



**USAID**  
FROM THE AMERICAN PEOPLE

**CENTRAL ASIAN REPUBLICS**

# AGRICULTURAL LINKAGES PROJECT (AGLINKS UZBEKISTAN)

## QUARTERLY REPORT (Q3 FY 2010)

APR 2010 – JUN 2010

**JULY 2010**

This publication was produced for review by the United States Agency for International Development. It was prepared by DAI.



# AGRICULTURAL LINKAGES PROJECT

(AGLINKS)

## Q3 FY 2010 QUARTERLY REPORT

APR 2010 – JUN 2010

**AgLinks Uzbekistan**  
**12 Afrosiab Street – 3<sup>rd</sup> Floor**  
**Tashkent, Uzbekistan**

Telephone: (998) (71) 252-5414

Fax: (998) (71) 252-6756

For the

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

RAISE Plus IQC

Contract No. EDH-I-05-00004-00

Task Order No. EDH-I-07-05-00004-0

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# TABLE OF CONTENTS

## Table Of Contents

### Acronyms

#### A. ADMINISTRATION

- A.1. Memorandum of Understanding.
- A.2. Other Development Partners and Programs.
  - A.2.a. USG.
  - A.2.b. Other Donors
- A.3. Project Management.
- A.4. Issue(s).

#### B. TECHNICAL

- B.1. Producers - AgriFirms & Water User Associations (WUAs).
- B.2. Private Sector.
- B.3. Public Sector.
- B.4. Issue(s).

#### C. ENVIRONMENTAL COMPLIANCE

- C.1. Mitigation.
- C.2. Monitoring.
- C.3. Issue(s).

#### D. FINANCE

- D.1. Disbursements.
- D.2. Commitments.
- D.3. Obligations.
- D.4. Issue(s).

**ANNEX A :** Monthly Reports (Apr and May 2010)

**ANNEX B :** Framework Mitigation & Monitoring Plan for Drip Irrigation Installations

**ANNEX C :** PERSUAPs in Central Asia

## ACRONYMS

<b>ADB</b>	Asian Development Bank
<b>BDS</b>	Business Development Services
<b>BFU</b>	Business Forum of Uzbekistan
<b>CCI</b>	Chamber of Commerce and Industry of Uzbekistan
<b>CE</b>	Categorical Exclusion
<b>CRSP</b>	Collaborative Research Support Program
<b>DAI</b>	Development Alternative Inc.
<b>Dekhan</b>	backyard farm
<b>FFP</b>	Food For Progress
<b>FtF</b>	Farmer to Farmer
<b>FY</b>	Fiscal Year
<b>G&amp;A</b>	General and Administrative
<b>GOU</b>	Government of Uzbekistan
<b>ha</b>	hectare (10,000 square meters, 100 meters by 100 meters, 2.47 acres)
<b>HACCP</b>	Hazard Analysis and Critical Control Points
<b>HO</b>	Home Office
<b>HPLC</b>	High Performance Liquid Chromatograph
<b>IEE</b>	Initial Environmental Examination
<b>IPM</b>	Integrated Pest Management
<b>JSC</b>	Joint Stock Company
<b>LLC</b>	Limited Liability Company
<b>MASHAV</b>	Agency for International Development Cooperation (Israel)
<b>MAWR</b>	Ministry of Agriculture and Water Resources of Uzbekistan
<b>MEO</b>	Bureau Environmental Officer
<b>MOU</b>	Memorandum of Understanding
<b>MRR</b>	Microenterprise Results Reporting
<b>NDC</b>	Negative Determination with Conditions
<b>NGO</b>	Non-Governmental Organization
<b>ODC</b>	Other Direct Costs
<b>OH</b>	Overhead
<b>OP</b>	Obsolete Pesticides
<b>PACD</b>	Project Action Completion Date
<b>PD</b>	Positive Determination
<b>PERSUAP</b>	Pesticide Evaluation Report and Safe Use Action Plan
<b>RMS</b>	Record Management System
<b>SABIT</b>	Special American Business Internship Training
<b>TA</b>	Technical Assistance
<b>TCN</b>	Third Country National
<b>TCCTC</b>	Tashkent City Center for Testing and Certification
<b>UNDP</b>	United Nations Development Program
<b>USG</b>	United States Government
<b>USAID</b>	US Agency for International Development
<b>VAT</b>	Value Added Tax
<b>WUA</b>	Water User's Association
<b>WUASP</b>	Water User's Association Support Project

This report covers the third quarter (April-May-June 2010) of the second full fiscal year (FY) of the AgLinks Project in Uzbekistan and focuses on activities during the agricultural season. This quarter was characterized by the height of the growing season and multiple farmer trainings through the “field school” approach utilizing demonstration plots for hands-on instruction. Trainings were held in all AgLinks supported regions with all AgLinks partners for all targeted crops and highlighted pest disease and control, irrigation, fertilization, pruning, thinning, grafting and farm household level processing. Additional trainings were held at the request of the Ministry of Agricultural and Water Resources, the Chamber of Commerce and Industry and private processing firms.

The requirements for 10 Uzbek partners to attend USAID’s Community Connection program were completed this quarter and the group departed for the US at the end of June. New private sector partners were engaged as the impact of project activities in the field become increasingly well known. Three new potential private sector processing partners self-identified and sought assistance from AgLinks this quarter. The major new technical activity this quarter was installation of 9 drip irrigation sites to expand the “field school” approach to farm-level water management to increase productivity. By the end of the quarter the project had expanded the farm household level agricultural processing program and the first variety contest of the 2010 season was completed (apricots in Namangan).

## **A. ADMINISTRATION**

The project continues to engage and support technical activities while seeking lowest cost solutions due to funding shortfalls. Cost were further reduced this quarter by indefinitely postponing the FY 2010 work plan proposed tractor and cold storage procurements, as well as not renewing the contract of one staff member. AgLinks further seeks to leverage its efforts by seeking collaboration with other donor activities and programs including USAID’s Community Connection, USDA’s Cochran Program, Commerce’s SABIT and USDA’s Food For Progress (FFP).

### **A.1. Memorandum of Understanding.**

Verbal commentary from the Ministry of Agriculture indicated that “version 2.0” of the proposed AgLinks Memorandum of Understanding (MOU) was acceptable to the Uzbek authorities. If the MOU is completed prior to the project action completion date (PACD) AgLinks will be able to change its registration from a “representative office” to that of a “project” which will allow AgLinks to import goods duty-free to support project activities (ex., pruning shears, grafting tools, farm machinery, etc.).

