

**Kyrgyz Agro-Input Enterprise Development Project**  
**End of Pilot Phase Report**

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**Submitted by**

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**to**

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## Table of Contents

	<b>Page</b>
Executive Summary .....	iii
Introduction.....	1
I. Association Development.....	2
II. Policy Analysis and Business Climate Improvement.....	6
III. Technology Transfer to Farmers .....	8
IV. Business Development Promotion .....	10
Appendix 1. KAED Training and Workshops	
Appendix 2. List of Brochures and Leaflets	
Appendix 3. Study Tours and Trade Missions	

### Acronyms and Abbreviations

AAK-JA	Association of Agro-business of Kyrgyzstan “Jer Azigy” (Food for Soil)
AED	Academy for Educational Development
AS	Agronomic Services – a support unit within KAED project
BDS	Business Development Services – a support unit within KAED project
CAR	Central Asia Region
CGF	Credit Guarantee Fund
CIMMYT	International Maize and Wheat Improvement Center
CPP	Crop Protection Products – includes both chemical and biological
GAA	German Agro Action
GTZ	German Agency for International Cooperation
IFDC	An International Center for Soil Fertility and Agricultural Development
IPM	Integrated pest management
IR	Intermediate Results Indicator
KAED	Kyrgyz Agro-inputs Enterprise Development Project
KAFC	Kyrgyzstan Agricultural Finance Corporation
LARC	Legal Assistance for Rural Citizens (co-funded by USAID and Swiss)
MASHAV	Israel’s Center for International Cooperation
NADPO	Netherlands Agriculture Development Project, Osh
OAI	Osh Agribusiness Initiative
PAM	Policy Analysis Matrix
PSES	Private Sector Extension Services
RAS	Rural Advisory Services (Public Extension supported by WB)
RCF	Revolving Credit Fund
SSI	Support to Seed Industry (Tacis)
STC	Short Term Consultant
TES	Technical Extension Service Project (German donor sponsored)
TTC	Technology Transfer Center – a field center featuring new practices and technologies to provide training to agro-businesses
USAID	United States Agency for International Development
VAT	Value Added Tax
WB	World Bank

Note: This final report is intended to highlight the main objectives, achievements, lessons learned, and problems encountered during the pilot phase of the project. Details of the KAED operations, activities, expert reports, and technical accomplishments are available in the monthly and quarterly project reports and the annual work plans submitted to USAID.

# **Kyrgyz Agro-Input Enterprise Development Project**

## **End of Pilot Phase Project Report**

### **Executive Summary**

The USAID/IFDC Kyrgyz Agro-Input Enterprise Development Project (KAED) began in November 2001. (KAED implementation was delayed approximately 2 months following the events of September 11, 2001). Many challenges faced the KAED team. However, in 24 months KAED has made excellent progress and has built a sound base for the 3-year project extension (recently awarded to IFDC) and future development activities.

Among the many constraints facing the rebuilding of the agricultural sector, USAID asked IFDC to focus on addressing the absence of:

- A market system for agro-inputs, due in part to the loss of previous suppliers.
- Technology transfer mechanisms to farmers to increase low crop yields.
- Favorable policies and a regulatory framework to stimulate agribusiness.
- Access to credit for agro-input dealers and agribusiness in general.
- Trade associations and other mechanisms to introduce, promote, and sustain change.

The vision of the KAED Project was to improve the productivity and profitability of the agricultural system in southern Kyrgyzstan, reducing rural poverty by generating employment in the rural areas and increasing social stability in the region. The mission of the project was the development of a trade association of agribusinesses that delivers appropriate and high-quality inputs and information to farmer customers. The goal was to position the association to provide communication, educational and training programs, and engage in advocacy to enable growth of competitive enterprises. This activity contributes to achieving the USAID Mission SO 1.3 by promoting the expansion of a private sector led economy and the growth of successful small and medium enterprises. With the USAID grant funds totaling \$1.0 million over a 24-month period, IFDC exceeded all the targets and results indicators. Notable achievements of KAED include the following:

- Created the trade association “Association of Agro-businessmen of Kyrgyzstan (AAK) “Jer Azigy” (currently 117 dues-paying members) as the main voice of private agribusiness and provided its members the tools for effective advocacy and partnership with governmental institutions and for financial and member service sustainability.
- Developed policy advice on issues affecting agriculture including taxation, comparative advantage of the primary field and vegetables crops, providing the tools for decision-makers to build an effective agricultural policy that would increase the production and profitability of these crops and improve the living standards in the rural areas in southern Kyrgyzstan. The stage is set for the Government of Kyrgyzstan to adopt these AAK positions.
- Initiated the elimination of the value added tax (VAT) on fertilizer and provided models for developing other position papers relative to other inputs and their regulatory system.
- Implemented an advanced field demonstration and extension educational program that helped Kyrgyzstan significantly increase yields of its main crops (for example, wheat by 25%, maize

by 20%, potato by 50%, and cotton by 30%) and introduced new crops, e.g., soybeans and a number of vegetable crops (including new varieties).

