajik businessman.

Hotak is using the deal as a stepping stone to bigger deals in the cashmere industry. He owns a cashmere scouring facility in Herat and is establishing a dehairing facility with USAID support. The facility will allow Afghan cashmere traders to dehair or remove coarse goat hairs from fine cashmere locally rather than sending the raw goods to China for processing. The facility will boost the value of Afghanistan's cashmere abroad and attract Tajik cashmere producers who want to use the state-of-the-art equipment.

Hotak is also in talks with high-end U.S. fashion company Kate Spade to produce woven cashmere scarves and hand-knit pillows with an Afghan women's organization. USAID helped to build the relationship between Hotak and Kate Spade and has improved the quality of Afghanistan's cashmere to make such business deals possible. During 2010, USAID trained more than 200,000 male and female goat herders on the value of cashmere and proper harvesting methods.

“The quality of the cashmere I have received has improved significantly,” Hotak said. “I am receiving goat hair that yields up to 60 percent cashmere compared to 45 percent a few years ago. USAID has contributed a lot to the cashmere industry in Afghanistan.”

ASAP'S CASCADING TRAINING SYSTEM IN 2010



ASAP'S CASHMERE VALUE AWARENESS CAMPAIGNS

Year	Herders Trained	Cashmere Harvesting Combs Distributed	Educational Print Materials Distributed	Radios Distributed
2009	210,544	250,395	361,403	300,000
2010	240,234	230,391	41,059	0
2011	15,943	16,907	0	0
TOTAL	466,721	497,693	402,462	300,000

imported the combs the first year of the campaign; afterward, an Afghan company manufactured the combs.

Another integral part of the program was strengthening the cashmere value chain. ASAP set up a national network of regional cashmere traders, trained them on the value of cashmere, and assisted them in purchasing cashmere from the goat herders. The project then facilitated deals between herders and regional traders, and between regional traders and international buyers for export. ASAP's training reached 950 cashmere traders, MAIL staff,

AgDepot owners, and VFU staff who worked with local herders in the field.

ASAP promoted Afghanistan's high-quality cashmere by facilitating the participation of cashmere traders in international trade shows, including SPINEXPO in New York, the Prime Source Forum and Materials Manufacturing & Technology fairs in Hong Kong, and Agro Expo in Tajikistan. In March 2009, the project also organized an agricultural fair in Mazar-e-Sharif that focused on cashmere. Eight cashmere buyers from European countries and the United States were invited to



VFU staff vaccinate a flock of sheep. ASAP established a nationwide network of VFUs to improve livestock health and productivity.

see Afghanistan's cashmere value chain at work. ASAP supported the establishment of Afghanistan's first dehairing facility in 2011, giving the country the opportunity to export dehaired cashmere for the first time in its history and allowing local traders and exporters to fetch a higher price for their processed cashmere.

ASAP's cashmere value awareness campaign resulted in the harvest of an estimated 915 metric tons, exported a value of \$12,295,200.

VFUs

Because many Afghans depend on livestock for their livelihoods, maintaining the health of sheep, goats, cattle, donkeys, chickens,

and other animals is essential. The VFUs comprise a network of private businesses that USAID has helped establish across Afghanistan to provide animal health-care services to rural communities. VFUs are increasing the general health of livestock and helping control outbreaks of major livestock diseases, such as respiratory disease, internal parasites, and mastitis.

The VFUs are staffed by veterinarians, veterinary assistants, or para-veterinarians who administer high-quality vaccines and medicines to livestock and provide advice and services to herders. ASAP provided training for the staff and equipped the VFUs

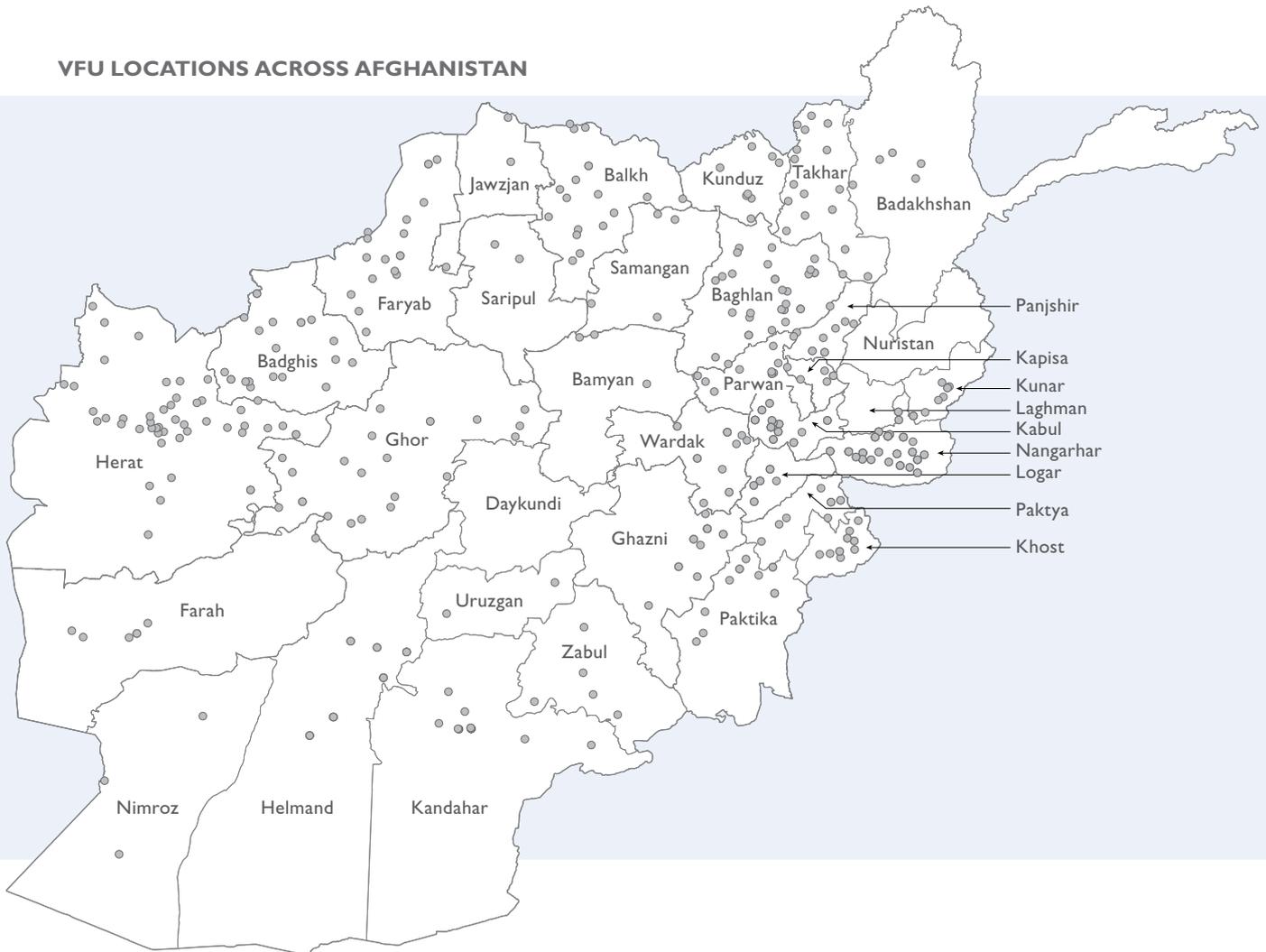
with items such as furniture, cattle crushes, medicine cabinets, motorbikes, and complete sets of veterinary instruments, including forceps, syringes, sterilizer, scissors, stethoscopes, and thermometers.

ASAP supported 383 VFUs in 17 original target provinces since the project's start in late 2006, and then expanded its reach into the South and East by establishing or reestablishing 67 VFUs in the provinces of Logar, Paktika, Nangarhar, Khost, Kandahar, Helmand, Ghazni, and Wardak. To date, the 450 ASAP-supported VFUs have gener-

ated \$12,821,340 in income and administered 30,750,604 vaccinations and 19,795,162 treatments to Afghanistan's livestock.

"The VFU network has provided demand-driven animal health-care services to herders around Afghanistan for years," said Minister of Agriculture, Irrigation, and Livestock Mohammad Asif Rahimi. "These private businesses are a real success story for Afghanistan. They have helped to improve the health of livestock, educate livestock owners, and help Afghans get more income from their animals."

VFU LOCATIONS ACROSS AFGHANISTAN



SNAPSHOT

Afghan Women Help Improve Animal Health



Momena Mohammadi uses her stethoscope to check the health of cattle in Herat.

When Momena Mohammadi drives to villages to treat farmers' livestock, other Afghan women ask her how they can become a para-vet like she is. The local women are not the only ones eager to follow in her footsteps; Mohammadi's husband and eldest son want to earn a living through veterinary services as well.

"Most of the people in Afghanistan are involved in agriculture and livestock, so this has an important role in Afghanistan's economy and in improving the livelihoods of families," said 30-year-old Mohammadi. "Strengthening this sector will help all the people and the general economy of Afghanistan."

With the assistance of USAID, Mohammadi graduated from a para-vet course and began running a VFU more than two years ago in Herat province. Mohammadi has clients in up to 15 villages and offers services like vaccination, pregnancy tests, deworming, and castration. Often she drives her car alone to see clients and treat livestock, but occasionally she travels with her husband into more remote villages.

Her husband is supportive of the career, and Mohammadi is the sole breadwinner for her family, which includes three sons ranging in age from 5 to 16 years old. Mohammadi estimates that her gross sales are 20,000 Afghanis, or \$400, each month.

Mohammadi attended a para-vet program for six months to learn about diseases, nutrition, anatomy, and other subjects that would enable her to improve livestock health. She also received training in business management to help her manage her VFU. Mohammadi graduated first in her class of 20 men and women. USAID provided equipment, ranging from a refrigerator for medicine storage to surgical instruments, to help her establish her VFU. Mohammadi is one of several female para-vets assisted by USAID. With such support, Mohammadi said women are becoming a growing force in Afghan society.