## **A.2. Other Development Partners and Programs.**

AgLinks has successfully leveraged scarce resources by collaborating with other donor programs. Examples include GTZ, UNDP and MASHAV for trainings implemented in previous quarters of FY 2010 and earlier. During this quarter efforts to mobilize other USG funded programs came to fruition. AgLinks has learned that using other programs can be a cost saving endeavor but it does require significant investment of staff time to meet the requirements of other donor programs.

### **A.2.a. USG.**

**Community Connection.** The centrally-funded USAID program “Community Connection” selected 10 AgLinks nominated Uzbek participants with 3 alternates to attend a course in California entitled “*Introduction to Contemporary Agro Technology in Fruit Cultivation.*” AgLinks staff assisted the finalists to prepare standardized photos, health exams and visa applications (DS-160). By mid-June the nominees had their plane tickets and visas with departure scheduled during the last full week of June. One alternate was mobilized to replace a finalist who was unable to attend the program for personal reasons. All 10 participants are AgLinks related partners who will visit agricultural universities, nurseries, farms and related groups during a visit to northern California from late-June to mid-July.

**Food for Progress (FFP).** The AgLinks proposed Food For Progress activities were accepted by both the US and Uzbek representatives to the joint oversight committee for this program that uses counterpart funds generated from US food aid sales. Activities to be supported include small-scale cold storage facilities and greenhouses. The recipients of this support will be determined on a competitive basis launched through the Ministry of Agriculture and Water Resources (MAWR). The local firms chosen to implement the activities will be similarly competed. While progress has been made in moving this program forward, the earliest agricultural season these activities could impact would be in 2011 at the time of AgLinks’ planned closure (July 2011).

**Cochran Fellowship.** Shuhrat Abrorov, the AgLinks staff member with the USDA-funded Cochran Fellowship in agricultural marketing for summer 2010, departed for northern California this quarter. He completed his Cochran program by late June and remains in the US as an observer to and technical resource for the Community Connection program participants (see above). AgLinks staff sought and obtained the necessary approvals and agreements from the Community Connection implementing partner (World Learning) and USAID to allow Mr. Abrorov to participate in their program with technical observer status. Mr. Abrorov will return to Uzbekistan at roughly the same time as the Community Connection participants (mid-July 2010).

**SABIT.** The Special American Business Internship Training (SABIT) program is offered by the US Department of Commerce’s International Trade Administration, and builds partnerships and provides technical assistance by training Eurasian business leaders in U.S. business practices. The FY 2010 program had two trainings of direct interest to AgLinks partners; “Fruit and Vegetable Processing and Packaging” (July 2010) and “Beverages : Processing and Packaging” (Sep 2010). The three AgLinks partners who submitted applications to these programs were not selected to participate. AgLinks and its partners will await the October 2010 release of the FY 2011 program before initiating any further SABIT activities. SABIT is scheduled to close on 30 June 2011 which would

not be too late for the project to identify potential participants prior to AgLinks closure on 31 July 2011.

### **A.2.a. Other Donors.**

AgLinks staff attended two one-day workshops in Tashkent during this quarter; one organized by the World Bank (climate change) and the other by the UN and the Uzbek Center for Economic Research (CER) (food security).

**World Bank Climate Change Workshop.** The World Bank, in collaboration with the Ministry of Agriculture and Water Resources (MAWR), organized a workshop on 19 May entitled “Reducing Vulnerability to Climate Variability and Change in Uzbekistan’s Agricultural Systems.” Presenters included World Bank staff and consultants (FutureWater and Industrial Economics), Uzhydromet, ICARDA, Land and Soils Research Institute, AVRDC, and Tashkent Agrarian University. Uzbekistan is one of four countries in the Eurasian region selected by the World Bank for activities in support of agriculture and climate change mitigation. The other countries covered by this program are Albania, Macedonia and Moldova.

Major observations included that agriculture is the most sensitive sector to climate change and variability. It must, therefore, plan for adaptation, reduce vulnerability and seize opportunities. The frequency and severity of extreme events (droughts, heat waves, severe cold, etc.) are expected to increase. Uzbekistan’s vulnerability to climate change is higher than the Eurasian region average and presently has low adaptive capacity. The water deficit in Uzbekistan is projected to increase by 500% by 2050 with major ramifications for the largest user, agriculture. Agriculture contributes to climate change, is affected by it and can help mitigate and adapt to it. The World Bank support at this stage appears limited to improving technical capacity for forecast modeling. The Uzhydromet technicians that presented were impressive with their existing knowledge and modeling capacity. The expected result of this initial technical assistance is to develop a draft “Response to Climate Change” report for Uzbekistan within the next 9 months.

**UN and CER Food Security Workshop.** The major UN agencies (UNDP, UNICEF, FAO) organized a workshop on 27 May entitled “Food Security – An Essential Factor in the Sustainable Development of Uzbekistan” in collaboration with the Tashkent-based Center for Economic Research (CER). The morning session focused on food and agricultural production and included presentations by representatives of CER (“Food Security in Uzbekistan”), FAO (“Improving Food Security in Uzbekistan through Agricultural Policy”), MAWR (“Uzbekistan’s Experience in Securing Food Independence”) and the ADB (“Adaptation to Climate Change and Agricultural Development”). The afternoon session was focused on the nutritional and health aspects of food security.

Major observations of the agricultural presenters included the limited ability for Uzbekistan to expand the area under cultivation (argues for intensive over extensive agriculture), increased uncertainty due to climate change (argues for reducing risk), increased water dependency (argues for more efficient water use), and the need to increase rural purchasing power by increasing incomes (argues for shift to higher value crops). The health and nutritional presenters noted that caloric provision was sufficient but there were issues around micronutrients (ex., minerals, vitamins, etc.).

### **A.3. Project Management.**

AgLinks did not renew the contract of one of the two project drivers when it expired this quarter. This action was taken as a cost reduction measure in the face of continued funding uncertainty (see Section D for details). The project now consists of 3 support staff (receptionist, driver and administrator) and 5 technical staff for a total of 8 full-time employees (7 local and 1 expatriate). AgLinks submitted another notification of limitation of funds memorandum to USAID this quarter (20 April 2010) and continues to seek cost-cutting measures in the face of continued financial uncertainty.