- Introduced modern technologies through farmer field demonstrations and other means that produced yield increases of 70% and net added income of \$210/ha for wheat and 150% and \$1,700/ha for potato.
- Increased availability and use of high quality agro-inputs. Sixty tonnes of nitrogen/phosphorus/potassium (NPK) fertilizers have been acquired for the first time since the collapse of the Soviet system utilizing a modest revolving credit fund. This fertilizer was marketed through AAK members to support groups supplying agro-processors and to support field trials demonstrating a balanced nutrient replacement program.
- Encouraged and supported the legal business activities in southern Kyrgyzstan, e.g., increased the amount of fertilizer clearing customs in Osh Oblast from 4 t in 2001 to 8000 t in 2003; in Jalal-Abad Oblast the increase in fertilizer clearing customs has raised from 0 t in 2001 to 2,024 t in 2003.
- In 2002 there were no legal distributors of crop protection products (CPPs) in the South. Due to strong KAED assistance to AAK members, today BASF and BAYER/AVENTIS (both reputable and large international suppliers) have legal distributors in the South who are AAK members.
- Three international suppliers of vegetable seed furnished KAED with samples of 140 new varieties and crops for demonstration to farmers during the spring of 2003. Two suppliers have established Southern distributors who are AAK members.
- Supported the expanded regional and international trade and other networks for clients through contacts and trade missions.

The USAID/IFDC project was only one of many players involved in the recovery and reconstruction of agriculture in Kyrgyzstan. The World Bank, Asian Development Bank, the European Union (EU), Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for International Cooperation—GTZ) and other USAID partners and donors exerted varying influence on fiscal, privatization, trade and other policies that shaped the environment for agribusiness.

KAED, however, even as a pilot project with limited resources was uniquely successful and influential among donor agriculture-related projects. In a 24-month pilot phase, IFDC was able to establish and solidify the base of the AAK trade association that became the core of the new extension program and to develop ties to private agribusiness and key progressive farmers in southern Kyrgyzstan. For example, IFDC:

- Was able to make an immediate impact based upon the lessons and success of the USAID/IFDC projects in Albania, Kosovo, and Bangladesh, which accelerated the process of training, trade, technology transfer, association establishment, and agribusiness development.
- Promoted the establishment of AAK that provided vectors for change, industry clusters, private sector extension services, and international procurement. AAK has the chance to have a voice in agricultural policy and ensures a private sector viewpoint in the government decision-making process. This institutional capacity building will yield enduring results in the policy/advocacy area.

- Set the groundwork for an effective collaboration with the Ministry of Agriculture, USAID partners, the EU and others that are helping build the sustainability of extension services in the country.
- Set the stage for developing a commodity chain particularly with vegetable producers.
- Helped farmers in remote areas gain access to agro-inputs and reach thousands of women particularly through the vegetable producer groups.
- Work to date demonstrates the potential for productivity increases in agriculture. Field demonstrations featuring a package of best management practices of combined inputs compared with traditional practices have shown productivity gain of 50%-300% with accompanying increases in net profit of 30%-150%.

Kyrgyzstan faces many challenges in the process of becoming a competitive player in the regional and global agricultural scene. The legacy of KAED during the pilot phase of the project is that it has helped provide private agribusiness and farmers with proven tools to increase production and influence. In addition, it has supported the public sector with more effective techniques and approaches to support agricultural development.

# **Kyrgyz Agro-Input Enterprise Development Project**

## **End of Pilot Phase Project Report**

### **Introduction**

#### **Background and Objectives**

The Kyrgyz Republic is a mountainous landlocked country with a population of about 4.9 million people. The large majority of the population, more than 70%, lives in rural areas. With a total land area of about 198,000 km<sup>2</sup>, Kyrgyzstan is a small country where arable land accounts for about 7% of the total area. Southern Kyrgyzstan includes the oblasts of Jalal-Abad, Osh, and Batken that are part of the Ferghana Valley, a highly populated area where arable land resources are intensively utilized in agriculture. These oblasts have good climatic conditions for growing cotton, fruits, and vegetables. However, the south is isolated from major export markets due to a poorly developed transport infrastructure and the lack of an effective agro-processing sector. Also, high population density and the limited availability of arable land, about 0.4 hectare of arable land per capita, have caused increased poverty in rural areas and migration to the cities and to the northern region of Kyrgyzstan. All but 3% of the arable land is privately owned and dominated by smallholder subsistence farmers. Productivity has been low due to little use of modern inputs, outdated technology, and little access to credit. An estimated 8% of farms are larger than 5 ha.

Additional hurdles faced farmers and agribusinesses when the USAID-funded and IFDC-managed KAED pilot project began in November 2001. A pilot project, by definition, is exploratory in nature. Among the significant unknown variables in southern Kyrgyzstan when the in-country activities began were the following:

1. What is the real situation vis-à-vis inputs in terms of availability, quality and price?
2. Is there a base of private entrepreneurs supplying inputs to farmers and can they be organized into a trade association?
3. Is there an appropriate regulatory system in place that assures the quality and safety of inputs for farmer consumers?
4. Can IFDC demonstrate a positive economic and environmental return for crop production through best management practices?
5. Do farmers and sellers of inputs have the requisite management information and skills to utilize improved inputs efficiently?
6. Does the general business environment support the growth of the private sector, in particular in regards to the agribusiness input suppliers?

Farmers have been applying nitrogen fertilizers that have been acquired in Uzbekistan and imported as contraband. There has been almost no use, since Soviet times, of fertilizers containing phosphorous or potash. As a result, soil tests were indicating marginal to deficient levels of these important elements. Although NPK fertilizers were available from Kazakhstan and Russia, they were perceived by nearly all farmers as being “too expensive.”

Crop protection products (CPPs) have not been available from legal distributors in the south. CPPs used in the south have been illegally brought in from Uzbekistan, and they were often out of date, mislabeled, and adulterated. Farmers seldom apply CPPs correctly or with proper safety precautions.