"If you compare the situation with some years ago, it's much different now," she said. "Women are active in many aspects in life in Afghanistan. They are going to school and operating businesses. Things are changing."

To build capacity across Afghanistan, VFU staff and VFU field monitors held extension awareness sessions with 18,403 farmers and herders, and provided rural populations with fact sheets and comprehensive training packages on topics such as herd health and the role of women in the live-stock sector. VFU staff played an important role in ASAP's cashmere value awareness campaign, training 169,373 of the 466,721 herders who participated in the initiative. Because they also acted as centers to collect cashmere to sell to regional traders, the VFUs generated extra income and

strengthened the sustainability of the stores.

ASAP held training courses to keep VFU staff informed about new developments and to expand knowledge of the field. The project also worked to improve the VFUs' ability to respond to increased demand through targeted training activities to develop business skills. Today, MAIL's Live-stock Department and NGOs pay the VFUs to report on livestock diseases and control outbreaks.

ASAP also strengthened the formal education of aspiring Afghan

VETERINARIAN BOOSTS LIVESTOCK PRODUCTIVITY

Muhammad Daud, who operates a VFU in the village of Zargaran in Farza district, Kabul province, is committed to helping rural Afghans by improving their livestock's health and productivity.

Dr. Daud earns about 9,000 Afghanis, or more than \$200, every month at his VFU from the sale of medicines, including antibiotics, anti-parasitic drugs, analgesics, and vaccines, that prevent diseases such as anthrax and foot-and-mouth disease. He also provides livestock owners with advice and extension materials on proper animal nutrition and care.

"VFUs can help to improve livestock in Afghanistan and are very important for herders," he said. "When the herders' animals are healthy, they can sell the animals and animal products at a higher price at the market. They can get more money, and they can also use the animals to feed their families."

ASAP provided training courses to Dr. Daud on veterinary care, business skills, and marketing so he and other veterinarians and para-vets could improve their knowledge on livestock health and strengthen their businesses.

"I am learning more practical and theoretical knowledge," Dr. Daud said. "Now I can help the herders more, and day-by-day my business is improving."

veterinarians and para-vets to produce more qualified staff to improve livestock health. With project support, Nangarhar University, the country's second-largest university, officially opened a modern veterinary clinic in early 2010. The facility has a surgery room, a laboratory, a pharmacy, and a shelter to keep three cows, three sheep, and one horse for demonstration and practical work. The university refurbished its existing building and procured office furniture, a refrigerator, surgical instruments, laboratory equipment, chemicals, drugs, and vaccines. Furthermore, ASAP recruited an experienced U.S. veterinarian to train students and faculty members. The university offers its services for a fee to an estimated 1,100 livestock owners to make the laboratory sustainable.

“Before, students of the veterinary faculty had to go to another area for practical training, which cost them in time and transportation,” Pir Mohammad, a veterinary teacher at Nangarhar University, said. “Now they can easily access every kind of practical training inside the faculty compound.”

HELMAND POULTRY PROJECT

Many people in the southern province of Helmand receive eggs and chicken through imports from India, Pakistan, and Iran. However, the local population in and around the capital, Lashkar Gah, are enjoying high-quality poultry products from a state-of-the-art facility that was transitioned to a private investor with the support of ASAP.

In an effort to develop the province's poultry industry, USAID launched the Helmand Poultry Project (HPP) in December 2007 under its Alternative Development Program–Southern Region. With HPP, USAID rehabilitated government-owned facilities at the Bolan Poultry Farm in Lashkar Gah and established an integrated breeder flock, hatchery, and feed mill operation. In February 2011, ASAP took over the final stage of USAID support to HPP and transitioned the Bolan Poultry Farm to a private company.

The Bolan Poultry Farm, which has the potential to produce up to 90,000 chicks and 750 tons of feed per month, has distributed more than 1 million chicks to farmers in the region since it began. Five distributors, 5 poultry veterinary clinics, 70 local outlets, and 50 outlets in other districts of Helmand carry poultry products from the farm. At last estimate, HPP-affiliated poultry farms were supplying 40 percent of Lashkar Gah's broiler market and 25 percent of its egg market. Local farmers are also enjoying increased demand for grain for use as poultry feed. The facility has the potential to generate \$2.5 million in sales each year.

HPP's ambition from the outset was to transfer assets of the Bolan Poultry Farm to the private sector. In September 2010, the Helmand Ihsan Poultry Co. (HIPC) won a stringent bidding process to identify the successor organization. It was evaluated to be the most capable local organization out of 7 applicants and more than 50



The Bolan Poultry Farm has distributed more than 1 million chicks to farmers since it began.

enterprises and individuals invited to apply. HPP implemented a tailored training regimen to ensure HIPC had the technical and business acumen to assume daily operations.

With support from ASAP, MAIL and the ALA signed a five-year lease in May 2011 that allowed HIPC to use the land on which the farm is located. USAID agreed to transfer ownership of the equipment so HIPC can oper-

ate Bolan Poultry Farm as an independent, sustainable enterprise. Four months after the transfer, the farm was fully operational, and now HIPC is looking to purchase additional parent breeder and layer stock.

At an event celebrating the privatization of the farm, Minister Rahimi said, “This is a wonderful indication of a joint partnership between government, donor, and investor.”



A lab technician tests a sample at the soil laboratory at Balkh University. Such tests allow farmers to know what fertilizers and crops are best suited to their land.

CHAPTER THREE

RESEARCH, DEMONSTRATION, AND TRAINING

BADAM BAGH DEMONSTRATION FARM

Afghanistan has a rich history of applied agricultural research and extension services. During the reign of King Zahir Shah prior to the Soviet invasion, the Afghan government turned a large piece of farmland called Badam Bagh (meaning “almond garden” in the local Dari language) into a demonstration farm. It ran as a demonstration site during the Soviet occupation, but was devastated during the ensuing years of conflict.

In early 2007, in coordination with MAIL, ASAP started to rebuild Badam Bagh and transformed the land into a demonstration site, training venue, and research center for Afghanistan. ASAP and MAIL managed 24 hectares of the 420-hectare Badam Bagh Agricultural Complex. The ASAP-managed portion of the Badam Bagh

Demonstration Farm now operates a fully functional commercial crop production and training venue. The project has developed a series of demonstration plots for a wide variety of crops; these are used to train farmers, university students, government employees, NGO staff, and other agricultural stakeholders.

Under ASAP’s leadership, Badam Bagh Demonstration Farm has for years been a vibrant research, demonstration, and training venue. The farm produces high-quality fruit and vegetables (e.g., wheat, corn, tomatoes, and grapes), and has introduced new varieties of crops, including spinach and strawberries. The farm demonstrates improved technologies such as drip irrigation; laser land leveling; greenhouses; GAP; intercropping; winter silages; urea treatment of wheat straw; raisin-drying sheds (known locally as *khish mish khana*); and different



Afghan women learn how to make sundried tomatoes at Badam Bagh Demonstration Farm. ASAP established the farm to showcase new agricultural technologies and modern practices to increase agricultural productivity across Afghanistan.

systems of grape trellising. Over the past five years, ASAP has built the capacity of Afghan farmers, students, and MAIL and DAIL staff who came to Badam Bagh Demonstration Farm to learn about better agricultural techniques and practices. The farmers were eager to adopt the new methods to increase their crop yields and generate more income. The farmers and the government staff, many of whom were extension workers, have gone on to spread the knowledge to others throughout Afghanistan.

Badam Bagh Demonstration Farm's impact has extended beyond its primary tasks of capacity-building and improving

agricultural productivity. Under a partnership with ASAP, the AWBC harvests and sells Badam Bagh produce on the local market and uses the profits to benefit disadvantaged women. ASAP has built fairgrounds on the site, and the farm has been the host of agricultural fairs that showcase Afghan produce to the world. The grounds also include a modern packhouse that complies with international food safety and quality standards, allowing Afghanistan to export to Dubai, India, Pakistan, and other markets.

Though MAIL is responsible for the entire complex, ASAP worked with the ministry to develop the Badam Bagh Agri-

cultural Complex Master Plan, a long-term strategy that enables MAIL to more efficiently manage the site and ensure its sustainability. MAIL hired ASAP's key farm staff and, in September 2011, began assuming operations of the farm so it can continue to build the capacity of Afghan farmers, students, government employees, and other agricultural stakeholders.

As a first step to establishing an official management structure for the entire Badam Bagh Agricultural Complex, ASAP and MAIL organized a Transition Executive Committee in August 2011 to oversee the site. The committee, composed of the directors of the ministry's Policy and Planning, Research, Cooperative, Extension, Natural Resource Management, and Forestry departments, is a precursor to an official organizational structure within MAIL — one that will require approval from the Civil Service Commission and the president's office. The Transition Executive Committee will fully implement the complex's official organizational structure and oversee the farm in accordance with the Master Plan until the official structure can assume such responsibilities.

RESEARCH AND TRAINING

ASAP used Badam Bagh Demonstration Farm as a centralized training center and relied on ASAP extension workers to travel to villages and bring knowledge of best agricultural practices to rural farmers, DAIL staff, and members of agricultural organizations. Recognizing that other

projects had developed valuable extension materials in support of such training activities, ASAP embarked on an initiative to compile agricultural extension materials into a single centralized location.

In 2009, ASAP partnered with the University of California at Davis to develop an online repository of agricultural extension materials targeting Afghanistan's key crops, including grapes, almonds, apricots, melons, pomegranates, apples, plums, and citrus fruits. Called the Afghanistan Agriculture Knowledge Bank, the repository contains field-tested extension materials to support farmers in adopting proper agricultural and horticultural practices. The materials are translated into the local languages of Dari and Pashto. ASAP shared the Afghanistan Agriculture Knowledge Bank website with farmers, exporters, MAIL and DAIL staff, students, and international and local organizations to boost agricultural productivity and spread knowledge of best practices.