The AgLinks management team also withdrew from test site status for the DAI Home Office's new Record Management System (RMS) this quarter because the required level of commitment exceeded the available time and manpower resources available. This effort requires a complete reclassification of both hard and electronic project records into a standard DAI structure and format to facilitate retrieval, exchange, and close-out. With one year left in the AgLinks project the RMS will facilitate the orderly close-out of the project by mid-2011 but will require HO assistance to accomplish. Project staff also updated the Microenterprise Results Reporting (MRR) data online at the dedicated USAID website for this activity during the quarter. Data were entered for Uzbekistan for FY 2009.

### **A.4. Issue(s).**

The major administrative issue remains the funding uncertainty facing the project as evidenced by the 4<sup>th</sup> notification of limitation of funds submission in less than 12 months. This issue is further outlined in "Section D – Finance" of this quarterly report.

## **B. TECHNICAL**

AgLinks support in the third quarter of fiscal year 2010 was predominantly working with farm household members through hands-on trainings to increase the productivity of production and processing. Farm level trainings using the “Field School” approach, that employ the AgLinks demonstration plots as classrooms, represented the vast majority of activities this quarter. A new addition this quarter was the introduction of drip irrigation to selected demonstration plots. AgLinks was approached by potential new private sector partners who had heard of the program and were interested in learning more. In the public sector, AgLinks supported the observation of Earth Day in April by co-sponsoring a school essay and drawing contest in collaboration with USAID and the US Embassy.



**Photo # 1:** Field School using Trellised Grape Demo Plot Samarkand Province

### **B.1. Producers - AgriFirms and Water User Associations (WUAs).**

Many trainings this quarter included a component of pest and disease identification and control by crop and drew on the farm manual produced and printed last quarter. The pest and disease identification and control farm manual has proven very popular and effective. Farmers previously did not know the nature of their pest problems and which steps to take to correctly limit damage. The AgLinks farm manual only promotes agrochemicals, application techniques and safety precautions approved by the Uzbekistan PERSUAP and the national plant protection service.



**Photo # 2:** Spring Pruning in Field School Setting using Peach Demonstration Plot -Ferghana Province

AgLinks producer training activities are planned, scheduled and located to combine farmer-members from both AgriFirms and WUAs that capture economies of scope in agronomic, pest, harvest and post-harvest trainings. These joint training sessions unite agrifirm and WUA farmers from the targeted geographic areas making for more efficient use of project resources, including the demonstration plots. Different components to

the field school based trainings are added depending upon the needs and expressed interests of farmers in a particular area. For example, farmers in Feghana who specialize in peaches not only receive a refresher course on pests and diseases but also a component on spring pruning techniques.

**Fruit Tree Pruning and Thinning.** Spring pruning and thinning trainings were held in Ferghana for stone fruit trees, particularly peach, and pome fruit, specifically apple and some quince along with the standard pest and disease identification and control program. A similar thinning training for grapes was provided to farmers in Namangan



**Photo # 3:** Example of Peach Fruit Setting Under “American” Pruning Methods Ferghana Province

and Samarkand provinces. Pruning and thinning in springtime allows growers to channel plant resources to fruit production over excessive woody plant growth. Farmers are initially reluctant to adopt this method because the idea of cutting material to achieve greater output seems inconsistent. However, given the success of the 2009 pruning and thinning trainings many more farmers are adopting these methods. When combined with proper pest and disease identification and control farmers can achieve significant productivity increases.

**Grape Thinning, Irrigation and Fertilization.** Almost 100 farmers attended trainings in Namangan Province on the needs of grape farmers at this time of the agricultural season. In addition to the standard pest and disease identification and control, farmers were introduced to thinning methods and proper irrigation and fertilization techniques for table grapes. Farmers from the Pungon Water Users Association (WUA) and the Torakoragon AgriFirm attended these trainings. The thinning technical expert is based in Samarkand and works for the provincial Shreder Institute. Farmers were especially interested to learn proper micronutrient management for grapes and how to preliminarily identify soil deficiencies through grape leaf impacts.



**Photo # 4:** Samarkand Based Expert Provides Thinning Training in Field School at Grape Demo Plot - Namangan Province

**Drip Irrigation.** During the previous quarter AgLinks commissioned a local drip irrigation consultant to assess possible sites among the AgLinks demonstration plots for installing pilot, farm-level irrigation systems. These systems are intended to lower water use, provide more uniform water distribution, reduce farm labor demand, allow for introduction of agricultural chemicals (fertilizers and pest control) and thereby increase overall farm productivity. A total of 9 plots were recommended based upon water

availability, topography, environmental concerns, crop diversity and the capability and interest of the host farmer. Based upon the assessment results a local tender was launched in March with bids evaluated this quarter. A legal and consistent means of implementing the local contract in Uzbekistan under existing constraints (ex., non-project status, limitations arising from the legal charter for representative offices, payment possibilities, etc.) was successfully resolved by the end of May with work beginning in June.



**Photo # 5:** Water Reservoir under Construction for Trellised Grape Plot – Namangan Province

Construction of the drip irrigation systems follows the standard AgLinks practice of cost-share with the local farmers. Participating farmers were required to provide all non-skilled labor, land preparation (including excavation) and basic materials (ex., sand, gravel, cement, reinforcing bars, etc.). Depending upon the financial status of the individual farmer the amount of their participation may vary. AgLinks, through its local subcontract, provided the drip irrigation materials and technical expertise for the installation and follow-up trainings.



**Photo # 6:** Installation of Primary, Secondary and Tertiary Piping – Namangan Province

Work began in June with first activities at the Ferghana Valley sites in Namangan and Ferghana provinces with a total of 7 planned drip irrigation installations. Work did not begin until farmers had completed their respective land preparation which involved installation of a water reservoir to feed the irrigation system. Farmers very quickly mobilized to install the necessary reservoirs. AgLinks's local sub-contractor, Saniplast, responded by pre-positioning materials in the Valley and beginning installations at farm locations as the reservoirs were completed. By the end of the month a total of 5

systems were completely installed and operational. The remaining 2 for Ferghana plus 2 planned for Samarkand should be completed by mid-July.

Farmers attending the apricot variety contest in Pop District of Namagan (see following section of this report) visited the drip irrigation systems installed in their region as part of the contest program. These visitors included the heads of some WUAs from Samarkand whose member-farmers will host the drip irrigation demonstration plots on their fields. Water demand should significantly reduce once the water management through drip irrigation is integrated with the AgLinks promoted modern pruning methods. The latter will further water demand by reducing the amount of unnecessary plant growth and direct plant inputs to their most productive use.

