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# USAID AGRO HORIZON PROJECT

YEAR TWO ANNUAL REPORT

OCTOBER 1 2015 – SEPTEMBER 30, 2016

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CONTRACT NUMBER: AID-176-C-14-00002

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### **DISCLAIMER**

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# ABBREVIATIONS

AAS	Aravan Agroservis
ABSP	Agricultural Business Service Provider
AFVE	Association of Fruit and Vegetable Enterprises
AgWASH	Agriculture Wash, Sanitation and Hygiene
AS	Advisory Services
ASP	Agricultural Service Providers
AIRD	Associates for International Research and Development
APWG	Agricultural Policy Working Group
B2B	Business to Business
BDSP	Business Development Service Providers
BNF	Beneficiary
BF	Beneficiary Farmer
CBO	Community Based Organization
EDC	Electronic Data Collection
ECS	Environmental Compliance Specialist
EEU	Eurasian Economic Union
F/B2B	Farmer and Business to Business
F2B	Farmer to Business
FTE	Full Time Equivalent
GGPAS	Good Governance and Public Administration Strengthening
GOKR	Government of the Kyrgyz Republic
Ha	Hectare
HICD	Human and Institutional Capacity Development
KGS	Kyrgyz Som
LOP	Life of Project

M&E	Monitoring and Evaluation
MFI	Micro Finance Institution
MTS	Machinery and Tractor Stations
MOA	Ministry of Agriculture of the Kyrgyz Republic
MOE	Ministry of Economy of the Kyrgyz Republic
MTS	Machinery and Tractor Station
OCA	Organizational Capacity Assessment
PMC	Pasture Management Committee
PY	Project Year
RAS	Rural Advisory Service
RfP	Request for Proposal
SME	Small and Medium-Sized Enterprise
SPRING	Strengthening Partnerships, Results, and Innovations in Nutrition Globally
STTA	Short Term Technical Assistance
TAIC	Trainings, Advisory, Innovations and Consulting Centre
ToT	Training of Trainer
USAID	United States Agency for International Development
USG	United States Government
VC	Value Chain
VHC	Village Health Committees
WASH	Water, Sanitation, and Hygiene
WUA	Water User Association
ZOI	Zone of Influence

# INTRODUCTION

## BACKGROUND

ACDI/VOCA, with subcontractors Helvetas and AIRD, is pleased to submit the Annual Report for the USAID Agro Horizon Project for the period October 1, 2015 – September 30, 2016. This report is organized according to the annual report requirements listed in section F.5.4 of the above referenced contract number.

In order to sustainably reduce poverty and promote agricultural economic growth, the USAID Agro Horizon Project (referred to as Agro Horizon or the project here forward) aims to:

1. Increase productivity of agricultural producers and link them to markets (Task 1: Productivity)
2. Increase productivity and markets for agribusiness (Task 2: Marketing)
3. Improve the enabling environment for agriculture sector growth
4. Improve nutritional status of women and children in the zone of influence (ZOI)

Year 2 activities build on the successes from Year 1 interventions that were designed to identify program opportunities. Successful pilot programs were expanded, including value chain (VC) concepts, and where entry points were identified, new activities will be developed going forward.

Year 2 program activities are broken down into two main categories; **value chain activities** and **supporting activities**. Supporting activities include productivity and marketing (Tasks 1 and 2) activities that are not incorporated into value chain activities, as well as enabling environment (Task 3) and nutrition (Task 4) activities. Crosscutting elements including gender and environmental compliance are integrated throughout each value chain, and in some cases, supporting activities.

The geographic focus or the ZOI of the project is defined as the entirety of Naryn, Jalal-Abad, Osh, and Batken oblasts.

# EXECUTIVE SUMMARY

The Agro Horizon Project focused during Project Year 2 on improving productivity of smallholder farmers of maize, potatoes, apricots, onions and berries. The project has overwhelmingly overachieved most of targets except for access to finance.

- **32,453 (353% of target)** unique rural households benefitted directly from training and technical assistance
- **470 (1,198% of target)** target value chain private enterprises including food security private enterprises (for profit), producer organizations, water users' associations, women's groups, trade and business associations, and CBOs (community based organizations)
- **34,908 (112% of target)** unique individuals were trained in practical agricultural trainings and field consultations covering cultivation, pruning, fertilization, soil preparation, seeding, plant protection (pest and disease control), harvesting and storage, controlling machinery and tractor station (MTS) operations, nutrition and agriculture sanitation, and dietary diversity
- **23,770 (95% of target)** farmers and target value chain enterprises including food security private enterprises (for profit), producer organizations, water users' associations, women's groups, trade and business associations, and CBOs applied improved technologies and management practices
- **33.3 (333% of target)** full-time equivalents (FTE) jobs were attributed
- **2,456** farmers used financial services (savings, agricultural credit) through financial institutions and commercial banks totalling **\$390,167**
- Preliminary data on incremental sales indicates that beneficiaries increased their sales **by 87.6% (876% of target)** and gross margins increased by approximately **12% (120% of target)**
- Women's Dietary Diversity Score (WDDS) **increased from 5.30 to 6.64**
- Under the nutrition initiative, **1600 households and surrounding communities** increased access to nutrient-dense food through the kitchen garden program