The field-test materials include fact sheets with answers to questions for people looking for quick answers, extension training courses, PowerPoint presentations, and comprehensive manuals. ASAP transferred the Afghanistan Agriculture Knowledge Bank to MAIL's Management Information System Department at closeout so the ministry can continue adding to the online library and using the materials to further knowledge of best agricul-

SNAPSHOT

AgFair Generates Almost \$2 Million in Business Deals



U.S. Ambassador Karl Eikenberry and Minister Mohammad Asif Rahimi smile as they cut the ribbon to open the Kabul International AgFair 2010.

U.S. Ambassador Karl Eikenberry and Minister of Agriculture, Irrigation, and Livestock Mohammad Asif Rahimi cut a ribbon signifying the opening of an agricultural fair that generated almost \$2 million in business deals and attracted more than 40 international business representatives from as far away as the United States and Australia.

"You have come at the perfect time," Minister Rahimi told an audience of Afghan government officials, diplomats, and business people from Afghanistan and around the world at the opening ceremony. "Global demand for Afghan products is big and grows larger every day."

Ambassador Eikenberry echoed the optimism, recalling childhood memories of Afghan raisins sold at U.S. supermarkets and lauding the comeback of the country's agricultural sector.

The Kabul International AgFair 2010 featured 174 booths showcasing a range of products and services from companies and organizations in agriculture processing and production, textiles, livestock, renewable energy, transportation and logistics, packaging and printing, bank and finance, and leather goods.

More than 40 business representatives from Argentina, India, Singapore, Tajikistan, the United States, the United Kingdom, Switzerland, China, Australia, the Netherlands, and the UAE participated in the event.

Early findings showed that 10 deals totaling \$1,969,000 were negotiated at business-to-business sessions at the AgFair, and 15 potential deals worth \$12,100,233 are being pursued.

Throughout the event, farmers, students, businesspeople, and the public attended seminars at the Productivity Center to learn about the latest agricultural technologies and methods.

The Kabul International AgFair 2010 attracted almost 35,000 visitors over the three-day period from October 6-8. Afghan families enjoyed vendors as well as restaurants, playgrounds, dancing, music, demonstration plots, greenhouses, livestock, and live wool and carpet weaving demonstrations.

“ If you have 50 international people who come to the AgFair, and those 50 people go and tell another 50 people in other parts of the world, then the reputation of Afghanistan improves. ”

**MANSOOR RIZVI,
CASE-NEW HOLLAND,
PAKISTAN**

“ Thirty years of a total standstill in a country cannot be changed in one or two years. If there were no AgFairs, then there would be no start. ”

**PETER VAN
OUWERKERK,
POMEGRANATE BUYER,
NETHERLANDS**

“ This event has opened up my eyes and will open others’ eyes as well — and that will open business. ”

**DAVID LEE, DIRECTOR
OF CASHMERE FIBRES
INTERNATIONAL LTD,
UNITED KINGDOM**

tural practices for Afghanistan’s primary crops. MAIL is providing copies of the knowledge bank to its 34 provincial offices so they can share the materials with local farmers, MAIL and DAIL staff, NGOs, implementing partners, exporters, and traders.

In another effort to boost the productivity of Afghan farmers, ASAP in 2010 established a soil laboratory in cooperation with Balkh University and the USAID-supported AWATT program. ASAP provided equipment and supplies, while AWATT trained lab managers and staff at Balkh University on pH, phosphorus, nitrogen, potassium tests, flame photometer installation, and organic matter analysis. The project worked with the AgDepots and farmers to link them to the university, and provided training to them, as well as DAIL and MAIL staff, on proper soil sampling and the soil laboratory’s services. The university is now providing basic testing for pH, salinity, nitrogen, phosphorous, and potassium, for a fee to make the laboratory sustainable and help farmers improve their productivity by allowing them to identify crops and fertilizers suitable for certain soil types.

AGRIBUSINESS TRADE

AgFairs

Afghanistan’s agricultural trade fairs, or AgFairs, placed the spotlight on the country’s pomegranates, grapes, dried fruit and nuts, cashmere, and other high-quality agricultural products, drawing thousands of participants from across Afghanistan and hundreds

of international buyers from around the world. ASAP organized 11 AgFairs in major Afghan cities, including Kabul, Mazar-e-Sharif, Kunduz, and Herat, in collaboration with MAIL and other local partners. The goal was to build awareness of Afghanistan’s agricultural sector, link buyers and sellers through business-to-business meetings, and boost sales of Afghan products nationally and internationally. Since ASAP held the first AgFair in April 2007, the events have come to be recognized as the largest and most important trade fairs in Afghanistan, catalyzing investment in the country’s agriculture sector, facilitating trade, and introducing new technologies.

In total, the 11 AgFairs held with support from ASAP have drawn 534,500 local visitors and generated an estimated \$4,037,829 in concrete sales and \$49,289,411 in potential business deals. In addition, 250 participants from Turkmenistan, Kazakhstan, Pakistan, India, the United States, Tajikistan, China, the Netherlands, the United Kingdom, Germany, Italy, New Zealand, the UAE, Argentina, and Turkey attended the fairs.

AgFair participants have included importers, exporters, wholesalers, retailers, producers, input suppliers, and service providers from across Afghanistan and other countries. Business-to-business meetings during the AgFairs have brought together leading national and international agribusiness representatives, generating business deals and building partnerships. The AgFair Productivity



Afghan businesspeople offer samples to international buyers at Gulfood in Dubai. To boost exports, ASAP facilitated Afghanistan's participation in trade shows in India, the UAE, and Tajikistan.

“ The fair was an eye-opener, and I got an opportunity to meet a good supplier. I look forward to starting business here in the new crop year. ”

**MUFFADEL YOUSOOOF,
TAJIR PRIVATE LTD.,
INDIA**

Centers, which offered lectures, presentations, and demonstrations, provided farmers, students, and government staff with insight into improved agricultural methods ranging from grape trellising and soil testing to cashmere harvesting and drip irrigation.

ASAP organized two AgFairs that catered specifically to two of Afghanistan's most valuable agricultural products: pomegranates and cashmere. The project organized the World Pomegranate Fair in November 2008, Afghanistan's first international AgFair dedicated to one product. Held at the Badam Bagh Fairgrounds in Kabul, the fair gave Afghan pomegranate producers an opportunity

to showcase their product to Afghan buyers and entrepreneurs, as well as buyers from the United States, the United Kingdom, the Netherlands, India, Turkmenistan, Kazakhstan, Pakistan, and the UAE.

At the business-to-business networking event, pomegranate producers met with other exporters, importers, and value-added manufacturers to initiate business deals and promote Afghanistan's pomegranate varieties. Potential business deals worth approximately \$600,000 were reportedly negotiated at the “PomFair,” which also attracted about 25 representatives from international media outlets (e.g., Fox News,

“ Afghanistan has sparked the interest and the appetite — literally the appetite — of the world. ”

**KARL EIKENBERRY,
U.S. AMBASSADOR**

“ The AgFairs are a very good initiative. This is a marketing opportunity. I can meet buyers and sellers from across the country and the world. Previously, I thought I was the only one involved in the cashmere business in Afghanistan. ”

**ABDUL AZIZ ZARANG,
PRESIDENT OF AFGHAN
CASHMERE SUPPLY CO.,
AFGHANISTAN**

ABC News, the BBC, the New York Post, and Telegraph TV UK) and representatives from 25 Afghan media outlets.

In March 2009, ASAP held the Mazar-e-Sharif International AgFair and Cashmere Exhibition at the Mechaniz-Zeraati Fairgrounds in Balkh province. The event showcased the country’s expanding cashmere industry and matched international buyers with Afghan suppliers to facilitate business deals and stimulate Afghanistan’s agriculture sector. Cashmere buyers from eight companies from Italy, the United Kingdom, Germany, China, and Switzerland participated.

Export of Produce

Through targeted technical support, commercial missions, and international trade fairs, ASAP opened up the international retail market for Afghan produce at well-known supermarkets such as Baharti, Wal-Mart, Spencer, Big

Bazaar, and Reliance in India; Carrefour and Lulu in the UAE; and Metro in Pakistan. In total, ASAP paved the way for more than \$14 million in exports and local sales of more than \$2 million of Afghanistan’s pomegranates, apricots, grapes, melons, apples, juice concentrate, and dried fruit.

Many Afghan traders had limited knowledge of proper sorting, grading, and packaging procedures, little access to transport to take their produce to outside markets, and no linkages to international buyers that could help them fetch a higher price for their product. Since its outset, ASAP has identified promising Afghan businesspeople and provided them with training on proper agricultural procedures and business skills, and assisted them in forging relationships with overseas buyers. To help facilitate exports, ASAP provided traders with proper packaging, support in

ASAP-SUPPORTED SALES AND EXPORTS OF AFGHAN PRODUCE

Type of Produce	Local Sales (\$)	Exports (\$)
Melon	240,307	5,001,330
Pomegranate	635,130	2,383,556
Apricot	1,564	713,340
Juice	0	185,319
Dried fruit and nuts	99,559	1,454,194
Apple	219,152	894,527
Grapes	0	776,826
Fresh fruit and vegetables	959,704	2,703,778
TOTAL	\$2,155,416	\$14,112,870



ASAP

USAID supported Haji Abdul Samad Hamid with training, packaging, transport, and market linkages so that he could export melons to Dubai.

SNAPSHOT

Afghan Melons Reach Dubai for the First Time

With more than 80 percent of Afghanistan's population relying on the agricultural sector, one of the main challenges faced by the Afghan government is paving the way for local traders to break into lucrative new markets. Melon farmers in Afghanistan count India and Pakistan as two of their biggest international customers, for example, but the UAE has proven to be a more elusive market.

That changed in August 2011, when 6 metric tons of melons from the district of Spin Boldak in the southern province of Kandahar reached Dubai, marking the first time Afghanistan had exported melons to the UAE.

Working in partnership with MAIL, USAID supported Haji Abdul Samad Hamid, a melon trader from Spin Boldak, in gaining a foothold in the new market. USAID provided proper cartons to ship the melons as well as training for his staff on proper harvesting, sorting, grading, and packing procedures. Twenty laborers harvested the melons, and eight others sorted, graded, packed, and transported the melons from the field. USAID also subsidized the air transportation cost for this initial shipment, relying on an Afghan airline to fly the melons from Kandahar International Airport to Dubai.