**Variety Contests.** The first of four scheduled variety contests was held this quarter in Namangan Province with a total of 30 participants. The 2010 season was the second year of this AgLinks activity and twice as many participants submitted crop varieties to be judged by a 3 person panel of experts. Contest timing coincides with the harvest period for each crop and apricots are the first contest each season. The panel of judges comprises local experts representing the horticultural research station (Schreder), private processors and a staff member of the local MAWR.



**Photo # 7:** Variety Contest Judges Evaluate Fruit Namangan Province

Varieties are judged in three different categories that represent the uses of the fruit and comprise “juiciness”, “drying capability” and “freshness”. Farmers could submit entries in all three categories, judges used scoring sheets with both objective and subjective variables and the judging process was held in the open air to assure transparency. Prizes were awarded to the winners of each of the three categories and all participants are provided a commemorative t-shirt. Winners received a ladder for use on-farm and in the orchards which is very practical for and greatly appreciated by fruit farmers.



**Photo # 8:** Apricot Variety Contest Judges and Winners Pop District, Namangan Province,

New to this year's event was inclusion of farmers from the other provinces where AgLinks has partners. The previous year's events were limited only to farmers in the local area. The physical locale was also changed from the Torakoragon AgriFirm to the Shirin Shuv Yangier Water Users Association (WUA). Changing the locale increased participation while expanding the participants geographically allowed for greater competition, widened interest in the event, provided more farmer interaction and identified additional "best" farmers and varieties.

Farmers participated from as far as Samarkand Province at the Namangan apricot variety contest. Although Samarkand is not usually viewed as a major producer of apricots, a woman farmer from Hojabuston WUA in Payarik District won the best "juiciness" category. The other winners for drying and freshness were both from Namangan Province. The remaining three variety contests scheduled for 2010 are peaches (July in Ferghana), grapes (September in Samarkand) and apples (October in Samarkand).



**Photo # 9:** Processing Trainer, Marifat Nazarova, Demonstrates Sterilization Procedures Namangan Province

**Farm Household Processing.** AgLinks also expanded and added more subjects to the successful farm household processing program that was pilot tested during the 2009 harvest season. Trainings are targeted to women in the farm household and provide hands-on training on how to process farm products to lengthen their usefulness, thereby improving food security throughout the winter months. Similar to



**Photo # 10:** Farm Household Processing Trainees with their Products – Samarkand Province

the variety contests, the farm household processing trainings are held when the appropriate crops are harvested to assure the product is available and the need for processing is highest. The trainer is a food technologist who works with a local processing company in Namangan and was also selected as one of the 10 Uzbek participants in the Community Connection program in northern California during late June to mid-July 2010 (see Section A.2.a above).

The 2010 program has been further expanded by introducing the training to other provinces beside the original pilot test area of Namangan. By the end of June the first farm household processing trainings were held in Samarkand Province. Additional crops for processing have been added to the program for 2010 at farm household request. A special feature of the 2010 program is attention to quality and hygiene concerns and the requirements of processing companies for semi-processed products to create possibilities for establishing links between the trainees and processing companies. Again similar to the variety contest approach, these trainings will continue throughout the harvest season with a focus on drying (July), candied fruit and fruit leather ("Fruit Roll-ups") (August) and pickling (October). Participants in Samarkand expressed keen interest in tomato and cucumber preservation which will be addressed later in the season.

AgLinks has built upon the lessons learned from the previous year's experience with farm household processing to enhance the effectiveness of the training. For example, in a traditional society, such as Uzbekistan, it is extremely important to use a female trainer to reach female trainees while being keenly aware of the specificities of training women within the Uzbek context. These include holding trainings in the morning so as not to interfere with preparation of the evening meal, not organizing trainings on major market days, the importance of holding trainings at individual homes rather than a training center, etc. All of these insights have made these trainings much more effective and impactful.

The first training of the 2010 season covered the early season crops of dill, strawberries, parsley and rosehips. These products are mostly dried for future use in the home, sales on the local markets and purchase by local processing companies. The second training in the series covered the preparation of jams, compotes and fruit drinks (ex., lemonades, etc.). While most women already knew of these processing procedures they admitted being unfamiliar with the hygienic processes and procedures. In Namagan, staff from a neighboring hospital noticed the training and joined for the entire session to learn how to process the fruits and vegetables produced on their grounds and to provide products for patients.

## **B.2. Private Sector.**

The AgLinks cost-share program with private sector processors which supports attendance at regional and international trade shows is not active during the agricultural season. Shows are not frequent in the agricultural season and partners are too busy to attend. This program usually runs in the Fall and Winter months. The one exception is the Fruit Logistica Asia trade show which is held annually in the early Fall, sometimes as early as September. Potential new private sector partners did contact AgLinks this quarter and follow-up meetings and site visits were held to explore possible avenues of collaboration.

**Potential New Partners.** AgLinks staff met with representatives of two new potential private sector partners this quarter. NutEco is a firm with interests and activities in water treatment, infant food production (including fruit and vegetable purees) and cold storage. The head of NutEco arranged for AgLinks to visit a Tashkent-based firm that manufactures small-scale cold storage solutions, including converted shipping containers. AgLinks shared its training materials, particularly the farm manual, with

NutEco and agreed to explore the idea of trainings for farmers working with them to provide raw materials. NutEco could potentially be a partner in cold storage work assuming funds become available for such an activity or the FFP funds are mobilized (see Section A.2.a).

Project staff also met with the representative of EuroBasis this quarter and made a site visit to their young orchards just outside of Tashkent. EuroBasis represents food processing interests who are now moving into farming to assure the quantity and quality of foodstuffs required to economically utilize their equipment investment. EuroBasis has land totaling 350 hectares (ha) and have already planted on 100 ha. Crops include cherry, plume, apricot and walnuts. AgLinks held a training for their farm staff using the pest and disease identification and control farm manual. This was followed by a visit to their orchard area by the drip irrigation specialist. AgLinks proposed to deepen the relationship with EuroBasis via a memorandum of understanding (MOU) to remain consistent with project practice. AgLinks initially proposed to provide the technical assistance for installing drip irrigation systems if EuroBasis provides all the material costs. EuroBasis is considering this offer and project staff will follow-up with them as the season progresses.

### **B.3. Public Sector.**

As mentioned above, the focus of the third quarter is rightly on-farm trainings given the seasonal nature of agricultural activities. For an agricultural project spring activities should emphasize farmer trainings which can still impact the level of production in that year. Given the on-farm focus this quarter the public sector activities were limited to two. AgLinks assisted the US Embassy and USAID to celebrate Earth Day in April and project staff provided trainings in collaboration with the Uzbek Chamber of Commerce and Industry (CCI) for farmers targeted by the latter.