Despite these challenges, USAID and IFDC believed that growth of agribusiness in Kyrgyzstan was both possible and essential as the engine of growth for the economy. IFDC had a clear strategy that could contribute to the agribusiness growth in the southern region of Kyrgyzstan. The KAED team in the first session of a strategic planning meeting in December 2001 concluded that southern Kyrgyzstan should be a market-driven private sector led economy, and there was a need to move quickly to:

- Develop a private sector association and support services.
- Establish a favorable policy and regulatory regime for business.
- Upgrade technology and develop value-added commodity chains.
- Identify new markets and promote regional trade.

KAED was designed to accomplish four main objectives:

1. Develop a trade association into effective and sustainable providers of services to members and farmers and private sector advocates.
2. Recommend priority policy reforms and organize advocacy.
3. Increase yields of key crops by improving the supply of modern inputs and by transferring upgraded technology to progressive farmers.
4. Stimulate the growth of agribusinesses by improving access to credit, business and technical training, and hands-on technical assistance.

The project focused on four key elements as drivers for agribusiness development (related to the objectives listed above). They were trade association development, policy analysis and reform, technology transfer, and promotion of agribusiness and credit. The following four sections contain a brief summary of the activities, including achievements and lessons, for each component.

## **I. Association Development**

### **A. Activities and Accomplishments**

The trade association development component served as the basic tool and driving force of the project structure and the catalyst for progress in the other three areas. The objectives for association development were to: (1) develop a market-based trade association, and (2) strengthen the membership and infrastructure capacity of the agricultural trade association so it could better provide membership services, achieve financial viability, and effectively represent agro-enterprises on policy issues.

Especially in an emerging environment such as Kyrgyzstan, agricultural trade associations represent the best way for individual firms to have their voices heard, shape an industry identity, achieve economies of scale in procurement and advertising, communicate with colleagues, learn about market information and new developments, and develop systems for delivering valuable business support services.

The objectives for trade association development included establishment of an Association of Agro-Business of Kyrgyzstan (AAK), increased dues-paying membership, and revenue from other sources. The number of dues-paying members increased to 117 (exceeding the project target growth in dues-paying membership), and they represented over 75% of the agricultural input markets in southern Kyrgyzstan.

Thus, the project significantly enhanced the effectiveness of the newly formed AAK and the influence of private sector agribusiness. The introduction of democratic elections and responsive governance in the associations helped develop local capacity and demonstrate the western model for institution building.

Oblast level elections were held in early August 2003. There were 17 nominations for the 9 director positions. Ninety voting members participated in the elections. All candidates spoke for 3 minutes on what they would do for AAK as a board person and then answered questions for 3 minutes. Of the 17 nominees, 3 were women. The 2003/04 Board is comprised of four new members and five re-elected members including one female.

The second General Assembly of AAK was attended by 93 paid members and approximately 30 KAED staff and invited guests. Board and committees presented their annual reports, and the new board was installed by the vote of general membership. The board elected officers and committee chairpersons for 2003/04. All five standing committees met in conference and presented recommendations to the membership for programs and activities for the coming year. The General Assembly passed a general resolution that was published in local newspapers.

The members attended monthly association meetings, paid dues, served on committees, and participated in extension and other KAED-supported association activities because they recognized a benefit in doing so. As a result of the various training programs, business plan and access to credit assistance, trade missions, information on the new international sources of input supplies, visiting expert advisors particularly from MASHAV (Israel's Center for International Cooperation) and the demand being created in part by the project, member firms generated more sales, and farmers benefited from better access to inputs.

For example, during the pilot phase of the KAED project:

- For the first time in 15 years, 60 t of NPK fertilizer were brought to the country. Legal fertilizer sales grew from practically 0 t in 2001 to approximately 10,000 t at the end of the project's pilot phase.
- More than 3,000 t of certified seed was sold during the second year of the project.
- Approximately \$8,000 worth of CPPs was sold in the southern Kyrgyzstan in the period 2002-2003.

- KAED introduced 2 new fertilizer products and 190 seed varieties (including vegetable crops).

Membership in the KAED-supported associations opened access to new sources of credit. With the assistance of the Credit Guarantee Fund AAK members, for the first time, will generate credit for use in growing their legal business activities over the coming year.

A total of \$35,545 in loans has been approved for 11 AAK members. The credit guarantee fund was committed to 20% guarantee for \$24,760 of these loans, or \$4,952 obligated. This amount has been transferred to an AAK sequestered account in Demir Bank, Osh Oblast. Financing institutions included Bai Tushum and the Kyrgyzstan Agricultural Finance Corporation (KAFC).

The training and preparation of business plans by KAED staff helped dozens of clients obtain loans. Similarly the project and trade association support encouraged members to invest in opening retail shops as a crucial missing element in the agro-input business chain in southern Kyrgyzstan.

Retail outlets in southern Kyrgyzstan have been non-existent since independence. In May of this year, Clara Prima, who is a founder and board member of AAK, opened the first retail shop in southern Kyrgyzstan (based in Osh). The shop is targeting the rural farmers as well as urban gardeners of flowers and vegetables. Mrs. Prima is currently repackaging complex fertilizer (NPK) into small containers using the AAK logo as a marketing tool. Her product mix includes flower seeds, fertilizer, seeds, retail CPP vials, potted plants, and seasonal products. Mrs. Prima's entrepreneurial activities have attracted the interest of other AAK members, and five input dealers are looking to follow her example and open retail shops in their villages based on the Albanian model, which they visited at the Assistance to Albanian Agricultural Trade Associations (AAATA) Project in June of 2003. Recently, a retail shop was opened in Jalal-Abad and six more are planned to open in the coming year.