**Table 1: PY2 Key Project Indicators (Unique Beneficiaries)**

#	Indicator	PY 2 Target	PY 2 Achieved	Percentage Achieved	Comments
5	Number of rural households benefiting directly from USG assistance	9,200	32,453	352.8%	The revised target of 9,200 is 3,800 less than the original 13,000. This reflects USAID's recommendation to reduce the target number of households in the maize value chain from 6,000 to 2,200
6	Number of target VC private enterprises assisted	40	479	1,197.5%	The definition of private enterprise was expanded to include unregistered community-based organizations (CBOs) since 90 percent of the 470 enterprises reported were farmer groups that were



					established with the support of Agro Horizon
7	Number of individuals trained	31,200	34,908	111.9%	The revised target of 31,200 is 8,800 less than the original 40,000. This reflects USAID's recommendation to reduce the target number of individuals in the maize value chain from 12,000 to 3,200
8	Gross margin per Ha, animal or cage of selected product (Crops include onion, maize, ware potato, dried apricot)	10%	12%	120%	The results of these indicators are preliminary and rely on Agro Horizon managers and its partners' records. The final results for these indicators will be identified after the 2 <sup>nd</sup> and final stage of the Year 2 Annual BNF survey in Q2 of Year 3
9	Value of incremental sales (farm level)	10%	87.6%	876%	
10	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	24,960	23,770	95.2% <sup>1</sup>	According to the Year 2 Annual BNF Survey 66.8% of farmers applied new technologies (23,319 farmers). To this number we add 451 organizations including CBOs, ASPs, Coops, and WUA to reach 23,770
12	Number of jobs attributed to implementation	10	33.3	333%	The target was set too low and underestimated the number of jobs that implementing partners would generate. MTS jobs such as tractor and combine drivers comprise 59 percent of the total number of jobs generated. The spraying service in apricot value chain generated 65 new jobs in Batken
14	Value of agricultural and rural loans	\$3,000,000	\$390,167	13%	The target was partly based on proposed payment of interest for 6,000 maize growers who were projected to borrow \$2.8 mln. However, payment of interest was found to be non-compliant with USAID regulations. The balance of \$200,000 was intended for maize beneficiaries. Of the \$390,167, 55% was for two MTS loans, 41% was for loans in the potato value chain, and 5% was for

<sup>1</sup> This number covers all beneficiaries trained during the Year 2 including target value chain farmers and individuals trained under the supporting activities as workshops, conferences, roundtables, and seminars.

					micro loans for seed packages for kitchen gardening.
15	Number of BNFs who used financial services (savings, agricultural credit) promoted by the project in the past 12 months	13,000	2,456	18.9%	The target was partly based on proposed payment of interest for 6,000 maize growers who were projected to borrow \$2.8 mln. However, payment of interest was found to be non-compliant with USAID regulations.
17	Women's dietary diversity: mean number of food groups consumed by women of reproductive age (W-DDS)	5.30	6.64	125.3%	

The overwhelming success of program year two is due in part to modest targets. Widespread training utilizing project-contracted Advisory Service Providers (ASPs) facilitated awareness of improved technologies and skills transfer among farmers. Partial subsidies to inputs and services through micro-grants play a key role in encouraging farmers to apply improved technologies such as improved seeds and use of machinery services.

Towards the second half of program year 2 it became apparent that the improved technologies will result in increased production, raising concerns about markets. This led to Agro Horizon shifting some resources to the marketing side, which led to overwhelming success in attaining international contracts for several agribusinesses amounting to US\$5.4 million and local contracts with a supermarket chain with a value of US\$365,000. The support to marketing also enabled a local cooperative, Aravan Agro Service to sell the early potatoes produced by its members for a profit of 3.5 million Kyrgyz Soms (KGS) compared to a loss of 4.2 million KGS in 2015.

## APPROACH FOR PY3 AND PY4

Based on lessons learned from project year 2, the Agro Horizon Project has refocused its approach consistent with the goal and objectives of the project.

In the next and last two years of the project (FY17 & FY18), Agro Horizon will work to improve the live-stock (meat and dairy), fruits, and vegetable value chains by developing each segment of the value chain as well as its support markets, such as the feed industry in the case of livestock and the fruit nursery business in the case of fruits.

Livestock is a sub-sector involving several value chains: cattle dairy value chain (including fresh milk), meat (cattle, poultry and small ruminants), live animals (cattle and small ruminants) and eggs. All these value chains are impacted by the feed industry. The project will work on the cattle dairy and meat value chains. Feeds has a critical function in developing competitiveness of these value chains. Meanwhile, feed ingredients such as maize, soybeans and fodder determine the competitiveness of feeds to a huge degree. The project will work on these critical components of the livestock market system that are important to the development of the cattle dairy and meat value chains.

In developing supply chains for open sourced products, the project will not focus on specific fruits. It will instead focus on developing logistics facilities for products traded through the same supply chain. For example, fresh apples, peaches, and various other fresh fruits and vegetables go through the same supply chain. However, dried products go through another supply chain. Hence, support to the development of the downstream side of the value chains will not be product specific, but will be based on gaps in the supply chain that when addressed, will boost the market pull for the agricultural products passing through that supply chain.

The project will carry out programming in partnership with private sector players such as SMEs and large companies engage in agribusinesses. Agro Horizon will focus on the following in the last two years of the project:

1. Expand markets for smallholder farmers by attracting investors to establish buyer platforms in the project's zone of influence. These buyer platforms will be in the form of processing, logistics, consolidation and similar facilities. Large buyers of raw materials are concentrated in the north, specifically, Chui Oblast. Agro Horizon will leverage the project fund to generate investment in the south and in Naryn.
2. Increase the productivity and expand the markets of processors and other agribusinesses already existing in the project's zone of influence through equipment, systems and human resource improvement and marketing support, including product development/diversification, packaging and branding.
3. Support productivity improvement at the farm level based on market requirements and ensure appropriate logistics and supply chain are established between farmers and buyers supported under Tasks 1 and 2 such that sustainable and strategic partnerships are promoted.
  - a. Support the establishment and capacity building of service providers that will offer responsive technical services in a business-oriented way.
  - b. Promote advisory/extension service provision that is less dependent on donors; and promote payment based on value-added results.
  - c. Promote embedded financing as a leverage for strategic partnership between farmers and buyer.
4. Work with lead firms that have demonstrated business capability in developing firm-based agricultural value chains that may or may not be within the livestock, fruits and vegetable value chains; the lead firm will provide co-investment in the development of the supply base and the processing or logistics facility, and will take responsibility for the marketing of the product.
5. Reduce barriers to access markets through market regulations and requirement awareness campaigns, product quality and production compliance to standards, and improved access to standards certification.
6. Promote women and youth participation in management of agribusinesses in its priority value chains through preferential support to women-/youth-owned and managed SMEs.
7. Focus on expanding outreach of its nutrition messaging in close collaboration with the SPRING project.