**Earth Day.** Earth Day was founded by US Senator Gaylord Nelson to inspire awareness and appreciation for the earth's natural environment through education. It has been celebrated every 22 April since 1970 and was expanded from the US to a worldwide event in 1990. Earth Day is coordinated globally by the Earth Day Network and is celebrated in more than 175 countries every year with April 22<sup>nd</sup> corresponds to spring in the Northern Hemisphere and autumn or fall in the southern hemisphere. Given the importance of husbanding earth's resources in agriculture, AgLinks accepted a request to co-sponsor Earth Day activities for students in the project's targeted areas.



**Photo # 11:** Sample Student Artwork for Earth Day 2010

AgLinks partner Water User Associations were requested to make presentations at local schools on Earth Day (22 April) and ask students to draw and write about their perceptions of the importance of the environment in Uzbekistan. Students in Namangan and Samarkand provinces provided drawings which were judged for non-verbal communication themes covered and clarity. Winners were awarded prizes at a special school event at which USAID and AgLinks staff attended.

**Chamber of Commerce Trainings.** The mutual success of the cold storage workshop held last quarter in collaboration with the Chamber of Commerce and Industry (CCI) of



Uzbekistan led the latter to request AgLinks assistance in trainings farmers in the Ferghana Valley. AgLinks staff were requested to provide training to farmers identified by the Chamber in each of the three provinces that comprise the Ferghana Valley (Andijan, Namangan, and Ferghana). Other trainers presenting at these one-day events included a representative from Nestle (to address dairy production) and the Growing Sustainable Business (GSB) initiative of UNDP (linkages to grocery chains).

**Photo # 12:** Students Receiving Earth Day Prizes and Participation Certificates - Samarkand Province

AgLinks presented on pest and disease identification and control and distributed copies of the affiliated farm manual. AgLinks also used its existing demonstration plots to give farmers hands-on experience in using the manuals in a field setting. This collaboration with the CCI provided AgLinks its first training opportunity in Andijan Province. Local farmers were very pleased with the farm manual, all participants were provided copies and additional copies were given to the CCI-GSB staff. CCI intends to expand this training to all regions of Uzbekistan and has agreed to inform and include AgLinks in subsequent trainings.

#### **B.4. Issue(s).**

Local subcontracting of the drip irrigation program proved difficult because two local banks refused, on separate occasions, to accept the contract stating it was a “non-commercial” transaction. Banks play an oversight role in Uzbekistan to assure all commercial transactions are accomplished through the wire transfer system. The drip irrigation contract was delayed by roughly 3 weeks as staff from both AgLinks and the local contractor worked with accountants and lawyers to determine a legal and effective means of implementing the activity. Through persistence, creativity and hard-work by both sides a solution was found and activities commenced.

## **C. ENVIRONMENTAL COMPLIANCE**

The Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) for Uzbekistan remains the prime guidance for all environmental activities under the AgLinks project and was complemented this quarter by a draft framework Mitigation and Monitoring Plan for the drip irrigation sites. The project continues to only train farmers on PERSUAP approved products and techniques through the agrochemical farm manual for fruit crops (stone and pome fruits) and the pest and disease identification and control sessions. The AgLinks team also met with representatives of the Integrated Pest Management (IPM) Collaborative Research Support Program (CRSP) and the Mission Environmental Officer (MEO), Nina Kavetskaya, visited the project office and field sites in the Ferghana Valley during this quarter.

### **C.1. Mitigation.**

Proper identification and control of pests and diseases by crop through on-farm training at demonstration plots remains the major mitigation activity of AgLinks. AgLinks staff, the national plant protection service and local technical specialists developed a farm manual on pest and disease identification and control based upon the PERSUAP and trainings used during the previous season (2009). The manual only recommends materials and approaches fully consistent with the approved Uzbekistan PERSUAP. All trainings are field based and require farmers to make field identifications, identify the pest or disease in the manual and reference the appropriate mitigation strategy and user requirements within the manual.



**Photo # 13:** Farmers at “Field School” Identifying Pests & Diseases Using AgLinks Developed Manual (center farmer)

At the request of the MAWR AgLinks presented the manual during a week-long workshop for farmers from all provinces of Uzbekistan. The manual was in great demand and all participants from throughout the country were provided copies. An additional 20 copies were provided to each provincial representative to provide further national outreach for this material.

AgLinks staff met with both national and international representatives of the USAID centrally-funded IPM CRSP program this quarter. The IPM CRSP was recently renewed for a second phase that will cover the 5 year period from 2010 to 2015. A productive exchange of information resulted in identification of possible avenues for collaboration and mutual support. AgLinks provided each of the 3 representatives with a copy of the pest and disease farm manual. The second phase program consists of two elements; applied research and demonstration plots plus student training. IPM

CRSP activities are present in Kyrgyzstan, Tajikistan and Uzbekistan and focus on 3 crops; tomatoes, potatoes and wheat. Three different partners among the IPM CRSP consortium have direct responsibility for their respective crop including the World Vegetable Center (AVRDC) for tomatoes, the International Potato Center (IPC) for potatoes and the International Center for Agricultural Research in the Dry Areas (ICARDA) for wheat.

AgLinks stated that if and when the FFP greenhouses are implemented the project would likely get much more interested in tomatoes which would provide a common interest between the programs. In the meantime, AgLinks does not work in wheat without a Bumpers Amendment approval and potatoes are not a targeted crop for the project. AgLinks did share with the IPM CRSP representatives copies of the most recent PERSUAPs of Kyrgyzstan, Tajikistan and Uzbekistan. The project also produced a table for the IPM CRSP representatives listing all recent PERSUAPs performed in Central Asia by country and crop. Along with the project's implementing the respective PERSUAPs this table provides a convenient summary of which crops are covered by individual countries and regionally. Curcubits, onions and tomatoes are the only crops presently covered in all three country PERSUAPs (see Annex C).

## **C.2. Monitoring.**

The MEO from USAID Almaty visited Uzbekistan during the last week of May and included discussions with the AgLinks technical staff in Tashkent and a field visit to selected sites in the Ferghana Valley, including both Namangan and Ferghana provinces. The field visit focus was on the planned drip irrigation sites for the AgLinks demonstration plots. The timing of the visit was fortuitous because the contract had been approved by the local bank the week prior to the visit and activities would finally begin. Concerns raised included the need for local authoritative approval for water reservoir construction, the need to reinforce concrete reservoir linings with heavier reinforcing bars (rebar) and farm consolidation issues.