KAED staff helped the associations to receive additional funding from the Academy for Educational Development (AED) and the Cochran Fellowship Program to organize a dozen delegations to attend study tours, seminars and workshops, develop trade linkages with neighboring countries, and to attend agricultural fairs. Twelve members of AAK visited the AAATA project in Albania and expanded their vision on the role of the association in developing lobbying and advocacy on behalf of private sector enterprises. In Baku, Azerbaijan 6 AAK members attended a workshop on market development issues in transitional countries. Four AAK seed producer members attended a 2-week training program at Iowa State University in Ames, Iowa, which was funded through the Cochran program. They shared their experiences with the Board of Directors and will attend the next cycle of village meetings to report to all AAK members about the study program.

In fall 2003, AAK representatives and project staff began developing a blueprint for the long-term sustainability of the organization. The aim was to enable AAK to provide the advocacy, business advisory, and extension services currently supported by the USAID/IFDC project on a fee-for-service basis.

The strategic plan incorporated an assessment of strengths and weaknesses of AAK and a structure and budget for a core team, with a 24-month plan for financial sustainability. As a first step in developing a business plan based on sustainability, the board developed the costs for operations. A tentative pro-forma 2006-2007 operating budget was constructed totaling \$56,000 for annual operations. Principles of dues and non-dues revenues were outlined and will form the basis for a plan to generate income sufficient to cover the operating expenses. The board has begun to think in terms of sustainability.

The project produced a well-received monthly newsletter as a means to share information on market conditions and appropriate technologies and to build association identity.

Tailored relevant training of association members and seminars continued throughout the project. For example, during the pilot project life there were 52 fertilizer, seed, and CPP-related training workshops and seminars in various regions in which 2,200 dealers, farmers, and agricultural experts participated. In cooperation with MASHAV, the project staff provided a complete training program for vegetable cultivation and orchard management for selected dealers and progressive farmers on the safe use of CPPs. This was the first such effort in Kyrgyzstan.

The project organized a study tour to Kazakhstan for selected seed producers of wheat to expose them to the procedures and operations of their Kazak counterparts and develop regional trade linkages.

## **B. Impact, Problems, and Lessons Learned**

The Association of Agribusinesses of Kyrgyzstan “Jer-Azigy” (Food for the Soil) is registered and very active. AAK has an involved Board of Directors. Its five committees for fertilizer, seed, crop protection products (CPPs), marketing, and advocacy are working with KAED staff to design programs that would lead to the future sustainability of the association. The association is building financial resources in several ways. AAK membership currently stands at 117. Of those, 64 belong to the first category (dues amount \$55/year) and 53 are in the second category (\$27/year). Association’s reserves total \$20,607 and reflect revenues from dues, fees for services, participation fees, and project-assisted purchase programs.

The AAK trade association directly assisted by the project has emerged as an effective, democratic institution that understands the benefits of group action and is dedicated to serving their members. The AAK will have an important impact on the development of policy and agribusiness in Kyrgyzstan. It is the primary advocacy voice of private agribusiness that has gained the attention of politicians and decision-makers. AAK and its membership base have successfully conducted two democratic elections with leadership changes and are functioning effectively in their capacity of policy advocacy.

The project provided extensive and continual training to 117 association members and helped them to build business relationships with large international suppliers and increase the size of legal businesses by organizing consolidated purchases and bringing to the market certified agro-inputs particularly CPP.

There has been no licensed distributor of CPPs in southern Kyrgyzstan. Facilitated by KAED, Mr. Asylbek Sharipovich Jeenbekov was able to arrange a meeting with the BASF representative from Kazakhstan in Bishkek. Mr. Jeenbekov is the President of AgroVet Service and was recently re-elected as President of AAK. He is now the first licensed BASF dealer in Kyrgyzstan and has imported \$9,000 worth of products for cotton and wheat production application. He has started developing a retail chain and would like KAED help with training in safety use of CPPs and marketing through trade associations.

The keys to success include continuous training in all aspects of association management, business and technical training, and of course real benefits to members, including access to credit, joint procurement, trade missions, and policy improvements. The visit to Albania of 12 AAK members and the meetings with Albanian counterparts helped in understanding the concepts and mechanisms of developing an effective and sustainable trade association. Engaging the media as a partner was critical in building the group image and raising the profile of AAK.

In addition to establishing a solid base for the trade association, a major purpose of KAED was to assist the association to become effective and financially sustainable in a medium-term. The idea is for IFDC to gradually disengage management assistance and support for the AAK under the KAED umbrella and transfer the responsibility for the associations operating activities to AAK itself. AAK will consolidate many of its functions during the extended phase of the project.

As indicated in the above section, great strides were made toward the understanding of financial sustainability. Guided by overall strategy that was developed by the Board of Directors, the assisted association raised \$20,607 in dues and in non-dues revenue during the pilot phase.

It is always a challenge for trade associations to provide services of value to their members and to generate sufficient non-dues revenue to maintain financial stability, especially in places like Kyrgyzstan where members have come to expect free services. IFDC has encouraged the Board of Directors and has provided assistance and training in developing proposals aimed at securing additional donor funds.

## **II. Policy Analysis and Business Climate Improvement**

### **A. Activities and Accomplishments**

IFDC adopted a three-phased approach to addressing agricultural policy issues. Initially the KAED staff was engaged in identifying key issues affecting the recovery and modernization of agribusiness. The project staff then organized meetings with AAK members to outline the strategy to address those issues.

In the second phase, with the involvement of project advisors, a position paper was developed addressing the issue of VAT on agricultural inputs. In October 2002, key project staff and three AAK members attended an agriculture policy seminar in Bishkek and brought to the attention of decision-makers issues such as VAT on agriculture, quality control of agro-inputs and illegal

business. In spring 2003, the Policy Committee of AAK organized a roundtable on VAT issues. The Committee developed a policy action matrix, undertaking economic analysis, marshaling arguments, and advocating effectively, including using the media and political influence.