# IMPLEMENTATION- VALUE CHAIN ACTIVITIES

## CROP I: LIVESTOCK

### VALUE CHAIN OBJECTIVES

In Year 2, Agro Horizon aims to work with farmers and pasture management committees (PMCs) to improve their knowledge on pasture management strategies, segregation of herds, and feeding rations in order to increase the quality and production of livestock milk and meat.

### ANNUAL ACCOMPLISHMENTS

- The Agro Horizon team identified the needs of farmers and PMCs in Osh and Naryn oblasts. The results of the study helped to outline Agro Horizon's strategy in the livestock VC in the Years 3 and 4 Work Plan.
- Agro Horizon established partnerships with leading businesses for Years 3 and 4 on winter milk production, establishing a traceable supply of meat for slaughtering, processing and exporting, as well as milk processing and livestock feed production.

**Table 2: Indicator Targets for Livestock (Winter Milk Production) Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comment
Number of Rural Households benefiting directly from USG assistance	102	0	Per instruction of the USAID, the planned activities and targets on winter milk production were not implemented in Year 2. Support to the livestock VC will take place in Years 3 and 4.
Number of Target Value Chain private enterprises assisted	2	0	
Number of Individuals Trained	204	0	
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	180	0	

**Table 3: Indicator Targets for Livestock Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comment
Number of Rural Households benefiting directly from USG assistance	500	0	Per instruction of the USAID, the planned activities and targets on pasture management were not implemented in Year 2. Support
Number of Target Value Chain private enterprises assisted	13	0	

Indicator	Year 2 Target	Year 2 Achieved	Comment
Number of Individuals Trained	1,000	0	to the livestock VC will take place in Years 3 and 4.

## ANNUAL PROGRESS

The Year 2 work plan focused on increasing winter milk production and collaboration with pasture management committees on herds segregation and use of remote pastures. As the initial concept on winter milk production was disapproved by USAID, the implementation of the plan was delayed. Based on the sectoral study with possible intervention areas conducted in Q2, Agro Horizon adopted a new market-driven strategy. For this, Agro Horizon established partnerships with SMEs to relaunch winter milk production based on market-centered, integrated value chain principles to support viable milk processing.

The initial study of PMC's needs recommended significant investments in infrastructure. However, the duplication with other donors' activities and the low impact in relation to the required efforts were reasons that the original approach was modified. Focusing on livestock production alone would not improve the wellbeing of livestock farmers. Therefore, in Q3 Agro Horizon opted for a market-centered approach that focuses on developing the downstream side of the meat value chain instead of increasing production and to establish a traceable supply of meat for processing for export.

### I.1 IDENTIFY PRODUCER GROUPS

In December 2015, STTA Nicolas Wageningen conducted an assessment for the first livestock value chain concept that identified bottlenecks and entry points for interventions in the livestock value chain. A weak veterinary system, the Kyrgyz government's inability to prevent and effectively control animal diseases, non-existent animal identification system, and intense competition in the domestic market makes improving production the most realistic and relevant objective in the livestock value chain.

Availability of balanced feed, especially during wintertime along with proper animal health management systems and adequate keeping conditions are the main factors, which determine productivity of livestock for meat and milk. During the study conducted in Q1, farmers confirmed that imbalanced feed rations as main constraint that limits productivity. Farmers also named improved infrastructure, particularly bad roads to remote pastures, as the main issue that leads to overgrazing on nearby pastures, as is the case for example in Besh Konush pastureland in Kara Suu region.

### I.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS

Under the new livestock value chain approach, in Q4, Agro Horizon hired two separate business development services providers, BT Innovations and Promotank, to assess meat and dairy processors SMEs and identify the most capable and viable companies to collaborate with on the development of the dairy and meat value chains. Agro Horizon's staff met with key private livestock and dairy sector players to verify the business development service providers' approach and to identify the capacities and needs of livestock and dairy SMEs. The work plan for Years 3 and 4 includes targeted assistance to livestock market integrators in order to foster aggregate sales and business relations in the dairy and meat sectors.

### I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

Activities under this section will be carried out in FY17.

## I.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES

Activities under this section will be carried out in FY17.

### CROP 2: POTATO

#### VALUE CHAIN OBJECTIVES

Based on the successful implementation of second reproduction (R2) seed potato pilot demonstration plots in Chong-Alai in Year 1, Agro Horizon expanded the activity to increase the volume of R2 seed potato produced and to promote higher productivity of ware potato producers in Year 2 by 1) including more seed potato multiplication farmers in the original location, and 2) expanding the intervention into new geographic areas. Both activities aim to increase productivity of potato cultivation by increasing the supply and use of high quality R2 seed potatoes and strengthening the cooperation between seed potato producers and ware potato growers.