"I have been exporting melons to Pakistan and India for the last 10 years, but this is the first time I have exported melons to Dubai," said Haji Hamid, who made \$4,980 on the initial shipment. "As a result of these efforts, we will be able to export more melons to Dubai and other international markets."

USAID also identified the buyer in Dubai and linked him with Haji Hamid in Spin Boldak. After initial feedback from the Dubai buyer, Haji Hamid is working with USAID to improve the quality of the next shipments with an increased focus on better sorting, grading, packing, and branding to meet the stringent requirements of the Dubai market.

The melon shipment marked the latest historic event in Afghanistan's agricultural sector. Afghan farmers made their first legal export of apples to India in November 2009 with the support of USAID and MAIL. USAID is now working with other traders in the south to bring their high-quality grapes and pomegranates to the supermarket shelves of Dubai.

marketing and customs documentation, access to cold-storage facilities, initial transport costs, and competitive rates with key airlines operating between Kabul, Kandahar, and target markets.

In 2010, ASAP conducted training-of-trainers sessions at the Badam Bagh Demonstration Farm in Kabul and in Mazar-e-Sharif in Balkh province for agriculture experts at MAIL, the DAILS, NGOs, exporter associations, and agricultural organizations from

across the country on a range of best post-harvest techniques so Afghan produce complies with stringent market requirements. The participants, many of them leaders in the agriculture sector, will go on to train other Afghan agricultural stakeholders. The program reached 220 leading professionals in the agricultural sector; they now have the capacity to train others in areas such as sorting, grading, packaging, cold storage, pelletizing, and Afghan-GAP.

IMPROVED SORTING, GRADING, AND PACKAGING TRANSLATES INTO HIGHER PROFITS

Kandahar province in southern Afghanistan produces melons that are reputed for superior sweetness and quality. India has long been a fan of Afghanistan's many other delicious melon varieties, but all too often the produce arrives damaged after the long overland trip.

Through ASAP, Kandahar-based exporters are now transporting the famed Zarda melon in protective packaging to Quetta and Pakistan, onward to the Wagha Border in India, and, finally, to Indian fruit markets. The secure packaging has reduced spoilage from about 40 percent to 5 percent and is translating into higher profits.

"Before USAID support, I received only 300 rupees (\$6.64) for a box of melons, but now I get 350 to 400 rupees (\$7.75 to \$8.85) per carton," said Haji Abdul Samad Hamed, the owner of Abdul Samad Hamed Co., a fruit exporter in Spin Boldak.

Hamed used to pack his melons in the traditional manner: in wooden crates filled with straw. But this rudimentary packaging offered little protection during the bumpy truck ride to India. After ASAP provided training, Hamed and other exporters began sorting and grading melons according to size and quality and packing them in carton boxes with dividers. With ASAP's guidance, Hamed designed and branded the boxes to make them more appealing to Indian buyers.

"Now we sort, grade, and pack our product in accordance with international business norms," he said, adding that his company has increased its melon exports to India by 20,000 metric tons annually.

ASAP also used commercial missions and participation in international trade shows to open up new markets for Afghan produce and to introduce Afghan businesspeople to international phytosanitary, customs, and logistics requirements. The project organized Afghanistan's participation in commercial missions in India, Pakistan, and Dubai, as well as major trade events (e.g., the India International Trade Fair in New Delhi, Gulfood in Dubai, and Agro Expo in Khujand, Tajikistan).

As part of efforts to reestablish Afghanistan's position as a producer of high-quality fruit, vegetables, nuts, and juice concentrate, ASAP facilitated Afghanistan's participation in Gulfood, the Middle East's largest business event for the food and drink industry, in 2010 and 2011. With project support, 25 Afghan businesspeople attended the four-day premier event in 2011 and displayed their fresh and dried fruit, nuts, juice concentrate, vegetables, saffron, honey, jam, and other agricultural produce.

Mahooba Waizi, head of the AWBC and one of the participants, said Gulfood surpassed her expectations. "We received contact numbers from more than 40 companies across the world. We got a lot of great remarks from visitors to the pavilion like, 'Wow, Afghanistan is here!' Buyers were very interested in our dried and fresh fruit, and there was a great deal of interest in saffron. Everybody was very happy with the outcome."

At Gulfood, ASAP facilitated meetings with importers and buyers from different parts of the world to build the foundation for business deals with the Afghan exhibitors. Discussions with Gulfood buyers, along with visits to fruit and vegetable markets and high-profile retailers such as Carrefour, Lula's, Géant, and Del Monte Foods, helped the Afghan exporters learn about international requirements that can increase the quality of their produce and boost exports.

"We learned a lot about advertising, packaging, marketing, and displaying products," AWBC's Waizi said. "We learned how to communicate with international buyers and how to promote our products. Gulfood was extremely useful for us."

Afghan traders also had success at the 30th India International Trade Fair, the largest annual international trade event organized by India, in November 2010. Over 14 days, Afghanistan traders sold more than 26,693 kg of dried fruits and nuts, fresh fruits, handicrafts, and carpets worth \$292,976. In addition, Afghanistan's beautifully decorated pavilion was awarded the gold medal in a contest for best booth decoration, best organization, most visitors, and public choice. Partnering with MAIL and USAID's Agricultural Credit Enhancement program, ASAP facilitated Afghanistan's participation in the event.

ASAP EXPANDS MARKET REACH OF AFGHAN EXPORTERS

Like many other Afghan pomegranate farmers, Haji Wali Muhammad sold his fruit on the local market for a price that could not sustain his Kandahar-based trading business. He and other Afghan producers needed to increase the quality of their pomegranates through proper harvest and post-harvest procedures, including sorting, grading, and packing. They also needed to find outside markets that would offer a competitive price for their sweet and juicy pomegranates.

To provide more opportunities to farmers and increase the reach of Afghanistan's famous pomegranates, ASAP studied neighboring regions and identified India, Pakistan, and the UAE as lucrative markets. As a first step to broadening Afghanistan's reach into these markets, ASAP in 2009 organized a trade mission to India for Haji Wali Muhammad and other Afghan producers of fresh and dried fruit. Three decades ago, Afghanistan exported a large portion of its produce to India, but these market linkages were lost after years of conflict. During this time, the Indian economy swelled, and the country emerged as a major consumer.

The 2009 mission generated substantial trade enquiries and export orders for the Afghan growers and producers. ASAP provided Haji Wali Muhammad and other producers with the required technical support on grading, sorting, packaging, and branding, as well as assistance in fulfilling the orders from India.

"I sold my first shipment of pomegranates to India in 2009, and I was happy to sell my produce at a 50-percent higher margin," said Haji Wali Muhammad, who now sells to India on a regular basis.

AFGHANGAP

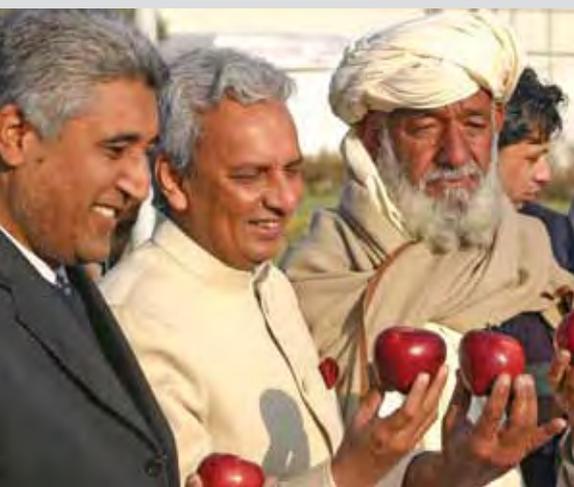
Though high-quality Afghan produce is winning customers in Pakistan, India, the UAE, and European countries, Afghanistan could dramatically boost its market share abroad by strictly adhering to international food safety standards.

In coordination with MAIL, ASAP in July 2010 created AfghanGAP after discussions

concluded that a unit devoted to training farmers, processors, and marketers of Afghan food products was vital to contend with international food safety standards. AfghanGAP is similar to programs in Kenya, Thailand, Chile, and Guatemala, countries that have built thriving agricultural export industries in which compliance to food safety is crucial to success in international markets.

SNAPSHOT

Afghan Farmers Make History with Apple Exports to India



Minister Mohammad Asif Rahimi (left) and Indian Ambassador to Afghanistan Jayant Prasad (middle) join an Afghan farmer in admiring Afghan apples which are headed to India for the first time.

Afghan farmers made their first export of apples to India on a sunny November day that Minister of Agriculture, Irrigation and Livestock Mohammad Asif Rahimi proclaimed made “history in Afghanistan’s agricultural economy.”

The opening of the Indian market comes after approval of a key document detailing how Afghan apples meet international standards. India requires the document, called a pest risk analysis, for apple imports to prevent dangerous infestations. In partnership with MAIL, USAID completed the analysis and submitted the document to India’s Ministry of Agriculture. India can require up to a year to process the document, but USAID expedited approval through frequent visits with agricultural officials in New Delhi.

Afghan farmers now have the opportunity to introduce their apples — some of the crispest, sweetest, and largest in the region — to the biggest market in Central Asia. Afghanistan will fill a surging demand after a drought reduced India’s apple harvest.

Minister Rahimi highlighted the achievement at a press conference at the Kabul International Airport with Jayant Prasad, Indian Ambassador to Afghanistan and John Pennell, director of USAID’s Office of Agriculture. Minister Rahimi concluded the press conference by proceeding to the tarmac, journalists in tow, and loading a box of Afghanistan’s apples onto a plane. The apples are being shipped via Air India to take advantage of special rates that USAID negotiated with the airline.

Farmers in apple-growing regions like Wardak and Gardez are wrapping up this year’s harvest and are expected to export up to 75 metric tons of apples each week until the year’s end. USAID, in partnership with the coalition forces, has provided the farmers with training to improve the quality and quantity of the apples and to introduce proper sorting, grading, and packaging. As a result of the partnership, farmers are also using cold-storage facilities that allow them to wait for optimal prices before selling the fruit.