In the third phase, KAED advisors in collaboration with HQ experts developed a policy analysis matrix study (PAM) to assess the comparative advantage of main field and vegetable crops in southern Kyrgyzstan. Knowledge about comparative advantages can facilitate the identification and exploitation of the best opportunities to attain gains through improvements in exports and import substitution.

Reliable information about the economic efficiency, profitability, and competitiveness of agricultural production activities and enterprises and the factors and policies that constrain them is essential to design policies and development assistance projects that promote agricultural development and economic growth.

One of the conclusions of the PAM analysis was that the benefits of increasing vegetable production to meet the demand of the domestic market and to boost exports could be realized. This in turn could benefit the incomes of small-scale farmers and the rural labor force in southern Kyrgyzstan should increase significantly. Another benefit would be important gains in foreign exchange. Thus, increasing vegetable production on an economically sound and sustainable basis could have an important positive impact on poverty alleviation and the balance of trade of Kyrgyzstan.

IFDC/KAED produced papers with analysis and recommendations and held roundtables and meetings with decision-makers in the private and public sectors. This program achieved the KAED objectives of encouraging and enabling effective trade association advocacy and building capacity so that private agribusiness could develop and advocate appropriate policy reform initiatives.

Examples of outputs include an assessment, well-researched analytical documents on the “The Comparative Advantage of Agricultural Production in Southern Kyrgyzstan,” and a position paper on “Proposed Removal/Reduction of VAT on Specific Agricultural Agro-Inputs.”

With project help, AAK organized study tours to Albania to make contacts and to observe public-private interaction in the formation of agricultural policy on issues of specific concern to AAK members such as fiscal and trade reforms and quality control.

AAK assisted the representatives of the Kyrgyz Parliamentary Committee for Agriculture in setting and developing priorities for its legislative agenda. In addition, AAK developed contacts with the head of the committee and its members to enhance the lobbying network. A leader in promoting policy reforms, AAK helped organize a roundtable with decision-makers in southern Kyrgyzstan addressing the issues of VAT on main agricultural inputs.
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AAK subsequently launched a drive to improve regulations and enforcement on agro-input quality control.

Selected accomplishments and results include:

- AAK hosted a roundtable in Osh with members of Parliament, local government, and AAK leadership to begin discussion on the possibility of removal/reduction of VAT on agricultural inputs from 20% to 10%. A position paper was prepared and widely distributed.
- KAED key staff and three AAK board members attended a seminar on agricultural policy in Bishkek hosted by the Ministry of Agriculture. They advocated private sector views relative to land reform, the taxation system, regional trade, and business environment.
- The AAK President and the AAK Executive Director participated in a conference in Bishkek addressing assistance to cooperatives that was hosted by the Ministry of Agriculture. AAK and the miller association conducted a comparative analysis with other countries and lobbied for fairer charge rates. As a result, the peak power penalty charges to flour and feed millers were reduced by 30%.
- IFDC provided technical input for legislation and enforcement on the quality control of seed and crop protection products.
- Helped decision-makers and private sector leaders achieve consensus on the future of agriculture development in southern Kyrgyzstan.

## **B. Impact, Problems, and Lessons Learned**

KAED and the AAK started developing a dialogue with main decision-makers that set the groundwork for significant breakthroughs on the policy front in the future. However, the project team and AAK leadership faced many hurdles in trying to promote agribusiness-friendly reforms. Kyrgyz authorities, influenced by powerful institutions, adopted hard-line positions that there should be no market distortions or fiscal exemptions. This situation made it difficult to conduct effective reform campaigns.

An example of the strict fiscal approach and an unsuccessful AAK effort is that of the VAT. This tax is applied to all agricultural inputs even though the bulk of farmers are subsistence and therefore do not sell any produce and cannot recover part of the tax as intended.

Even with the difficulties mentioned above, the project has helped set the stage for the future and prepared AAK for a leading role in the policy advocacy area.

## **III. Technology Transfer to Farmers**

### **A. Activities and Accomplishments**

The objectives for KAED, as agreed by USAID and IFDC, were to develop packages of new technologies, transfer technology to farmers and other producers via the agro-input dealers and other agricultural associations, develop technical materials, disseminate the results of on-farm trials and demonstrations, increase awareness of the potential and benefits of crop diversification, and develop sustainability by engaging public sector and other programs engaged in southern Kyrgyzstan.

The results indicators for the project included southern Kyrgyzstan-wide average yield increases of 30% for wheat, 25% for maize and cotton, 35% for potato, 18 field demonstrations, 35 tailored technical knowledge training activities, and the transfer of skills to agro-input dealers.

The targets were exceeded. Average wheat yields increased by 30% and maize by 25%. The results on the project trials demonstrated the potential for twice those yields, and the thousands of smallholder farmers who adopted the improved technology packages far exceeded the average yield increases. One key improvement was to convince some farmers to shift to higher nutrient value fertilizers such as NPK. The yield and the economic response to the new package of technologies were significant.

The project's crop trial program initially focused on winter and spring crops such as cotton, maize, and potato. In response to the needs of vegetable producer groups and processors supported by the Pragma project, more recent trials also included different type of vegetables for field production and greenhouses. KAED established contacts with some of the largest international vegetable suppliers from the Netherlands such as Nun hems and HZPC, which provided samples of 140 new varieties. The trials were set up in three regions and recommendations were made to producers and processors. An estimated number of 2,900 farmers visited the demonstration fields during the life of the project. The information was distributed through dealers' networks and the local media (over 77 news clippings and press articles were produced).