#### ANNUAL ACCOMPLISHMENTS

- In Chong-Alai (Osh oblast) the number of specially trained seed potato multiplication farmers increased from 11 to 30, and the area on which R2 early variety seed potatoes were produced increased from 5.5 to 15.33 ha.
- The project partner TES Centre, provided project support to 641 early potato growers in Aravan and Kara-Suu rayons.
- Seed potato producers and beneficiary early ware potato farmers in Aravan and Kara-Suu organized themselves into cooperatives.
- The contracted ASPs RAS Naryn, RAS Jalal-Abad, and RAS Batken mobilized ware potato growers in their respective areas and conducted an advisory program consisting of three trainings and five field consultations for 561 ware potato growers, 28 percent of them women. The advisory program included effective and safe use of agrochemicals (AgWASH).
- Partner ASPs conducted 35 field demonstration days (1-2 in each working area) with participation of an additional 2,543 farmers. Add-on AgWASH trainings were included in all field demonstration days.
- Agro Horizon supported the establishment of potato seed funds with the micro-finance institutions (MFIs) Agro Credit Plus in Osh, AKOK Credit in Naryn, and Altyn Oroon in Batken, and with the "Soyuz Konsultantov" in Jalal-Abad. The MFIs and the Soyuz Konsultantov advanced 50 percent of the seed potato costs for the beneficiary farmers (BF) in their respective area.

**Table 4: Indicator Targets for Potato Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of rural households benefiting directly from USG assistance	300	3,416	1,232 primary direct beneficiaries (BNFs) and the remainder secondary direct BNFs, i.e. field day participants
Number of target value chain private enterprises assisted	6	94	TES Centre, RAS Naryn, Jalal-Abad and Batken, Agrokhiymiya, Totuke farm, cooperative Agroservice Aravan, cooperative Sar-Bashy (Chong-Alai), cooperative

Indicator	Year 2 Target	Year 2 Achieved	Comments
			Zoloto Doliny, Soyuz Consultatov, MFIs Agro Credit Plus, AKOK Credit, Altyn Oroon
Number of individuals trained	600	3,516	1,232 primary direct BNFs and the remainder secondary direct BNFs, i.e. field day participants
No of farmers and others who have applied improved technologies or management practices as a result of USG assistance	484	2,587	As per annual beneficiary survey, 70.9% of the BNFs applied improved technologies

## ANNUAL PROGRESS

### 1.1 IDENTIFY PRODUCER GROUPS

In Year 1, Agro Horizon supported the multiplication of second reproduction (R2) of seed potato in Chong Alay rayon to supply ware potato producers in the low-lying areas in Aravan and Kara-Suu rayons with high quality seed potatoes of early varieties. The high elevation of Chong Alay makes it one of a few locations in the country where reproduction can be done without the risk of disease infestation. Because of the positive results of the previous year, the project concluded an agreement with the ASP TES Centre for continuation in Year 2. The number of seed potato producers in Chong Alay increased from 11 in 2015 to 30. The number of early potato growers supported with training activities in Aravan and Kara-Suu increased from 100 in 2015 to 641 new farmers. A total of 270 farmers were supplied with seeds potatoes. Overall, 671 seed and ware potato farmers (in Kara-Suu, Aravan and Chong-Alai) were trained on potato growing technology, flow-chart production of potato, and the advantages of farmer collaboration.

Agro Horizon contracted RASs in Batken, Naryn, and Jalal-Abad as ASPs to support ware potato producers in their respective oblasts. In total, the three RASs mobilized 561 ware potato farmers; 108 in Batken, 324 in Jalal-Abad and 129 in Naryn. In Batken, 48 percent of participants are women, in Jalal-Abad 17 percent and in Naryn 43 percent respectively. The beneficiaries were organized into groups of around 20 farmers.

### 1.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS

The project supported Aravan Agroservis (AAS) cooperative in promotion and marketing by financing the travel of its market specialist to Almaty to meet and conduct negotiations with potential buyers from Kazakhstan. However, at the time of harvest of early potatoes, Kazakhstan imposed a ban on potato imports from Kyrgyzstan to Kazakhstan. Consequently, the cooperative sold their production in cooperative-labeled sacks in Bishkek and in local markets.

They sold 140,000 out of 457,000 tons to Agro Product Asia, a Kyrgyz exporter with a logistics center and storage facilities near Bishkek. The remaining potato production was sold to domestic wholesalers. Nevertheless, the early potato farmers made a good profit as shown below in section 1.3.

### 2.2(A) IDENTIFY REGIONAL AND NATIONAL MARKET OPPORTUNITIES



A variety of research conducted by project staff and hired business development service providers identified regional and national market opportunities for cooperatives and assessed possible opportunities. Major recommendations included the diversification of clients and the establishment of collection and sorting center. Further support to AAS is planned for Year 3.

### I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

The 1,202 ware potato beneficiary farmers attended three trainings and between 5 and 13 group and individual field consultations from the respective ASPs. Farmers learned all aspects of improved potato production practices from selection of varieties and seed quality, over land preparation, planting, soil fertility management, plant protection and safe use of agrochemicals, irrigation, and harvesting.

In Aravan and Kara-Suu, TES Centre established 14 demonstration fields. These served as learning fields on advanced production practices for beneficiary farmer groups and to show to field day participants the advantages of advanced production practices.

The ASPs also conducted 1-2 field days in the course of the season. In total, 15 field days were conducted in Osh oblast, 14 in Jalal-Abad, two in Batken and six in Naryn. An additional 2,543 farmers participated in these to learn about advanced potato production practices. It is expected that a substantial number of additional farmers will adopt advanced practices in their own fields to some extent.

In late May, flooding and hail destroyed 0.76 ha of potato fields of beneficiary farmers in Kadamjay affecting 19 farmers. Between 10 and 90 percent of their potato fields were damaged. The farmers with damaged potato plots had to pay only half of the cost for the seed potatoes.