AgLinks staff followed up on these issues and determined that on-farm structures of this cost level did not need additional authorities for construction, assured that heavier gauge rebar was used and clarified the relationship between one of the grape trellis locales and his farm consolidation status. Only one of the locales had this issue and the consolidated farm owner assured the project that materials would remain in place. The consolidated owner is a regular and enthusiastic participant in AgLinks activities and his apricots won the "dryness" category in the apricot variety contest (see Section B.1., "Variety Contests" above).

In partial response to the MEO visit AgLinks technical staff prepared a draft Framework Mitigation & Monitoring Plan for the drip irrigation installations (see Annex B) prior to starting construction. Individual site reviews for each of the 9 locales will be made once the installations are completed. The pest and disease identification and control trainings continue to emphasize to farmers that only the PERSUAP approved products and techniques presented in the farmer manual are used. AgLinks efforts at educating farmers through both the trainings and the manual also emphasize the need to avoid obsolete pesticides (OPs).

### **C.3. Issue(s).**

The 2010 version of the approved agricultural chemicals list for Uzbekistan has still not been released and AgLinks has been unable to perform the proposed PERSUAP update. The continued importance of environmental monitoring and mitigation, particularly with the increase in project construction activities (ex., drip irrigation) argue for greater depth of technical capacity in environmental issues within AgLinks. AgLinks will seek potential USAID relevant environmental training programs to augment existing staff technical capacity in this area.

#### **D.4. Issue(s).**

The project remains on track with the budget submitted with the FY 2010 work plan as reflected in a quarterly deviation from plan of only \$6,979 for expenditures of \$342,777, representing a shortfall of only 2%. Fiscal year-to-date (9 months) the project is running a surplus of \$56,252 from the projected FY 2010 work plan budget. This expenditure shortfall represents the projected value of the planned tractor procurement which has been indefinitely postponed for both budget (funding uncertainty) and administrative (unclear tax status) reasons.

With roughly one year remaining to the scheduled 31 July 2011 project closure, AgLinks passed the halfway mark for budget expended (52%) this quarter with over a third of the original budget (37%) remaining to be obligated. Assuming the project is fully funded, the 10 months of FY 2011 (October 2010 to July 2011) will witness significantly increased expenditures. Assuming the project is not fully funded and no new obligation is made next quarter, the project will commence closedown activities at the end of August.

**USAID AgLinks Project**  
Monthly Report #13 – April 2010

Contract #EDH-I-00-05-00004  
TO #EDH-I-07-05-00004-00

April marked the arrival of spring, greatly increased agricultural activity and was accompanied by increased trainings at the farm level.

**ADMINISTRATION.** Team members met with representatives of the USAID implementing partner (Cardno) for the LDI Project to share insights on establishing and implementing a project in the Uzbek environment. Project financial forecasting was prepared for the DAI Home Office for the next 12 months. The USAID Microenterprise Results Reporting (MRR) data were entered online. A notification of limitation of funds memo was submitted to USAID. To further reduce costs AgLinks staff were reduced by one person to a total of 8 full time employees with the non-renewal of a driver's contract. The drip irrigation contract was signed but two local banks refused to register the contract stating it was "non-commercial" and the project continues to work with the local vendor (Saniplast) to determine the best way forward.

**TECHNICAL.** April trainings at field schools using demonstration plots covered either crop pest and disease identification and control or pruning, grafting and budding.

*Farm Manuals.* Distribution continued of the first farm manual on pest and disease identification and control with requests for copies and trainings received from the Chamber of Commerce, the Ministry of Agriculture and Water Resources (MAWR), the Social Initiatives Support Fund and others. AgLinks staff continued to develop the second planned manual on pruning, grafting and budding techniques through farmer trainings and refining them through field trainings in April. Farmer feedback and additional information needs are identified at these trainings and incorporated in the final draft. The draft is now at the peer review stage and the project is seeking publication approval in collaboration with MAWR's department of fruit and vegetable production and processing.



*Farmers Receive Pest & Disease Manual and Training*

*Trainings.* Grape related trainings were held in Samarkand throughout April on pest & disease control, pruning, irrigation and fertilization. Samarkand farmers were notably more active this year and stated they were impressed by the increased productivity of farmers following AgLinks recommendations from last season. Farmers also mentioned the importance of field schools over classroom instruction and printed color handouts with information as positive incentives to participate. Orchard crop farmers in Samarkand were also introduced to the pest and disease manual and its use.

Orchard farmers in Ferghana and Namangan were introduced to and provided copies of the pest and disease manual as part of the training program for April. Namangan

**USAID AgLinks Project**  
Monthly Report #14 – May 2010

Contract #EDH-I-00-05-00004  
TO #EDH-I-07-05-00004-00

May marks one of the busiest months of the agricultural year, increased farm level activity and several real-time field school trainings for numerous farmers.

**ADMINISTRATION.** The local contract for drip irrigation activities was signed and registered this month after redrafting the SOW and contract to meet the local bank's definition of "commercial activity." Project staff assisted the editing and translation of the finalized versions of the Food For Progress (FFP) proposals for funding consideration by the GOU-USAID joint committee. Staff also arranged and facilitated USAID visits to former WUA and NRMP project sites in Karakalpakstan and Bukhara. No response was yet received for the notification of limitation of funds memo submitted to USAID last month. The project continues to seek additional cost reduction measures in light of financial uncertainty.

**TECHNICAL.** May trainings covered grape shoot thinning, summer pruning and thinning, and household level fruit processing and preservation.

*Farm Manuals.* The farm manual on pest and disease identification and control was used and distributed to all participants in three provinces in collaboration with the Uzbek Chamber of Commerce. AgLinks and the Chamber agreed to organize joint trainings in project targeted regions as well as other provinces in Uzbekistan. The manual, based upon and in full accordance with the USAID PERSUAP for Uzbekistan, continues to attract significant interest with requests for multiple copies from private agro-processing firms including EcoNut, EuroBasis and UzWinProm Holding. The second manual on pruning remains under peer review by the Ministry of Agriculture while the draft material continues to be used in field trainings.