KAED was recognized as the leader in field trial work in Kyrgyzstan. For example, in fall 2003 (just before the pilot phase ended) KAED developed a set of high quality input packages for 20 progressive farmers. The idea was that these early adopters became the drivers of new advanced technologies in their farms. Each of them was linked with an AAK dealer in the region that would assist the farmer in implementing the program, disseminate the information to the rest of the farming community, and ensure that the increased yields were replicable.

Uraimov Kubanychbek is participating in the IFDC demonstration program using his greenhouse to demonstrate new methods of cultivation in tunnels along with new vegetable varieties. The greenhouse was constructed with the assistance of MASHAV. More than 80 input dealers and 200 farmers have visited the greenhouse. All attendees were impressed with the increased yield and the quality of the produce using the recommended new technologies (drip irrigation, NPK fertilizer, string-tied vines, and greenhouse production).

## **B. Impact, Problems, and Lessons Learned**

KAED provided the main impetus for technology transfer and extension services during 2001-2003 in Kyrgyzstan. The project was highly respected by experts and farmers alike and was given much of the credit for the yield increases. The project facilitated communications between input suppliers, producer groups, and progressive farmers by introducing new field crops and vegetable varieties with qualities that met industry requirements.

Before the pilot phase project ended, IFDC implemented a plan for sustainability of the technology transfer functions, involving the private sector agro-input dealers as extension providers. The KAED has worked in close collaboration with GTZ, the Rural Advisory Services of the World Bank (RAS) and the German donor-sponsored Technical Extension Service (TES) in enhancing the extension work results. IFDC plans to continue the lead in extension work with main field crops such as wheat, cotton, maize, and vegetables both for open field and greenhouses under the new extension phase of the project.

IFDC-supported farmer participation field trials demonstrated the production potential of adopting modern technology, such as using NPK 10-26-26 for the first time in 15 years. Field crop yields increased from 150%-300% in the demonstration sites and the net profits ranged from \$230/1,300/ha. The project implemented a crop diversification program by introducing soybeans and other vegetable crops suitable for high labor farming systems, thus providing an alternative source of import substitutes and potential export commodities.

The program succeeded because the dedicated and competent project staff quickly built trust with the farmers and the dealers and convinced both that field demonstrations were valuable and that the best practices KAED was promoting were realistic. Using the media extensively and as a partner helped bring attention to the IFDC demonstrations program and real life success stories.

The key in southern Kyrgyzstan, as in other IFDC projects around the world, was transforming private agro-input dealers into extension providers and trainers. In an internal survey developed by project staff, half of the dealers considered themselves, after KAED training, to have the technical knowledge and extension skills needed to help their farmer customers.

The cooperation with other donor organizations and programs yielded good results and paved the way for developing extension programs that are cost effective, beneficial for the rural community, and have strong potential for becoming sustainable.

#### **IV. Promotion of Agribusiness Development**

##### **A. Activities and Accomplishments**

The objectives for this component of the project were to develop feasibility options for selected enterprises, improve business skills, have access to technology and market information, help clients increase investments and gain access to credit, and encourage diversification into new products.

The project undertook a range of activities to prepare and motivate potential agro-entrepreneurs, again using the trade association as the base of clients and mechanism for delivering training, technical assistance, and access to credit. In addition to preparing 18 business plans for AAK members, staff members assisted with marketing plans for selected businesses. KAED joined forces in providing business training and advice to the project clients and staff.

IFDC and AAK exposed association members to new business practices and technology through trade missions. During 2001-2003, three trips were organized to businesses and trade fairs in the region. As a result, new business links and networks were developed and joint procurement of wheat seed for the first time in southern Kyrgyzstan was realized.

Credit was critical to the business success of project clients and to the value they perceived in joining the trade association. Finance for agribusiness is still scarce in Kyrgyzstan given the risk involved and strict requirements from the banks relative to collateral. However, KAED forged alliances with donor-funded credit schemes and signed an MOU aimed at facilitating the access to credit of AAK members. The project staff identified credit-worthy clients, helped them prepare business plans and loan applications, introduced them to the project-lending partners, continued to monitor the loans, and provide technical and business advice throughout the duration.

A total of \$35,545 in loans has been approved for 11 AAK members. The credit guarantee fund was committed to 20% guarantee for \$24,760 of these loans, or \$4,952 obligated. This amount has been transferred to an AAK sequestered account in Demir Bank, Osh branch. Financial institutions involved included Bai Tushum and KAFC.

As a result of the coordinated program of technical and business assistance, project clients were able to expand their enterprises and increase their domestic investments.

Karataev Abdugopur purchased a backpack sprayer last year from KAED. He provides CPP treatment services to his farmer customers. In addition to his company's CPP application services, Mr. Abdugopur sells CPPs and potato seeds. Approximately 70% of his sales are derived from potato seed and 30% from the sale of CPPs. There are approximately 22,000 people in the village of Nookat, which is the target market for Mr. Abdugopur. He advertises his products through demonstration fields and village meetings. Four years ago he started his seed production operation on 1 ha of land where he sold 5 t of potato seed. The following year he increased his production to 3 ha and is currently producing potato seed on 4 ha (1 ha owned and 3 ha rented).