The early potato farmers in Aravan and Kara-Suu harvested on average 22.3 t per ha, totaling 970 tons of early potato. With a sales price of on average 17 KGS and production costs of slightly above 10 KGS/ha, their gross margin was 7 KGS per kg or 470 USD from their 0.2 ha potato plots. Thanks to higher yields, the profits of the early potato farmers were significantly higher than in 2015 and the farmers were satisfied.

Final yield and profit data for seed and ware potatoes were not yet available at the end of the reporting period as most potatoes are harvested in late September and early October. Final results will be reported in Q1 report of FY17. However, preliminarily yields in Osh are estimated at 28-30 t/ha. In Batken, the yields are slightly lower at 25-27 t/ha; rain, hail and flood damage were factors affecting the yield of part of the farmers. These yields are satisfactory given that the average potato yield in Kyrgyzstan is only 14-16 t/ha. However, excellent farmers in the country achieve yields of 40 t/ha. Osh farmers who already harvested indicate that they have sold their produce at a price of 13-14 KGS/kg. With production costs around 9 KGS/kg, this suggests that farmers have made a reasonable profit of 4 KGS/kg.



*Participants at a potato field day in Naryn.*

### I.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES



Agro Horizon contributed 40 tons of R1 seed potatoes to the seed fund for Chong-Alai seed producers and 59.2 tons of R2 seed potatoes to the seed fund of the ware producer cooperatives in Kara-Suu and Aravan rayons. Around 300 farmers received these seed potatoes with a condition of 50 percent prepayment and the remainder paid after harvest.

Agro Horizon supported the creation of a potato seed fund which purchased 193.2 tons of R2 seed potatoes for BFs in Batken, Jalal-Abad and Naryn oblasts. A total of 561 BFs received 350 kg of seed potatoes for a 0.1 ha plot. They paid 50 percent as prepayment and will pay back to the seed fund the remaining amount after harvest. The seed funds are managed by pre-selected micro finance institutions (MFIs); Agro Credit Plus in Osh, AKOK Credit in Naryn, and Altyn Oroon in Batken. The commercial distributor of agricultural inputs and equipment, “Soyuz Konsultantov” manages the seed fund in Jalal-Abad. Repayment to the seed funds is still on-going. In Naryn, farmers have already paid back 95,000 KGS.

All direct BFs received in-kind grants in the form of fertilizer (30 kg Urea and 20 kg Ammophos), herbicide (0.2 l Zenkor), insecticide (0.2 l Bi-58 New) and a fungicide (0.2 l Ridomil Gold), as well as a knapsack sprayer valued at 41 USD.

Seed potato growers in Chong-Alai received eight consultations and two trainings. In the first training, they learned how to use production flow charts, record expenses and income, and calculate profits. The second training presented the advantages of cooperation and how to organize group purchase of inputs. In early August when their potato fields were in full bloom, the seed potato cooperative arranged a field day to demonstrate improved seed potato production practices and to promote their seed potatoes to potential buyers from low-lying areas. The field day served as a negotiation platform and to establish trust between seed potato farmers and their customers. Customer farmers already placed orders for 165 t of seed potatoes. At the end of the reporting period, harvesting had just started and the yield per ha is 30-35 t. Of the total harvest approx. 50 percent are of a size that can be used and sold as seed potatoes. With an area of 15 ha and assuming an average yield of 32 t, the volume of seed potatoes will be around 225 t, i.e. nearly 75 percent of the harvest already found customers.

## 2.1 INCREASE SME COMPETITIVENESS

The project supported the MFI “AgroCredit Plus” to increase its client base through links with beneficiary farmers. The MFI provided crop loans to BFs in Kara-Suu and Aravan. The credit agency, “Altyn Oroon”, and input supplier, “Soyuz Konsultantov”, provided crop loans and inputs with delayed payment for 432 potato producers of Jalal-Abad and Batken rayons.

## LESSONS LEARNED AND NEXT STEPS

In Naryn, where farmers normally grow potatoes with very little external inputs, the interest in the use of agro-chemicals was significant. In other areas, farmers were satisfied with the high input production strategy promoted by the project and with the resulting potato crops. It remains to be seen how many of them will employ the promoted improved practices also in future.

Market prices for potato in Kyrgyzstan dropped significantly in the past two years, most likely as a result of competition by imports from other countries of the Eurasian Economic Union (namely Belorussia). At one point in 2015, the farm gate price for potatoes in Issyk Kul oblast was below 5 KGS/kg. At such low prices potato is no longer a profitable cash crop for Kyrgyz farmers. However, increased storage capacity could reduce the volume of potatoes in the market just after harvest resulting in more even prices in the winter months. The future development of the potato market in Central Asia and the Eurasian Economic Union is unclear at the moment, but will certainly impact Kyrgyz potato farmers.

## CROP 3: APRICOT

### VALUE CHAIN OBJECTIVES

The main objective of the apricot value chain interventions is to increase the productivity of apricot farms and improve the quality of apricot products in Batken in order to get higher prices. The project estimated that apricot farmers' gross margins would double if good agronomic and processing practices were applied.

In Year 1, the project provided training to 280 farmers in improved agronomic and on-farm drying practices through the ASP Hitech, provided the apricot farmer cooperative "Alysh Dan" with solar dryers, and supported the processing cooperative "Batken Jemishy" with brand development and improved packaging.

In Year 2, project support aimed at increasing the number of apricot farmers reached to an additional 1,250 households with a focus on consistent agronomic practices with the use of fertilizers and chemical plant protection by spraying service providers, established within the framework of the project.