*Farmer Reviews Pest & Disease Manual*

*Trainings.* AgLinks began the joint training program for farmers with the Chamber of Commerce utilizing AgLinks demonstration plots as an integral part of the program. Roughly 75 farmers were introduced to pest and disease identification and control at separate trainings in Namangan, Ferghana and Andijan. This was the first training held by AgLinks in Andijan. Introduction to shoot thinning for both stone fruits (Ferghana) and grapes (Namangan and Samarkand) trained more than 130 farmers this month. Thinning is an important aspect of best orchard and vineyard management to increase yield, efficiently harvest

#	TRAINING	LOCALE(S)	Trainees
1	Grape Shoot Thinning	Namangan & Samarkand	104
2	Jam, Compote, Lemonade	Namangan	45
3	Summer Pruning and Thinning	Ferghana	30
4	Pest & Disease ID & Control	Namangan, Ferghana & Andijan	75
<b>TOTAL</b>			<b>254</b>

# Framework Mitigation and Monitoring Plan

## for construction of drip irrigation system demonstration plots

### Site Selection Process and Results

USAID's Aglinks project plans to procure and install drip irrigation system in 9 locales in 3 provinces of Uzbekistan (see table below). Field locales were selected after an assessment headed by a local irrigation specialist of roughly 30 potential locations among existing AgLinks demonstration plots. Demonstration plots are hosted at one of three AgLinks partner groups; Water User Associations (WUAs), AgriFirms (AF) or the provincial branch of the Shreder Fruit and Grape Research station. Host farmers are either members of the WUA, AF or a staff member of the Shreder branch. The average size sought by AgLinks was roughly 1 hectare which is sufficient to motivate farmer participation while providing a large enough area to demonstrate impact and host trainings for neighboring farmers.

An assessment, implemented by Dima Lunev and AgLinks staff members, rank ordered the potential site locations based on the level of water scarcity, farmer willingness to use and maintain drip irrigation, age of crop, field topography and crop type. The objective of this activity is to select a number of cropping systems to determine the best drip irrigation systems to introduce in different settings. The specialist and AgLinks technical staff visited each province and field to collect information and produced a matrix to facilitate the choice of fields for pilot drip irrigation activities. Based upon the review criteria and budget constraints a total of 9 fields were selected that best met AgLinks' requirements.

### List of planned drip irrigation plots

#	Province	AF/WUA	District	Farmer	Crop	Area
1	Namangan	Pungon WUA	Pop	Tursunali Juraev	Grape	1 ha
2		Turakurgan Sohibkorlari AF	Turakurgan	Muhtorjon Shermatov	Peach, Pomegranate	0.93 ha
3		Namangan Shreder	Uychi	Abdumalik Nishanov	Apple, peach	1 ha
4	Fergana	Kuvasoy Behizor AF	Kuvasoy	Sobirjon Botirov	Peach	1,34 ha
5		Kuvasoy Behizor AF	Kuvasoy	Yusubjanov Bahadir	Peach	1,18 ha
6		Fergana Shreder	Kuva	Alisher Saydaliev	Peach	1 ha
7	Samarkand	Karshiboy Mirob AUS WUA	Payarik	Umurzakov Allaberdi	Apple, grape	0.65 ha
8		Karshiboy Mirob AUS WUA	Payarik	Tojanboy Koziboev	Grape	0.5 ha
9		Dilkusho Sifat AF	Toyllok	Safarov Sharif	Grape	0.9 ha

The resulting list of demo plots contains a sufficient variety of the targeted AgLinks crops in stone (peach), pome (apple) and grape fruit varieties plus a small portion of one subtropical fruit (pomegranate).

## **Project and Partner Responsibilities**

USAID's Aglinks project agrees to furnish the necessary physical components and technical expertise to result in a functional drip irrigation system including the sand filter, mono-block pump, fertigation tank, pipes, hoses, drippers, and all other necessary equipment. AgLinks agrees to contract with a local service provider (SANIPLAST) to provide the necessary materials and technical assistance required to install the system and train in its use and maintenance. AgLinks is prepared to provide additional technical assistance from both existing staff and local consultants as needed. is responsible to provide complete set of system and install it.

The AgLinks partner-farmer agrees to

- build a water reservoir to accommodate enough water for a two- week period. Reservoir size will depend upon site locale characteristics and differ based upon crop type, drip system design, water availability from the irrigation canal during peak vegetation periods, etc. The principle function of the reservoirs is to store the water from the open canals, allow settlement of sediment and sands, and irrigate when necessary. Each farmer is responsible for the construction of the water reservoir according to the technical specifications provided them by the AgLinks expert and in advance of any drip irrigation installation.
- provide, build or otherwise assure that
  - excavators (human or machine) are used to dig reservoirs.
  - walls and floor of the reservoir is cemented with M-400 quality cement and minimum 12 mm armature reinforcing iron used to assure structural integrity.
  - protective fences are constructed at the edge of the reservoir to protect against entry by children and animals.
- construct a small warehouse next to the water reservoir to house the drip system's head unit and avoid theft and vandalism. The filter, valves, motorized pump, fertilizer tank and all other tools will be located at this head unit. The warehouse will be locked during nights under the control of the host farmer.
- dig a trench for the main distribution pipes of the drip system. The main distribution pipes of the drip system will be permanently buried 50 cm underground. The host farmer is responsible to prepare these trenches in advance of any additional drip irrigation installation.

## **Mitigation and Monitoring Plan**

The proposed mitigation and monitoring plan is presented in tabular format in the following 3 pages. The plan outlines the general approach to be undertaken and each individual site will have its own environmental review within the context of this plan. The accompanying table presents the activities to be undertaken, forecasts possible consequences, the mitigation of these consequences, monitoring efforts and a timeframe for action.