“I’m expecting to sell our apples at a good price in India,” said Abdul Masood, a farmer who has received training from USAID. “That in turn will encourage us to grow more apples, export them to India and get more money, which, as you know, can contribute to the local economy.”

The project trained recent agriculture graduates from the universities of Kabul, Nangarhar, Balkh, Kandahar, Paktya, Kapisa, and Bamyan on food safety management programs and selected the top trainees from each region. ASAP then introduced these professionals, 16 inspectors, and an inspectors' coordinator to the Afghan food industry and deployed them to key areas in the country. Equipped with laptop computers and digital analytical tools, the inspectors trained more than 3,365 farmers, exporters, MAIL and DAIL staff, and students; inspected more than 10 small, medium, and large companies interested in complying with food safety standards; and assessed more than 3,000 hectares of farmland.

The AfghanGAP staff provided training that covered basic areas of inspection and certification common to the food safety requirements of GlobalGAP, good management practices (GMP), good hygiene practices (GHP), and HACCP, the British Retail Consortium, and the U.S. Food and Drug Administration, including water quality, food handling, agrochemical use, and traceability. These four aspects represent the foundation for any food safety assurance program aimed at generating business opportunities with retail and food service companies locally and abroad.

ASAP created Pashto and Dari versions of a detailed AfghanGAP manual, and developed crop-based GAP manuals that can be distributed to regions based on key crops. These guides provide

a written manual for farmers to understand the food safety requirements of their major crop; illustrate the practices used in other countries that comply with food safety; detail standards; and function as recordkeeping for field activities so buyers can see an account of those improved practices.

To bring the farmers up to AfghanGAP standards, ASAP also distributed 377 latrine-building kits with hand-washing facilities to farmers in Paktya, Kandahar, Wardak, Samangan, Balkh, and Bamyan provinces beginning in July 2011. By mid-September 2011, the project determined that the farmers had constructed about 50 percent of the latrines and were in the midst of constructing the remainder. Because the farmers had already applied recordkeeping and other requirements of AfghanGAP certification, completing this construction is the last step before receiving AfghanGAP certification. Certified farmers in the region will provide a model for other farmers and encourage them to copy GAP and apply them on their farms and orchards.

AfghanGAP plays a central role in the Afghan First Policy, a U.S. government initiative that strives to rely on Afghan companies for goods and services, such as supplying produce to international and national troops in Afghanistan. Not only will AfghanGAP work with farmers, exporters, and companies toward building the foundation for food safety certification in areas such as water quality, handling, agrochemical



An employee at the Badam Bagh Demonstration Farm packhouse in Kabul packs apricots bound for export. ASAP renovated the facility to comply with international food safety standards, creating new opportunities for local traders in support of the Afghan First Policy.

management, and traceability, it will be the interface between strict international standards and companies working toward compliance. As a result, AfghanGAP is expected to be the point of contact for the different certifying bodies required by clients such as the U.S. Army Public Health Command, which approves food suppliers for the U.S. Army in Afghanistan and other countries.

Through the training of farmers and support to farmers in building latrines and adopting other best practices, ASAP led a farm-based food safety assurance program aimed at Afghan First clients and the international markets. The project is encouraging MAIL to absorb AfghanGAP activities so it can build on the foundation created by ASAP and AfghanGAP can serve as the official food certification body for the government.



A man trims a bunch of grapes at the modern packhouse at Badam Bagh Demonstration Farm. ASAP has trained every packhouse employee on international food safety standards.

CHAPTER FOUR

AGRIBUSINESS INVESTMENT

JUICE-PROCESSING FACILITY

The Omaid Bahar Fruit Processing Facility, established with ASAP support, is using Afghanistan's produce to compete in world markets with two products. First, it is processing pomegranates, apples, melons, apricots, peaches, and mulberries for sale as juice concentrate that meets international quality standards with the help of ASAP's AfghanGAP. Second, its fresh fruit packaging portion is sorting, grading, and packaging fresh produce for export to markets in Asia, Europe, and North America. It has created about 70 jobs.

"Today is not just the start of a factory it is the rebirth of Afghanistan in the global economy," Minister Rahimi said as he addressed the press at the opening ceremony of the facility in October 2009.

ASAP provided a business plan, technical assistance, training, cold rooms, generators, logistical support, and market linkages with farmers and international buyers to help establish the state-of-the-art facility and grow its business. In 2010, it facilitated a landmark business deal in which Pomegreat, the United Kingdom's leading pomegranate juice company, became the first international company to purchase pomegranate juice concentrate from Afghanistan — from Omaid Bahar. ASAP also supported deals at the local level by encouraging mulberry farmers in Panjshir province to sell their berries to the facility for juice concentrate. The deal was the first time the farmers had sold their mulberries and was accomplished in partnership with USAID's Financial Access for Investing in the Development of Afghanistan, the Panjshir PRT, and the Afghanistan Investment Support Agency.



Employees at the Omaid Bahar Fruit Processing Facility, established with ASAP's support, sort mulberries before they are cleaned and processed into juice concentrate. ASAP linked the facility with mulberry farmers in Panjshir province, who were trained on proper sorting and grading.





Afghan businessman Amir Jan packs melons into boxes. His company's produce will be used to feed Afghanistan's police force.

SNAPSHOT

Afghan Company Strikes Profitable Deal

Amir Jan had been searching for ways to expand his family's fruit and vegetable business, so he seized the opportunity to participate in the Middle East's largest business event for the food and drink industry last February.

Amir Jan now spends his days neatly packing fresh produce into colorful boxes and loading them onto trucks for their final destination. His busy days are the result of a lucrative deal his company, Nijabat Haidari Co., and Supreme Group, a Dutch company that supplies clients in challenging environments, struck at Gulfood 2010 in Dubai.

Amir Jan attended Gulfood 2010 with the support of USAID. In coordination with MAIL, USAID set up a booth to feature Afghanistan's fruit, vegetables, and dried fruit and nuts. Minister Mohammad Asif Rahimi opened the booth with a ceremonial ribbon-cutting, and Afghan traders like Amir Jan met with international business representatives throughout the four-day event.

Amir Jan's meeting with Supreme Group resulted in a six-month business deal that he said is worth up to \$600,000. Amir Jan said his company supplies fruit and vegetables to Supreme Group, which then sells the produce to feed national police in Gardez, Jalalabad, Mazar-e-Sharif, Kunduz, Kandahar, and Kabul. Amir Jan said he expects the deal to be renewed for another six months.

"The experience in Dubai was a very good one for me," Amir Jan said, adding that he learned about international packing standards at the event and now places his fruit and vegetables in sturdy and attractive cartons to increase their appeal.

In addition to facilitating links with international buyers through events like Gulfood 2010, USAID has supported Afghan traders like Amir Jan by providing improved packaging and training on proper harvesting, sorting, and grading to increase the value of their produce.

"If we support agriculture, then the country's economy will improve," said Amir Jan.

In addition, ASAP's AfghanGAP inspectors worked with quality assessment and quality control staff from Amsterdam-based Supreme Group B.V., which supplies international and local forces in conflict zones, to assess the facility and recommend upgrades in 2011 in preparation for an audit by the U.S. Army Public Health Command. When the facility passes the audit, Supreme Group will be able to purchase juice from the facility's Tetra Pak line to sell to U.S. forces under the Afghan First Policy.

The facility receives fruit from farmers in Kandahar, Helmand, Wardak, Ghazni, Paktya, Farah, and Kapisa provinces. The high-quality fruit is exported as fresh produce, and lower-quality fruit is turned into concentrate. The facility has the capacity to process 100 metric tons of fruit daily. Because Afghanistan is a landlocked country with logistical constraints, juice concentrate is an ideal way to capitalize on the country's abundance of produce. Omaid Bahar has also exported fresh apples, apricots, and pomegranates to South Korea, Canada, the UAE, India, and Pakistan. It installed a Tetra Pak line in 2011 that allows it to sell packaged juice on the local market, substituting for juice imports from Pakistan, Iran, and other countries. In June 2011, it began producing juice for local consumers at high-end supermarkets, creating additional jobs and replacing imported juice.

CASHMERE PROCESSING FACILITY

Afghanistan is estimated to be the world's third-largest producer of cashmere. However, it has not had scouring, disinfecting, and dehairing equipment, forcing local traders to export the cashmere in its raw, greasy state, which sells for much less than processed cashmere. With ASAP support, Afghanistan is now exporting de-haired cashmere for the first time.

ASAP, in coordination with MAIL, worked with Abdul Basir Hotak, owner of the Hirati Cashmere and Skin Processing Plant, to create Afghanistan's first modern cashmere processing in Herat, the center of Afghanistan's cashmere industry. The Hirati Cashmere Skin and Processing Plant had scouring and disinfection equipment, and ASAP procured state-of-the-art dehairing equipment and trained the staff on its use and maintenance. The machine, which began operation in July 2011, has five dehairers that clean and remove coarse hairs from the cashmere, and can process more than 200 kg of greasy cashmere per day, increasing the product's value in international markets. (One kilogram of raw, greasy cashmere sells for \$35. Two kilograms of raw, greasy cashmere yields 1 kh of de-haired cashmere, which commands between \$90 and \$110 on the market.)

The plant has already provided de-haired cashmere to high-end



The Hirati Cashmere and Skin Processing Plant uses state-of-the-art equipment provided by ASAP to dehair cashmere. With project support, Afghanistan exported dehaired cashmere, which fetches a much higher price than raw cashmere.

U.S. clothing retailer Kate Spade and has sent samples to buyers across the world. After receiving a sample, an Italian company, Fiber Resource International, inked an \$84,000 deal for one metric ton of pure, dehaired Afghan cashmere. Other export deals are also in the works.