The biggest constraint for his operation is the ability to acquire elite seed because he does not have a sufficient operating budget to cover the costs. Nevertheless, he was able to buy 1 t of NPK 10-26-26 fertilizer acquired by a KAED supported tender and increased his potato yield by 40%. Currently, Mr. Abdugopur has increased his storage capacity and formed a subgroup of potato seed producers within AAK. His primary concern is to build the trust of the producers so that he will be able to develop a viable producer association. He recognizes the real support of KAED in growing his business.

## **B. Impact, Problems, and Lessons Learned**

KAED was the first project of its kind in Kyrgyzstan and served as a beacon for private-sector-led agribusiness development. Using a holistic and practical support system focused on the trade association, USAID and IFDC were able to pioneer paths and demonstrate the opportunities for Kyrgyz agro-entrepreneurs.

Credit was one of the main pre-occupations of the project—from finding willing lenders for project clients, to identifying and preparing bankable borrowers, to monitoring repayments and dealing with potential defaulters. All donors and financial institutions faced problems of default, especially in the agricultural sector because of the many risk factors involved.

The current land law restricting the use of agricultural land as collateral and the reluctance of financing institutions to give any value to real estate such as houses or warehouses outside of Osh and Jalal-Abad limit the ability of small businesses to invest in their own growth.

## Appendix 1

### List of Trainings Provided or Facilitated by IFDC/KAED for AAK Members and Their Clients (2001-2003)

No.	I. Date	Training Topic	Presented by	Attendance	Duration
1	27.03.02- 24.04.02	Safety Application of Pesticides (8 locations)	<u>Training and Extension Service</u> ; Consultants–Juma Sadirov, Abykahar Ergeshov, Manas Ergeshov	135	1 hour
2	1)13.05.02 2)07.10.02 3)18.06.03	Drip Irrigation System Management (3 times)	MASHAV Consultant–Iosy Golan	73	3 hours
3	14.05.02- 30.05.02	Custom Procedures for Import of Fertilizer, CPPs and Seeds (8 locations)	<u>Customs Officials</u> : Janibay Tairov, A. Gaparov Nurhan Tekebaeva	115	1 hour
4	14.05.02- 30.05.02	Potato Management Technology	<u>IFDC Agronomist</u> Jyrgalbek Musaev	115	0.5 hours
5		How to Give a Presentation	Hiqmet Demiri	8	2 hours
6	10.06.02	How to write a report	Hiqmet Demiri	8	2 hours
7	05.06.02- 26.06.02	Land Code (7 locations)	<u>LARC</u> Consultants: Jypargul Abakarova, Bermet Satibaldieva, Elvira Sayakova, Nurhan Azimov, Eric Jumukov, Bazarbay Kulanmatov, Marat Maydonov, Venera Baltabaeva	104	1 hour
8	05.06.02- 26.06.02	Maize Management Technology (7 locations)	IFDC Consultant Hiqmet Demiry	115	1 hour
9	21.06.03- 22.06.03	Strategic Planning I for IFDC Staff	Channing Sieben	8	2 days
10	27.06.02	Biogas System	1) Kim Ignat	20	1 hour
11			2) Center for Problems of Renewable Energy Sources Utilization Alaibek Obozov , Lev Krelbaum	17	2 hours
12	11.07.02- 18.07.02	Integrated Pest Management Program in Cotton (3 locations)	IFDC Consultant Hiqmet Demiry	24	1 hour
13	06.09.02- 07.09.02	Strategic Planning for Board Members	Channing Sieben, Aziza Yuldasheva	9	2 days
14	18.09.02	Advocacy	Civil Education Improvement Center - Pirjan Manasov	15	1 hour
15	20.09.02	Seed Law	Oblast State Seed Inspection Anatoliy Krushenitsky	12	1 hour
16	02.10.02- 16.10.02	Marketing (7 locations)	1) University Lecturer–Ludmila Kan, 2) IFDC General Manager Aziza Yuldasheva	110	1 hour
17	07.10.02	Solar Drying System	TES Center	15	1 hour

No.	I. Date	Training Topic	Presented by	Attendance	Duration
18	02.10.02-16.10.02	Soil Nutrients, Seed-dressing (7 locations)	1) Toxicological Laboratory Specialist Abdurahim Kadirov 2) IFDC Agronomist Jyrgalbek Musaev	113	1 hour
19	04.11.02-08.11.02	Orchard Management and Drip Irrigation System	Itshak Coster Yonatan Gal	18	4 days
20	26.11.02-18.12.02	Business Planning (7 locations)	Dilshod Abdulhamidov	76	1 hour
21	19.12.02-20.12.02	Potato Seed Production (2 locations)	German Agro-Action Specialist IFDC Agronomist–Musaev Jyrgal	30	2 hours
22	14.01.03	SWOT Analysis, Marketing	Ludmila Kan	10	1 hour
23	17.01.03	Lobbying Techniques	Baratov Mansur	19	1 hour
24	1)14.02.03 2)18.02.03	Oil Crops (2 locations)	Kokkozov Adan, State Variety Testing Plot	31	1 hour
25	18.02.03-21.02.03	Cotton Varieties (4 locations)	Andijan Cotton Institute	59	1 hour
26	11.03.03-12.03.03	Hybrid Maize Production	Chan Sieben	15	2 days
27	18.03.03	Potato Management	Ministry of Agriculture. Bishkek	2	1 day
28	18.03.03	Law on Chemization	Osh Oblast Plant Protection Station Alymjan Karimov	47	1 hour
29	18.03.03	CPPs Use on Orchards	Osh Oblast Plant Protection Station Alymjan Karimov	47	1 hour
30	18.03.03	Sanitary Regulations in Transportation, Storing and Marketing of CPPs	Jalalabat Oblast Plant Protection Station–Atabek Mamajanov	47	1 hour
31	18.03.03	CPPs Used to Control Pests of Cotton, Grain Crops and Vegetables	Jalalabat Oblast Plant Protection Station–Atabek Mamajanov	47	1 hour
32	19.03.03	Biological Means of Crop Protection	Osh Bio-laboratory	47	1 hour
33	19.03.03	Sanitary Standards for Contents of Harmful Substances in Agriculture Products	Osh Toxicological Laboratory	47	1 hour
34	07.04.03-11.04.03	Designing Policies and Institutions That Promote Competitive Agricultural Input Markets in Transitional Economies	Baku Conference	10	5 days
35	14.04.03-16.04.03	Leadership Training for Baku Association	Channing Sieben Aziza Yuldasheva	20	3 days
36	16.04.03-18.04.03	Strategic Planning for Baku Staff	Aziza Yuldahseva	15	2 days
37	22.04.03	Use of Herbicides on Wheat, Cotton, Vegetables and Control of Colorado Beetles.	Osh Oblast Plant Protection Station Alymjan Karimov	23	2 hours