### ANNUAL ACCOMPLISHMENTS

- The project conducted a value chain assessment as a basis for the development of the intervention concept with a focus on improving apricot tree management and free inputs and spraying services to demonstrate the benefits of active orchard management.
- El Pikir, a Bishkek-based non-profit organization, was contracted for the mobilization of farmers and for provision of an extension delivery support. The project hired an STTA from neighboring Sughd oblast of Tajikistan to ensure high technical standards, provide guidance to El Pikir and review all training modules and materials. El Pikir recruited six local agronomists as trainers and arranged TOT for them (one of them dropped out). El Pikir mobilized and trained an additional 24 persons as pruning service providers.
- The Batken company Jash Ka was contracted for the provision of spraying services to farmers. It trained 84 local young men in apricot tree spraying and safe use of pesticides. 65 were hired and provided spraying services to the project BFs.
- 1250 farm households participated in the support program, which consisted of in-kind input grants, free spraying services and extension support from early spring until autumn. An additional 3617 farmers participated in demonstration days.
- The apricot specialist STTA conducted a rapid appraisal of the apricot markets in Batken and the neighboring areas of Tajikistan.
- In the end of September, the project organized a Farmer/Business to Business forum in Batken city to build linkages between potential buyers and the project beneficiary farmers with 120 participants of which over 20 represented buyers of dried apricots (mainly processing companies from Tajikistan).
- As per anecdotal evidence, farmers were very satisfied with the program and there were clear differences between orchards managed with Agro Horizon support and other orchards visible in terms of yield, leaf color and signs of diseases on fruits.
- The BFs got around 2.5 t of dried apricots per ha, which is 25 percent more than the baseline of 2 t/ha.
- A dispute between the project and organic farmers who claimed that the project's spraying program affects the organically managed orchards negatively, resulted in a wave of posts from organic farming stakeholders against the project in the local social media. The conflict was resolved through a range of meetings with organic movement stakeholders and by GIS mapping of the organic orchards in order to establish buffer zones between organic and project-supported orchards.

**Table 5: Indicator Targets for Apricot Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comment
Number of rural households benefiting directly from USG assistance	1,250	4,551	The initial target of 1,500 HH was reduced to 1,250 per USAID instructions. These results are so high because numbers include secondary beneficiaries (those that did not receive in-kind grants and direct technical assistance, but did participate in demo days).
Number of target value chain private enterprises assisted	6	58	Jash Ka, El Pikir, Agronomy Research Centre, processing companies in Tajikistan and Batken
Number of individuals trained	4,250	4,753	4,250 individuals is comprised of 1,250 primary direct BNFs and 3,000 secondary direct BNFs (from demo day). Demo day participants were far more than anticipated.
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	2,400	3,133	The annual BNF survey shows that 64.7% of the apricot BNFs applied something new already.
Number of jobs attributed to implementation	2	10.2	65 young people of Jash Ka worked as pesticide sprayers, 24 pruning specialists provided pruning services for an estimated 1 month each. 5 local trainers provided trainings and consultations during 5 months. Most of these jobs were not anticipated.

## ANNUAL PROGRESS

### 1.1 IDENTIFY PRODUCER GROUPS

Implementing partner, El Pikir, mobilized 1,250 farmers, of which 306 were women and 109 were young people below the age of 30 (14 of them female) for the apricot support program. Farmers were divided into 50 groups of 20-25 persons. The target Aiyi Okrug were Dara, Kara-Bak, Kara-Bulak, Tort Gul, Samarkandek, Ak-Sai and Batken city, all in the main apricot growing areas of Batken rayon. Each farmer committed 0.5 ha to the practices recommended by Agro Horizon totaling 625 ha of apricot orchards with 78,000 trees.

### 1.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS

Most Batken apricot farmers are chronically dissatisfied with the price they get for dried apricots. Agro Horizon's market study shows that over 90 percent of the dried apricots from Batken go into Tajikistan, one way or another but mostly through several intermediaries, onward to the end market in Russia. With the aim of building direct business linkages between project BF's and buyers from Kyrgyzstan and Tajikistan (mainly processing companies), the project arranged a Farmer and Business to Business (F/B2B) forum on dried apricots in September. The forum was attended



*Project beneficiary farmers learn about apricot buyers' requirements at the Farmer/Business to Business Forum in September.*

by 120 persons; 68 beneficiary and other apricot farmers, 17 representatives of foreign buyers (mainly from Tajik processing companies), 10 persons from local processing enterprises, and 25 other participants (local administration, ASPs, associations and media). At the forum, Tajik buyers explained their requirements, group leaders of BF's and other farmers presented their produce (varieties, qualities and available volumes), B2B and F2B talks were held, and Tajik processors, as well as interested farmers, visited Batken processing facilities. The vast majority of the participants found the forum inspiring. Future renting of the processing facility of Mol Tushum in Batken by Tajik buyers seems likely. At least two Tajik companies expressed interest in establishing joint ventures with Kyrgyz busi-

nesses for the processing and marketing of Batken dried apricots. A Korean company appears set to invest in cool storage for dried apricots in cooperation with the local cooperative Mol Tushum. The Tajik buyers received a list with contact information of all project BF group leaders. It remains to be seen whether their local agents will actually approach the BF groups or continue to buy what they need in the bazaar.

## 2.2(A) IDENTIFY REGIONAL AND NATIONAL MARKET OPPORTUNITIES

Local partner, Agro Lead, conducted an in-depth study of domestic market opportunities for Kyrgyz food processors with a focus on potential import substitution opportunities. The study identified market players (supermarkets and other retailers, hotels, and other institutional buyers) looking to expand their businesses that will lead to an increase in sourcing of raw materials or processed products, including Batken where apricots are grown.

A second local partner, M-Vector, conducted a two-month in-depth study of export market opportunities for Kyrgyz food processors including key market players outside of Kyrgyzstan and related market regulations. The activity focused on target value chains of livestock (meat and dairy), fruit and berries, and vegetables, including apricots grown in Batken.