ASAP has also trained 240 women on how to knit high-quality clothing from cashmere that they can sell to Kate Spade, which plans to create about 1,000 jobs over three years for Afghan women. Under the supervision of a world-class production quality-control manager who has worked with big clothing retailers in the United States, the participants

received training on how to knit hats, scarves, and mittens according to Kate Spade's design specifications for its 2011 fall collection.

BADAM BAGH PACKHOUSE

ASAP renovated a packhouse at Badam Bagh Demonstration Farm to meet international food safety standards. The 1,256-square-meter facility now has a pre-washing area, a sorting room, a washing and packing room, a final packaging area, a water and air filtration system, and cold storage. The state-of-the-art packhouse features easy-to-clean rooms, a pest control system, and separate toilet and shower facilities for men and

women. Staff has been trained on GMP and GHP; proper packing, sorting, and grading; and the use of high-quality packaging — all of which meets international standards and will boost exports of agricultural products. The packhouse is HACCP-compliant, and is awaiting an audit from the U.S. Army Public Health Command that will allow it to supply produce to Supreme Group, which can then sell the fruit and vegetables to the U.S. military in Afghanistan in support of the Afghan First Policy.

Samsor Ban Agricultural Services, which has nurseries and orchards in 10 provinces, is one of several Afghan producers that has begun to export its fruit through the packhouse. Many of the company's 200 employees have received training at Badam Bagh on proper sanitation, sorting, grading, packaging, and cold chain management to ensure the produce meets international standards.

Akhter Mohammad, who worked at Samsor Ban for 20 years, said, "I've learned everything at Badam Bagh. I first learned about the concept of a packhouse here. I learned about proper dress and hygiene, and

I have been trained on all the procedures necessary to get our fruit to other countries in good condition."

Representatives of Nejabat Haidary Co., with support from ASAP, attended Gulfood 2010 in Dubai, where they were awarded a contract to supply fresh fruit and vegetables to Supreme Group, which sells the produce to the Afghan National Police and Afghan National Army in Gardez, Jalalabad, Mazar-e-Sharif, Kunduz, Kandahar, and Kabul. Nejabat Haidary is using the packhouse to supply Supreme Group under the Afghan First Policy. Furthermore, AWBC and other local companies are using the packhouse to take advantage of the HACCP-compliant environment for packing their fruit and vegetables. ASAP has trained all of the staff on GAP, GHP, AfghanGAP, HACCP, and packhouse management and operation.

ASAP transitioned responsibility for the packhouse to MAIL, which is working through the ALA to lease the operations to a private company with substantial experience in logistics and facility management. This company will run and maintain the packhouse for a profit.



A herder stands with his goats and sheep in Balkh province. ASAP established a network of VFUs to provide herders with access to medicines and vaccines for their livestock.

CHAPTER FIVE

MAIL ADVISORY SERVICES

ALA

The government of Afghanistan holds about 6 million hectares of land that are considered suitable for industry or agricultural development, but access has been a major obstacle to investment.

To pave the way for private-sector investors, ASAP supported MAIL in establishing the ALA, which aims to fast-track leasing procedures for government-owned land primed for investment. The initiative is laying the foundation for new jobs and additional revenue for the government by increasing the amount of state-owned land available for commercial use.

In early 2009, ASAP held technical consultations with lease applicants, USAID projects, MAIL directors, donors, and local organizations to gather feedback on creating the ALA. The project collected all policies and legislation related to land use and business promotion, and

researched past and ongoing land-lease efforts in other countries, including Russia, Kazakhstan, and Mongolia. With this information, ASAP developed the concept for the ALA and shaped its final structure in partnership with MAIL.

Minister Rahimi presented the ALA proposal in April 2009 at a meeting of the Joint Coordination and Monitoring Board, which includes Afghan ministers, members of the international community, and private-sector representatives. Minister Rahimi positioned the ALA as a key component of a new development strategy for the agricultural sector. The board welcomed the proposal and agreed to facilitate quick and fair leasing of state-owned land to Afghan farmers and investors. This milestone enabled ASAP to continue formulating and refining an implementation plan for the ALA.

ASAP supported MAIL throughout 2009 in working to rally financial and political support for the ALA. The High Commission for Investment, the Afghan government's focal point for policy-making concerning investment, gave the ALA its formal endorsement in July 2009. Two months later, the General Cabinet gave MAIL a formal mandate to conduct the design phase for the ALA. With the assistance of ASAP, MAIL received a formal commitment from Harakat, an Afghan NGO whose goal is to improve Afghanistan's business environment, to fund the initiative through the signing of a grant agreement in September 2009.

“Government owns 6 million hectares of non-farmable land potentially suitable for industry, and it owns agricultural land too,” Minister Rahimi said at a press conference inaugurating the initiative. “It leases only 6,000 hectares and gets only about \$500,000 a year in rent. This is a bad system. Farmers and agribusiness investors miss opportunities, the government loses revenue, and the economy suffers. This will change starting now.”

ASAP worked with MAIL to design a legal and organizational framework for the ALA, developing strategic and operational plans, and designing national procedures for maintaining an inventory of governmental land and leasing the lands. MAIL and ASAP completed the selection process for key ALA positions and held training sessions for the newly hired staff. The project also hired international advisors to

provide technical assistance in cadastre, policy-making, legislation, human resources, communications, and operations. In addition, ASAP provided advice on the production of internal manuals, policies, and standards related to land management and organizational management, and helped establish the ALA headquarters.

The ALA, now called *Arazi* (“land” in Dari), began operations in 2011 and has already contributed to key ASAP initiatives such as the transition of HPP to a private investor and the privatization of the Badam Bagh packhouse. It now maintains a detailed inventory of public land that includes information on location, size, and price, delivers the leasing service in a cost-effective and timely manner, and assumes responsibility for supervising compliance with lease contracts.

NAIS

Agriculture is the backbone of Afghanistan's economy, and detailed data on the country's pomegranate orchards, wheat fields, goat herds, and weather patterns is vital to efforts to strengthen farming and livestock activities. In early 2007, ASAP established NAIS to consolidate, augment, and map information concerning the agriculture sector.

NAIS has four main sections: AgNet, statistics, geographic information systems, and database management. ASAP established AgNet centers at MAIL offices in 19 provinces, providing each with a weather station, a global positioning system, and a satellite ground station. The AgNet cen-



An ASAP employee services a satellite dish on top of an AgNet building. ASAP established the AgNet centers to collect weather data, including wind direction and speed, the amount and intensity of rainfall, and relative humidity. The data allows MAIL to better plan for agricultural projects.



ASAP

MIS can produce a range of information products about Afghanistan's agriculture sector.

SNAPSHOT Data Helps Grow Agriculture Sector

Rich soil, warm weather, and adequate water can lead to a healthy harvest for an Afghan farmer, but solid data is required to grow the country's agriculture sector and boost the economy.

In February 2010, USAID transitioned the National Agriculture Information System (NAIS), a database that offers crop, livestock, and weather information for 19 provinces, to MAIL. Today, the system, now known as the Management Information System (MIS), is informing MAIL's agricultural strategies and has turned into its one-stop shop for the collection, consolidation, and dissemination of agricultural data.

USAID had established a NAIS presence in 19 provinces, providing each provincial office with a weather station, global positioning system, laptop, and Internet connection. USAID trained a MAIL employee in each province to operate the equipment, collect data, and transfer it to the central processing center in Kabul. Agricultural and livestock surveys were conducted in the 19 provinces, and data was compiled and presented in detailed profiles using geographic information systems.

In the past year, MAIL has outfitted the country's other 15 provinces with similar equipment and hired and trained staff to collect data there. The agricultural profiles completed under NAIS are also serving as the foundation for a nationwide study being conducted by MAIL. Using the 19 profiles as a model, MAIL is in the midst of a pilot in Uruzgan province that will grow into a nationwide analysis of arable land, livestock, and irrigation.

The British Embassy, the Food and Agricultural Organization, and the Japanese International Cooperation Agency have all expressed interest in developing new projects with MIS. MAIL's MIS staff are also assisting in the implementation and oversight of the agricultural databases of other USAID-funded projects.

"What began under USAID has turned into a central component of the Ministry — and has a key role in helping other organizations improve the agriculture sector," said Ahmad Fahim Didar, a former NAIS employee and now the head of MIS at MAIL.

ters collected weather data such as wind direction and speed, rainfall and its intensity, and relative humidity. This data was collated and entered into a centralized database built by ASAP. AgNet provided Internet communications for the 19 provincial MAIL offices and connected them to the ASAP system.

NAIS' statistics section conducted surveys used to develop agricultural profiles of provinces. Its geographic information systems laboratory graphically presented the data in maps that display data such as specific crop areas and production values, and its database management provided easy access to the information.

NAIS completed detailed provincial agricultural profiles of the 19 provinces under ASAP's original mandate: Badghis, Baghlan, Balkh, Bamyan, Farah, Faryab, Ghazni, Ghor, Herat, Jawzjan, Kabul, Kapisa, Kunduz, Logar, Panjshir, Parwan, Samangan, Saripul, and Wardak. The profiles are a snapshot of crop production and variety, land use, livestock, and harvesting data at the provincial and district levels. NAIS also created a website to transfer and compile data directly from regional AgNet offices. The intent of the site was to offer publicly

accessible data on district profiles, statistics, crop classification, and weather reports for 95 districts. ASAP transitioned NAIS to MAIL in February 2010, and provided training and technical assistance to help turn the system into a one-stop shop for the collection, consolidation, and dissemination of agricultural data that can be used by the government, the private sector, and aid organizations.

"The ministry has access to agricultural data with the click of a button," Engineer Mohammad Safa, data analysis and processing unit manager at MAIL, said. "The ministry now has expanded the system nationwide to all 34 provinces."

MAIL is using the system to continue gathering detailed agricultural and livestock information throughout Afghanistan, coordinate with agricultural stakeholders, and plan for activities that improve productivity. It is also distributing CDs containing copies of the Afghanistan Agriculture Knowledge Bank to each of the provincial offices that house the system, so farmers have access to educational materials about the latest agricultural methods and procedures.