No.	I. Date	Training Topic	Presented by	Attendance	Duration
38	23.04.03	Methods and Mechanisms of Advocacy	IFDC Association Specialist Mansur Baratov	10	1 hour
39	21.05.03- 29.05.03	Diseases and Pests of Vegetable and Grain Crops (5 locations)	1) Jalalabat Oblast Plant Protection Station–Atabek Mamajanov 2) Osh Oblast Plant Protection Station–Yuldashev Hairulla	89	1 hour
40	13.05.03- 21.05.03	CPP Use and Storage Safety (film), (9 locations)		140	0.5 hours
41	12.06.03- 19.06.03	Study Tour to Albania	Albanian Association	16	8 days
42	18.06.03	Drip Irrigation Use on Vegetable Crops	MASHAV Iosy Galon	30	2 hour
43	19.06.03	Diseases and Pests of Melon, Cabbage, Onion, Pepper, Tomato, and Potato.	Osh Oblast Plant Protection Station–Yuldashev Hairulla	30	2 hours
44	19.06.03	Integrated Control of Diseases and Pests of Vegetable Crops	Osh Oblast Plant Protection Station–Yuldashev Hairulla	30	2 hours
45	19.06.03	Marketing and Sales	Scott Wallace	30	1 hour
46	21.06.03	Training on Wheat Demo Field Results for TES Center and RAS Consultants	IFDC Agronomist Musaev Jyrgal	18	4 hours
47	30.08.03	Presentation of Holland Vegetable Seeds	SVS Holland Seed Company Bishkek	9	8 hours
48	11.09.03	Strategic Planning for New BD	Aziza Yuldasheva	9	3 days
49	16.09.03	Management Practices for New Varieties of Potato of Holland and German Breed	NADPO–Abdurahmanov Hairulla	30	2 hour
50	16.09.03	Scientifically Proved Technology of Potato Management in Conditions of Kyrgyzstan	Hiqmet Demiry	30	1.5 hour
51	29.09.03- 30.09.03	Legislative and Standard Acts Regulating Production and Marketing of Seeds in Kyrgyzstan. Acquaintance With New Varieties of Grain Crops and Their Production in Advanced Enterprises of the Northern Kyrgyzstan.	TACIS Ministry of Agriculture Bishkek	5	2 days
52	01.10.03- 17.10.03	Dry-Land Wheat Varieties and Management (8 locations)	BD Member, Kokkozov Adan	98	0.5 hour

## Appendix 2

### List of Brochures and Leaflets Produced by IFDC/KAED (2001-2003)

No	Title	Language	Copies
1.	Application of DAP, MAP on Winter Wheat	Russian	100
2.	Application of Bulldock	Russian	50
3.	Confidor	Russian	100
4.	Application of Urea on Wheat	Russian	100
5.	Compendium on Spraying	Russian	50
6.	Technology of Winter Wheat Culture	Russian Kyrgyz Uzbek	150
7.	Characteristics of Wheat Varieties Included in State Register	Russian	60
8.	Poster on Winter Wheat	Russian	80
9.	KAED Key Components	Russian English Kyrgyz Uzbek	200
10.	KAED Mission, Vision	Russian English Kyrgyz Uzbek	150
11.	KAED Business Development Department	Russian English Kyrgyz Uzbek	50
12.	KAED Private Sector Agronomic Services	Russian English Kyrgyz Uzbek	50
13.	KAED Agribusiness Sector Trade Association	Russian English Kyrgyz Uzbek	50
14.	Monthly IFDC/KAED/AAK Newsletters	Russian	100
15.	“Kyrgyz 5” Cotton Management Technology	Russian	100
16.	Watermelon Management Technology	Russian	150
17.	“Koronet” White Cabbage Management	Russian	150
18.	Cucumber Management Technology	Russian	150
19.	Tomato Management Technology	Russian	150
20.	Onion Management Technology	Russian	150
21.	NPK Application Recommendations	Russian	100
22.	Marketing in Agribusiness	Kyrgyz	100
23.	Marketing of Agricultural Production	Russian	100
24.	AAK Structure	Russian	50
25.	Potato	Russian	200

### Appendix 3

#### Study Tours and Trade Missions

<u>Location</u>	<u>Number of Participants</u>	<u>Quarter</u>
Albania (Study Tour)	12	June 2003
Azerbaijan (Workshop)	11	April 2003
Israel (Training)	1	June 2003
Kazakhstan (Agriculture Trade Mission)	6	August 2002
United States (Study Tour)	4	August-September 2003
Uzbekistan (Trade Mission)	5	March 2003