These reports identified potential partner companies that can work with the project on improvements such as sorting and packaging to expand opportunities for themselves, which will lead to wider market opportunities for small holder farmers producing apricot. Recommendations from the reports were taken into consideration for the Years 3 and 4 strategy.

## 1.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

El Pikir developed two training modules for farmers; one on pruning, fertilization and plant protection, and the other on the specifics of apricot cultivation. It recruited six local agronomists as trainers and extension agents and arranged TOTs for them over 17 training days. While one trainer dropped out, the remaining ones have good potential to continue to function as village advisors. El Pikir also selected and trained 24 pruning specialists as service providers.

The extension program started with demonstration days in three Aiyl Okrug for a wider audience of 911 participants on pruning, where farmers learned how to correctly prune apricot trees.



*Field day on improved apricot orchard management in Batken.*

Throughout the season, each BF group participated in two training events (on each of the above-mentioned modules) and received four field consultations on pruning, fertilization, plant protection, harvesting and on-farm drying.

In July, El Pikir organized a demonstration day in each of the six target Aiyl Okrug on good practices of harvesting and drying of apricots. Four learning stations were established; proper harvesting, agro-sanitation measures, drying and storage.

In total, 15 demonstration days were conducted in the course of the agricultural season in the six target Aiyl Aimaks, three each on (1) pruning, (2) fertilization, irrigation, saplings, (3) plant protection, and six on harvesting and drying. AgWASH sessions were included in all of them. In total, 4,861 additional farmers and other people participated in the demo days.

After the apricot harvest, El Pikir conducted a survey among all beneficiary farmers to determine the actual yield and quality of apricot. The yield results, when compared to 2014 and 2015, are 3-4 times higher; however, these results are not meaningful since yield in the previous two years were uncharacteristically low. An inquiry among the 50 group leaders and 70 other farmers showed that the BFs got on average about 2.5 t of dried apricots from one ha. This is 25 percent above the baseline estimate of 2 t/ha and certainly a good result. On the other hand, the BFs rated the quality of apricots this year at a four on a scale of five, compared to 2.4 and 2.1 in the previous two years. In general, this year, apricots grown without Agro Horizon interventions were of low quality due to fungal diseases from high levels of spring and early summer rain. Therefore, it can be assumed that plant protection measures supported by Agro Horizon indeed had a significant effect on quality.

Another result of the intervention are the links established between the farmers on the one hand and the service providers for pruning and spraying, and the trainers, who can function as village advisers in future, on the other hand.

#### **I.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES**

Support to apricot farmers included the provision of free fertilizers, pesticides and spraying services. Local company Jash Ka LLC was competitively selected as a spraying service provider. They recruited over 80 young people as spraying operators. Agro Horizon provided three days of training to all 86 Jash Ka personnel on safe use of pesticides, basics about insecticides, herbicides and fungicides, and practical training on using spraying equipment, its matching and calibration, and wearing special protection clothing to ensure effectiveness and safety. In two of the training days, 50 leaders of the BF group also participated because they were tasked with leading and supervising the spraying service providers. 65 of the trained young men provided spraying service to apricot BFs.



Every farmer received an in-kind grant of 4 kg of copper sulphate and 4 kg of lime for Bordeaux mixture, 0.4 liter of the insecticide Bi-58 New and 0.1 liter of the fungicide Score and 150 kg of Ammophos fertilizer. The fertilizer was handed over directly to the farmers, while Jash Ka applied the pesticides to all 625 ha of orchards three times, first with Bordeaux mixture, then with the insecticide and finally with the fungicide.

## 2.1 INCREASE SME COMPETITIVENESS

To enhance the technical capacity of Jash Ka, the company received an in-kind grant for 50 percent of the costs of 35 motorized sprayers.

The project is trying to identify business partners dealing with dried apricots in Batken to market dried apricots from Batken; however, so far no such partner has been found. We will continue to try to find promising business partners for dried apricots.

## LESSONS LEARNED AND NEXT STEPS

As per anecdotal evidence, farmers were very satisfied with the program. Clear differences in terms of yield, leaf color (as a result of fertilizer application), and signs of diseases on fruits were visible between project-supported orchards and non-project orchards. An inquiry among the 50 group leaders and another 70 individual BFs, showed that BFs got 2.5 t of dried apricots per ha – 25 percent higher than the baseline estimate of 2 t/ha and at the aimed for level as per intervention concept. Yields will be compared in a quantitative manner as the majority of BFs did not measure the yields of the project-treated and non-treated orchard plots separately. As explained above, it can be safely assumed that the program had significant effects on fruit quality as suggested by the El Pikir survey and anecdotal evidence.

Clear effects of the improved practices on yields can only be expected when farmers apply these on a regular basis. The project will therefore follow up on a number of BFs who continue to use improved practices to assess their yields in comparison with those of farmers using traditional practices in the coming two years.

BFs and other farmers asked if the project will continue to provide orchard management support. They were informed that they are expected to continue the improved practices through their own means. It remains to be seen how many of them will do this and make use of the apricot management services, which the project will develop in Years 3 and 4. An important aspect in this is access to the right pesticides. Agro Horizon will have to motivate local suppliers to stock Bi-58 New and Score. Also the establishment and capacity building of more apricot service providers, which Agro Horizon plans for the coming year, is expected to facilitate adoption of improved orchard management practices by more farmers.

There are indications that other farmers are adopting improved practices. Jash Ka provided fee-based services to over 100 additional farmers, Mol Tushum reported an increase in demand for pesticides and fertilizers. A local businessman purchased professional spraying machines to use for fee-based spraying. Further, in several cases, spraying equipment that was provided earlier by other projects and was stored for several years, was repaired and used widely, because of growing demand for spraying services from non-beneficiary farmers.