A woman demonstrates her handcraft skills at an AgFair booth. The AgFair focused on Afghan fruit and vegetables, but gave other businesspeople the opportunity to showcase their products.

CHAPTER SIX

GENDER

BADAM BAGH PARTNERSHIP

Women workers in blue robes and hats are a common sight at the sprawling Badam Bagh Demonstration Farm in Kabul. Members of the AWBC, they work in partnership with ASAP to harvest and market the farm's produce and use the money for further enterprises.

As part of its strategy to stabilize and rebuild the country, MAIL called for the enhancement of gender equality in the agriculture sector by making women active partners and contributors in agricultural productivity. In support of the strategy, ASAP in April 2010 entered into a partnership with AWBC to embark on an integrated gender and development program.

Under the partnership, ASAP trained female members of AWBC on GAP, GMP, GHP,

HACCP principles, and proper harvesting and post-harvesting techniques. The project has turned over Badam Bagh's entire yield of high-quality fruits and vegetables, including grapes, strawberries, melons, cherry tomatoes, spinach, and lettuce, to AWBC for harvesting and marketing. AWBC uses the proceeds to pay the women's salaries, provide training, and promote business ventures for women.

Since the partnership at Badam Bagh began, AWBC has earned more than \$82,432, provided incomes to 892 female workers, and benefited 3,464 families. Mahooba Waizi, chief executive officer of AWBC, testifies to the huge impact on members. "All 892 women who are working in Badam Bagh are very poor," she said. "About 30 percent of them are sole breadwinners who are either widowed or abandoned, or whose husbands are inca-



ASAP

Mahooba Waizi, director of the Afghan Women's Business Council, inspects strawberries packed by members of her organization at Badam Bagh Demonstration Farm in Kabul.

SNAPSHOT

Afghan Women Profit from Produce

Mahooba Waizi knows that women in Afghanistan play an important role in Afghanistan's agriculture sector but often lack opportunities to learn new skills and create businesses to take full advantage of the country's array of fruits and vegetables. Now she is giving hundreds of Afghan women the tools to turn Afghanistan's fresh produce into profit.

Mahooba helped to establish the AWBC in 2003 to provide local women with access to training, capital, and other resources to create businesses. She entered into a partnership with USAID in 2010 that allowed her to expand the organization by hundreds of women and give them a much needed source of income.

The AWBC women were given the opportunity to harvest, package, and sell produce grown on the Badam Bagh Demonstration Farm, a modern farm and training facility established by USAID with the Ministry of Agriculture, Irrigation, and Livestock.

"If they didn't have this job, then they wouldn't have a job," Mahooba said, explaining that the majority of the Afghan women working on the farm are illiterate and very poor.

Following training provided by USAID, AWBC women learn how to harvest, clean, and pack the fruit and vegetables. They then sell the produce, grown with modern agricultural methods and adhering to phytosanitary practices, to local supermarkets, private residences, and embassies. AWBC uses the profits to pay salaries, buy packaging materials, and fund other business and training opportunities for women.

Badam Bagh's high-quality fruit and vegetables, including spinach, broccoli, sweet corn, peppers, squash, strawberries, grapes, and melons, are in high demand, and Mahooba hopes to expand AWBC activities by exporting grapes to Dubai.

Mahooba sees the partnership as just one example of opportunities opening up for Afghan women: "There are more economic, education, and employment opportunities for Afghan women, and more and more women are in leadership roles."

pacitated.” Waizi added that the women take turns working at the farm so income is spread among the group.

A WOMEN’S BUSINESS ENTERPRISE

To build upon the solid foundation established by the ASAP-AWBC partnership, the project in 2011 constructed a 50-square-meter area at the AWBC premises that is serving as a modern food-processing center compliant with international food safety standards. The women use the center to produce pickles, jams, preserves, and juices; as a packing center for fruits and vegetables; and as a women’s training center for AfghanGAP, GMP, and GHP. The facility is also a modern kitchen with a production capacity of one metric ton of processed product per month; it will support the AWBC’s goal of increasing sales in the domestic and export market.

ASAP also supported AWBC as it began implementing a plan to create a business consortium comprising 11 partner female organizations in Kabul and Parwan provinces. The consortium will work together and leverage each other’s resources as they try to break into the export market.

AWBC negotiated a land lease agreement for one-half *jerib* (approximately 1,000 square meters) of prime land in the center of Charikar in Parwan province.

The AWBC consortium plans to erect a multipurpose building in the area that will house a women’s farm store, display area, and training center for Parwan-based women organizations. ASAP has helped AWBC find financing for the building and other business activities, and has set up a demonstration plot that will complement the farm store. USAID’s Afghanistan Farm Service Alliance project will build the farm store.

Recognizing that Afghan women are a crucial but often underserved force in Afghanistan’s agriculture sector, ASAP aimed to include local women in its initiatives wherever possible, including training under the cashmere value awareness campaign, participation in trade shows, growing pomegranate saplings in women-run nurseries, staffing VFUs, employment in agribusiness facilities, and promoting AfghanGAP. In addition to including women in its overall activities, ASAP created targeted initiatives such as the Badam Bagh partnership and the women’s business enterprise in Parwan, and smaller projects that have taught women how to establish greenhouses and weave cashmere and wool. ASAP improved the livelihoods of 2,717 women by teaching them new agricultural and agribusiness skills, and offering them opportunities to earn an income and contribute to their economy.



Farmers in Kandahar rest after harvesting their pomegranates. ASAP trained farmers on proper agricultural practices to bring Afghanistan's pomegranates up to export quality.

CHAPTER SEVEN

LESSONS LEARNED

Build strong partnerships with local organizations. In late 2008, ASAP expanded from 19 provinces to a nationwide project and worked in remote regions to spread knowledge to rural farmers and herders. Given Afghanistan's size and the insecurity in many areas, ASAP relied on dependable local partners that already had a presence in many of the regions. For example, Community Empowerment and Development Organization, a local NGO, led ASAP's pomegranate sapling distribution project in the East. Such local organizations had the knowledge, expertise, and relationships necessary to successfully implement activities with ASAP support and were able to strengthen their organizational capacity by working closely with a USAID project.

The AWBC proved to be another valuable partner to ASAP, beginning as a beneficiary and gradually taking on the role of imple-

menting partner as the project built its capacity. ASAP began working with AWBC under a partnership that allowed AWBC's female members to harvest and market produce at Badam Bagh Demonstration Farm. ASAP trained the women on proper harvesting, sorting, grading, packing, AfghanGAP, and processing of fruit and vegetables; the women then trained other local women on processing techniques at community centers. AWBC also built a modern processing center to provide women with additional employment and training opportunities. The organization became a valued implementing partner that helped spread knowledge of proper agricultural practices throughout local communities.

Begin transition early in the project. After almost five years since its inception, ASAP had built up departments (e.g., AfghanGAP), activities (e.g., the cashmere value

chain), and venues (e.g., Badam Bagh Demonstration Farm) that were improving agricultural productivity and expanding agribusiness opportunities. ASAP began formal efforts to transition these components in June 2011 to ensure that they continued to benefit the Afghan people. Coordinating with MAIL, identifying the appropriate ministerial focal points, and making joint decisions on the way forward proved to take longer than expected. Transition activities could have begun earlier because effective handover of activities is a lengthy, piecemeal process that requires agreement from multiple parties.

Provide incentives to keep talented staff through project completion.

ASAP began in November 2006 and was scheduled to end in November 2010. It was extended twice to allow expansion into the South and East, and to allow it to continue activities and successfully transition components to MAIL and other local organizations. By the time the project closed in September 2011, many of its talented local staff had left. As each extension went through the lengthy stages of approval, staff members were uncertain of the project's future and chose to leave for what they perceived as more stable jobs. ASAP had spent years building staff members' capacity and anticipated that they would assume their international mentors' positions and help to

guide the smooth transition of activities toward the project's end. As key local staff members and many international advisors departed in the final months, certain project departments had a shortage of expertise and institutional knowledge. Incentives, including performance-based bonuses at the end of project, could be used to keep talented staff motivated and committed to working with the project until closeout.

Conduct timely impact studies.

ASAP conducted multiple large-scale projects, including establishing pomegranate orchards in the East and South and conducting cash-for-work activities in the North. ASAP collected data such as the number of people trained, full-time equivalent jobs, improved hectares, and families benefited in accordance with its USAID-approved indicators, but additional impact studies could have shed light on the longer-term outcomes of the activities and yielded more lessons learned. Furthermore, though ASAP's studies on grape trellising, alfalfa production, wheat seed distribution, AgDepots, sales and exports, and VFUs provided valuable information to quantify the impact of those activities, additional in-depth studies on cashmere harvesting, the Badam Bagh Demonstration Farm, and the project overall would have helped to better capture its impact.

HIGHLIGHTS OF ASAP PARTNERSHIPS

ASAP relied heavily on valued partnerships with USAID projects, Afghan government entities, local and international agricultural organizations, and PRTs. Below are several of the partnerships that made ASAP's achievements possible.

- With CERP funding and assistance from the Bagram ADT, ASAP implemented a grape trellising project. Under the CERP-funded project, ASAP trellised 100 hectares of vineyards in Kabul, Kapisa, and Parwan provinces with 449 farmers.
- ASAP facilitated an agreement with the Wardak farmers' association allowing it to manage a 500 metric ton cold storage facility constructed by the Turkish PRT in Wardak. The association harvested apples, packaged them in wooden boxes purchased with CERP funds, and delivered the apples to a central packing shed constructed by ASAP. The apples were graded and packed in cardboard boxes (again bought with CERP money) and exported to international markets immediately or stored in the cold storage facility.
- In February 2011, Mulberry farmers in Panjshir province struck a deal with the Omaid Bahar Fruit Processing Facility in Kabul. It was the first time they would be selling their mulberries. The deal resulted from collaboration among ASAP and USAID's Trade Accession and Facilitation Program, the Panjshir PRT and ADT, the Afghanistan Investment Support Agency, and the provincial DAIL office.
- Afghanistan made a strong showing at the 30th India International Trade Fair, the biggest annual international trade event organized by India. Afghan traders had great success in outright sales and potential deals, and the Afghanistan pavilion won a gold medal for best booth decoration, best organization, most visitors, and public choice. MAIL, USAID's Agricultural Credit Enhancement program, and ASAP organized Afghanistan's participation at the fair.
- ASAP established a demonstration plot that will complement a farm store AWBC is creating with USAID's Afghanistan Farm Service Alliance in Charikar, Parwan province. The plot will have aboveground and underground greenhouses, drip irrigation, a water reservoir, grape trellising, orchards, and intercropping.
- ASAP held 11 international AgFairs in Afghanistan to stimulate the country's export sector and introduce new agricultural technologies. Organizing partners included MAIL, the Afghanistan Chamber of Commerce and Industry, the Afghanistan Investment Support Agency, and the Export Promotion Agency of Afghanistan.