#	Activity	Possible consequences	Mitigation	Monitoring	Date
1	<p>Excavation of reservoir with proper excavator</p> <p><i>(Excavator driver is a licensed and trained person fully aware of the safety rules and environmental requirements.)</i></p>	<p>Passersby might fall into the reservoir if there is no fence or sign indicating the construction site.</p> <p>Earth from the reservoir might block roads if it isn't taken away immediately.</p> <p>Excavator's bucket might accidentally break underground water pipes and create water problems.</p> <p>Driver might be injured if he doesn't obey safety rules while working.</p> <p>Excavator's bucket might touch power lines and create blackout for entire village or cause fires.</p>	<ul style="list-style-type: none"> <li>• Excavator driver's license and all documents will be checked to make sure he is aware of all safety and environmental rules.</li> <li>• The excavator driver should wear proper outfit while working at site (boots, helmet, gloves)</li> <li>• The surrounding area of the reservoir should be fenced at least with a rope so people don't have access to the excavation site.</li> <li>• There must be a sign indicating the construction process.</li> <li>• The earth from the reservoir should be taken immediately to the closest landfill or to the construction site where it is needed.</li> <li>• Excavation works to be carried out only between the 6 am and 6 pm periods of time, no more than 8 hours a day.</li> <li>• Excavator driver should look carefully for any electrical lines and underground pipes if there are any.</li> <li>• Ground water table should be taken into account</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	<p>Aglinks project staff and consultant Dima Lunev will monitor the construction process.</p>	<p>June 2010 (early)</p>
2	<p>Correcting and finishing floor and walls of the reservoir with shovels.</p>	<p>Workers might accidentally get minor injuries or wounds while working if they don't obey safety rules and wear protective outfit.</p>	<ul style="list-style-type: none"> <li>• The workers should wear proper construction outfit with gloves while working.</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	<p>Aglinks project staff and consultant Dima Lunev will monitor the construction process.</p>	<p>June 2010 (early)</p>
3	<p>Place polyethylene film at the bottom and walls of the reservoir to avoid water filtration.</p>	<p>No effect to environment</p>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	<p>Aglinks project staff and consultant Dima Lunev will monitor the construction</p>	<p>June 2010 (early)</p>

				process.	
4	<p>Cementing the walls and floors of the reservoir.</p> <p>The thickness of the walls and floor will be minimum 20 cm.</p> <p>The walls and floor of the reservoir will be cemented with M400 grade cement.</p> <p>12 mm reinforcing armatures will be used to strengthen the walls and floor of the reservoir.</p>	<p>Working with cement might cause allergic dermatitis, irritant dermatitis or burns and eye problems.</p> <p>Workers might accidentally get minor injuries or wounds while working if they don't obey safety rules and wear protective outfits.</p>	<ul style="list-style-type: none"> <li>• Appropriate personal protective equipment should be worn to ensure people do not suffer allergic dermatitis, irritant dermatitis or burns</li> <li>• Avoid eye and skin contact by wearing suitable eye protection, waterproof clothing, waterproof footwear and waterproof gloves.</li> <li>• Ensure that cement does not enter boots or gloves.</li> <li>• Do not kneel in wet cement. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment <b>must</b> be used.</li> <li>• Avoid breathing cement dust.</li> <li>• Keep out of the reach of children.</li> <li>• On contact with eyes or skin, rinse immediately with plenty of clean water. Seek medical advice after eye contact.</li> <li>• Wash hands and face after working with cement, particularly before eating and drinking.</li> <li>• Cement should be used and stored as instructed on the delivery ticket or bag and used within the period stated.</li> <li>• Injuries can be caused by lifting cement sacks, particularly if the overall load exceeds 25kg:</li> <li>• Appropriate personal protective equipment should be worn all the time.</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	<p>Aglinks project staff and consultant Dima Lunev will monitor the construction process.</p>	<p>June 2010 (early)</p>
5	<p>Construction of fence around the reservoir to keep kids, passersby and animals away from the reservoir The fence will be constructed from reinforcing armature and angle bar. The fence</p>	<p>No effect to the environment Workers might accidentally get minor injuries or wounds while working if they don't obey safety rules and wear protective outfit.</p>	<ul style="list-style-type: none"> <li>• Workers should avoid heavy lifting</li> <li>• Appropriate personal protective equipment should be worn (gloves, helmet, clothes)</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	<p>Aglinks project staff and consultant Dima Lunev will monitor the construction process.</p>	<p>June 2010 (middle)</p>

	will be fixed to the reservoir's edge.				
6	Excavation of trench for main distribution pipes. The trench can be done either manually with shovel or trenching machine. <i>(Excavator driver is licensed and trained person, and is fully aware of the safety rules and environmental requirements.)(see #1 above)</i>	No effect to environment.  Workers might accidentally get minor injuries or wounds while working if they don't obey safety rules and wear protective outfit.	<ul style="list-style-type: none"> <li>• The workers should wear proper construction outfit with gloves while making trenches manually with shovel.</li> <li>• If the trenching machine is used, driver's license and all documents will be checked to make sure he is aware of all safety and environmental rules, and excavator has undergone recent scheduled technical checkup.</li> <li>• If the trenching machine is used, the driver should wear proper protective outfit.</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	Aglinks project staff and consultant Dima Lunev will monitor the construction process.	June 2010 (early)
7	Installation of main distribution pipes, connecting the main pipes to sub-pipes and drippers. The installation of the pipes will be done by contractors (drip system seller) <i>(Contractor is licensed, and fully aware of the safety and environmental rules)</i>	No effect to environment  Workers might accidentally get minor injuries or wounds while working if they don't obey safety rules and wear protective outfit.	<ul style="list-style-type: none"> <li>• The workers should wear proper construction outfit with gloves while working.</li> <li>• Medicine chest will be available all the time to give first aid.</li> </ul>	Aglinks project staff and consultant Dima Lunev will monitor the construction process.	June 2010 (middle)
8	Water application through DIS	No negative impact to environment No effect to human health  Possible consequences if salty drainage water is used: - Crop yield and soil quality might worsen. - The trickles and pipes might	<ul style="list-style-type: none"> <li>• Only water coming from the open canal will be used for drip irrigation.</li> <li>• No subsoil water or drainage water is planned to be used.</li> <li>• In a situation when water is extremely scarce during the peak irrigation season, some drainage water could be partially used in mix with canal water only after testing its salinity level in a laboratory.</li> </ul>	Aglinks project staff and consultant Dima Lunev will monitor quality of water used for irrigation including lab tests of water samples	June 2010 - September 2010 (during irrigation season)

		undergo corrosion - The trickles might get stuck	• Farmers are fully aware of the consequences of irrigating from drainage water		
--	--	---	---	--	--

USAID PERSUAPs in Central Asia			
Country	KYR	TAJ	UZB
Project	KAED	AgLinks Regional	AgLinks Uzbekistan
Approval Month & Year	Jul-07	Dec-08	Mar-09
		apricot	apricot
		grape	grape
		pomegranate	pomegranate
	tomato	tomato	tomato
	onion	onion	onion
		cucumber	curcurbits
	melon	melon	
	watermelon	watermelon	
			peach
			plum
			cherry
			cotton
			wheat
			rice
		almond	
	potato		
	red beet		
	sweet pepper		
	maize		
	soybean		
alfalfa			
fodder beet			
chickpea			