An AgDepot owner in Herat talks to customers at his store. ASAP has established a network of 370 AgDepots across the country to provide high-quality inputs and supplies to local farmers.

CHAPTER EIGHT

CAPACITY BUILDING AND SUSTAINABILITY

ASAP has focused on building the capacity of the Afghan people in agricultural, livestock, and agribusiness activities. The project's training has targeted the country's wide range of agricultural stakeholders, including MAIL employees; DAIL staff; traders; exporters; farmers; herders; local women; university students; AgDepot owners; VFU staff; and agribusiness owners. These efforts have extended from the national level with government employees in Kabul to businesspeople in the regions to farmers and herders in the field.

ASAP's capacity-building efforts have centered on boosting crop and livestock productivity, increasing sales and exports, and developing the expertise of ministerial staff. As a result of almost five years of intensive, continuous, and targeted training, the project was able to transfer its core activities (e.g., AfghanGAP and

the Badam Bagh Demonstration Farm) to ministerial control and build the sustainability of private enterprises (e.g., AgDepots and VFUs) so they will continue to operate as profitable enterprises.

The project has relied on its talented local staff and a handful of international consultants to provide technical assistance to farmers, traders, and exporters in harvest and post-harvest practices and complying with AfghanGAP; assistance with export and customs documentation; training abroad (e.g., cardboard box management training in India); participation in international trade fairs and commercial missions; and interaction with international and local buyers through commercial missions and AgFairs. It worked with agricultural stakeholders in the classroom, as well as side-by-side with farmers and herders in the field. It used the Badam Bagh Dem-

onstration Farm in Kabul and demonstration plots throughout the country to showcase improved technologies and train stakeholders on proper agricultural methods. Since late 2006, ASAP has established 370 AgDepots and supported 450 VFUs, providing training to the owners and staff so they can pass the training on to their customers.

Capacity-building efforts consistently included MAIL and DAIL officials, enabling them to continue activities after the project closes. ASAP transferred to MAIL valuable materials such as all of its proven training materials; detailed lists of Afghan exporters, associations, interna-

tional buyers, and farmers; and reports on international trade fairs and commercial missions. MAIL hired ASAP's talented agribusiness staff, assumed ASAP's AgFair activities, absorbed AfghanGAP, and is working on establishing itself as the government's official food-certification body. It also linked MAIL staff to the VFU, AgDepot, demonstration plot owners, and the cashmere association that it established. With MAIL's support and partnership, the VFUs and AgDepots will continue operating as private businesses, and the cashmere association will encourage cashmere training, sales, and exports throughout the country.

THE TRANSITION/LINKAGE OF ASAP'S PRIMARY COMPONENTS

AgDepots	→	MAIL Extension Department
Pomegranate orchards	→	MAIL Extension Department
Dehdai pistachio plantation	→	Dehdadi DAIL
Chimtal pistachio plantation	→	Chimtal Forestry Committee
Cashmere value chain	→	Afghanistan Social Cashmere Development Association MAIL Livestock Department
VFUs	→	MAIL Livestock Department
Bolan Poultry Farm	→	Hilmand Ihsan Poultry Co.
Badam Bagh Agricultural Complex	→	MAIL Transition Executive Committee
Badam Bagh Demonstration Farm	→	MAIL
Badam Bagh Packhouse	→	MAIL
Soil laboratory	→	Balk University
Agribusiness trade and facilitation	→	MAIL Private Sector Unit
AfghanGAP	→	MAIL Food Quality Department
AgFairs	→	MAIL Private Sector Department

ASAP transitioned responsibility of Badam Bagh Demonstration Farm to MAIL so that the farm can continue serving as a demonstration and training venue. It also collaborated with MAIL to create a plan and a management structure that will guide the entire Badam Bagh Agricultural Complex in the years ahead. In another effort to build the capacity of the country's farmers, students, and other agricultural stakeholders, the project transferred its Afghanistan Agriculture Knowledge Bank, which contains field-tested extension materials, to MAIL so the ministry can continue to spread knowledge of proper agricultural and horticultural practices.

Beyond its broad efforts to boost livestock and agricultural productivity and increase sales and exports, ASAP has supported MAIL in targeted initiatives that

will help the ministry attract agribusiness investment and plan for agricultural projects. ASAP established the ALA to streamline leasing procedures for government-owned land and created NAIS to improve access to agricultural data and promote planning by MAIL and agriculture-focused projects. The project successfully transitioned ALA and NAIS to MAIL oversight.

When ASAP ended in October 2011, it had built MAIL's capacity to guide and assist agricultural development, and provided Afghanistan's agricultural stakeholders with the knowledge and skills to build the country's farm and agribusiness sectors. Through this coordination and capacity building with MAIL and local entities, ASAP's activities will continue to positively influence Afghanistan's agricultural economy for years to come.



Mohammad Hashem, a grape farmer from Kabul, looks at his trellised vineyards. He used to grow his grapes in the traditional manner — with the vines close to the ground — but switched to trellising to increase the yield and quality of his grape crops.

CHAPTER NINE

SUMMARY OF RESULTS

ASAP RESULTS VERSUS INDICATORS NOVEMBER 2006 – SEPTEMBER 2011

Indicators	Total Life-of-Project Targets	Total Life-of-Project Results	Percentage Reached
5.1b: Increased final sales of licit farm and non-farm products in U.S. government-assisted areas over previous year.	\$52,600,972	\$57,275,912	109%
5.1a: Net (total) increase in private sector employment for assisted farms and agribusinesses (full-time equivalent)	7,715	7,948	103%
5b: Number of households benefited by agriculture and alternative development interventions in USAID-assisted areas	1,075,960	1,159,601	108%
5.2.3a: Number of hectares in areas of biological significance under improved management and/or conservation	24,996	22,754	91%
5.1.2e: Number of women's organizations/associations assisted as a result of U.S. government assistance	8	11	138%
5.1.2c: Number of agriculture-related firms benefiting directly from U.S. government-supported interventions	6	877*	14,617%
5.1.1f: Number of individuals who have received U.S. government-supported agriculture-productivity short-term training	358,419	516,429	144%
5.3.2b: Number of Afghan government agricultural programs focused on developing new technologies	15	17	113%

* At the recommendation of USAID subcontractor Checchi Consulting, ASAP began including its AgDepots, VFUs, and agribusiness clients in this figure in August 2011, causing a dramatic increase over its original target of six.

ASAP'S TRAINING COURSES BY PROVINCE AND GENDER

Province	Males	Females
Badakhshan	12,908	6,057
Badghis	12,299	5,908
Baghlan	12,722	5,931
Balkh	25,061	7,683
Bamyan	8,647	3,196
Daykundi	5,224	408
Farah	10,170	1,528
Faryab	17,828	7,754
Ghazni	15,266	0
Ghor	11,882	3,132
Helmand	17,939	0
Herat	22,699	12,212
Jawzjan	12,742	2,261
Kabul	18,162	2,825
Kandahar	15,204	0
Kapisa	8,745	3,051
Khost	13,402	0
Kunar	18,498	0
Kunduz	8,421	2,889
Laghman	14,574	0
Logar	11,024	0
Nangarhar	25,231	5
Nimroz	8,357	0
Nuristan	6,232	0
Paktya	13,658	0
Paktika	8,552	0
Panjshir	2,330	2,601
Parwan	12,376	5,903
Samangan	14,321	3,306
Saripul	8,545	1,871
Takhar	9,903	4,627
Uruzgan	9,505	0
Wardak	9,612	0
Zabul	11,242	0
TOTAL	433,281	83,148

NEW TECHNOLOGIES ADOPTED BY ASAP BENEFICIARIES

ASAP has introduced improved agricultural technologies to Afghan farmers, herders, agribusiness staff, and exporters to improve the quality and quantity of the country's crops, add value to its produce, and increase its sales and exports.

ASAP beneficiaries adopted 17 improved agricultural technologies throughout the project's lifespan that allowed them to increase their productivity and improve their livelihoods. ASAP transferred the following agricultural technologies to Afghan beneficiaries:

- Grape trellising to lift grape vines off the ground, improve ventilation, and increase the amount of sunlight reaching the fruit
- Drip irrigation to make efficient use of limited water resources
- Laser land leveling to level lands for better cultivation and irrigation
- Cold-storage facilities to extend the life and quality of produce
- Proper sorting, grading, and packaging to increase the quality of produce for sales and exports
- Combs to harvest cashmere (opposed to the traditional method of shearing, which reduces quality)
- Cashmere dehairing equipment that removes coarse hairs from the cashmere and increases export value
- Plastic-covered tunnels to extend the growing season for certain crops
- Urea treatment of wheat straw to increase protein content and produce nutritious fodder for livestock
- Proper agricultural practices such as fertilizer application and post-harvest handling to improve crop yield
- Technologies to process fresh fruit into juice concentrate
- Vaccination of livestock to improve health
- Flex-flumes for more efficient irrigation
- Power sprayers to allow farmers to safely and quickly apply pesticides
- Roller seeders to allow farmers to cultivate land using a standard quantity of seed
- Seeders to allow farmers to cultivate land using a standard quantity of seed
- Alfalfa production to produce a valuable crop that can be used as nutritious fodder



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