In the reporting year, the focus of activities was on production practices and only demonstration days were addressing harvesting and on-farm drying. In the coming two years, Agro Horizon will place increased emphasis on post-harvest, in particular better drying practices.

The F/B2B forum was the first initiative of Agro Horizon to address marketing of dried apricots. Stakeholders and the project's STTA voiced various recommendations on how to systematically improve access of Batken dried apricots to more profitable markets, e.g. creation of a consolidation center or the establishment of a specialized wholesale market very close to the border. In years 3 and 4, the project will search for business partners to realize promising initiatives for improving marketing of Batken dried apricots.

Bishkek-based El Pikir, the implementing service provider, had little experience in the agricultural sector. The project assumed that El Pikir would be able to manage the apricot program more effectively than the local Batken service providers, who after nearly 20 years of involvement in donor-funded activities still are very weak in management and the related paper work. In hindsight, communication with El Pikir proved to be difficult with things happening in Batken and the El Pikir management being in Bishkek. It might have been better to spend all the capacity building and coaching energy into a local extension service provider, which would have strengthened local capacity in Batken.

## **CROP 4: ONION**

### **VALUE CHAIN OBJECTIVES**

Given the considerable demand for onion on domestic and export markets year round, onion production presents good profit-earning opportunities for farmers in southern Kyrgyzstan. Though profitable, onion production is labor-intensive. A study of onion production practices by an international STTA indicated that an increase in efficiency and yield from 40 tons to 50-60 tons per ha of onion production is possible with quality seeds, sufficient fertilizer application, adequate plant protection, and appropriate machinery services.

Agro Horizon intends to assist onion growers in the adoption of improved practices to increase productivity and profits by establishing 20 demonstration plots to showcase improved onion growing practices. Agro Horizon provided quality seeds and other inputs to demo plot owners, and on a leveraging principle, demo farmers received seeders and sprayers. An ASP hired by Agro Horizon selected 20 farmers for demonstration plots, provided technical assistance and mobilized additional 1,000 farmers belonging to 500 households who participated in demonstrations on these demo plots.

### **ANNUAL ACCOMPLISHMENTS**

- The project established 20 demo plots, 0.3 hectares each, in all three southern oblasts to increase awareness and education about improved production practices and the advantages of using machinery for seeding onion instead of manual work. Three field demonstration days with participation of at least 50 farmers, were conducted on each demo plot.
- On each demonstration plot, nine field consultations were provided to farmers neighboring each demo plot
- In total, 1,200 farmers were participating in the field demonstration days and the field consultations, through which they learnt about advanced onion cultivation practices. According to the annual beneficiary survey, 70 percent of them already applied improved practices on their own farm.
- The project supported the demonstration farmers with manual seeders and motorized sprayers whereby farmers paid 30 percent of the costs.

- The local STTA on onion conducted 3 TOTs for TAIC's agronomists on the topics of seeding technology, pest management and spraying of chemicals, harvesting and preparation of technological card. The local STTA also conducted sessions on best onion growing practices during Agro Expo with the participation of 65 farmers.

**Table 6: Indicator Targets for Onion Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of Rural Households benefiting directly from USG assistance	500	757	The target was based on the assumption that two individuals would be trained from each household; however, its clear that participants came from more than households. There were 20 primary BNFs and 1,000 secondary BNFs reached through field days.
Number of Target Value Chain private enterprises assisted	3	4	TAIC, Agrokhiymiya, PE Yusupov Abaibek, PE Pyak Ludmila
Number of Individuals Trained	>1,000	792	In total, approximately 1,000 individuals were trained or will attend the last field days of the season in October; accordingly, the remaining forms will be collected and the data entered in Q1 of Year-3
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	800	554	The annual BNF survey found that 69.4% of the interviewed onion BNFs applied new practices. With 792 individuals trained, this means 554 adopters by the end of the agricultural season
Number of jobs attributed to implementation	2	0	

## ANNUAL PROGRESS

### 1.1 IDENTIFY PRODUCER GROUPS

Through a tender the Training Advisory and Innovation Centre (TAIC) was identified as the ASP for onion activities. All onion interventions were prepared and accompanied by the local vegetable expert, STTA Baatyrbek Tajamatov.

Together with the Agro Horizon team, TAIC identified and contracted 20 farmers (one woman) to host demonstration plots. The farmers agreed to follow the recommended practices accurately and contribute roughly US\$ 2,285 as their own leveraging contribution towards machinery costs. Three demo plots were located in Kadamjay (Batken), eight in Kara-Suu rayon (Osh), and nine in Suzak, Nookan and Ala-Buka rayons (Jalal-Abad).

Identifying demonstration farmers was difficult because of the considerable financial requirement. To address this challenge, the project facilitated linkages with First Micro Credit Company, for farmers to take loans to cover their share in the machinery costs. Nevertheless, of the twenty initially selected demonstration farmers, 15 withdrew when the level of the farmers' contribution in the machinery cost became known, and consequently, another 15 farmers had to be found. It took a long time and a lot of efforts to find these farmers, which delayed planting of onions.



Nearby each demonstration farm, TAIC mobilized at least 50 additional farmers to take part in field consultations and demonstration days, extending the reach of improved onion growing practices.

## **I.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS AND I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS**

TAIC field advisors provided regular coaching to the 20 demonstration farmers to ensure compliance with the recommended practices. Each of the demo farmers planted a demonstration plot of 0.3 ha. Overall six ha of onions were planted in Batken, Jalal-Abad and Osh oblast.

On each demonstration field, three demonstration days for a wider audience were held throughout the season, totaling 60 demo days with the participation of at least 50 farmers each. Further, nine field consultations for at least 20 farmers from the neighborhood were held on each demonstration field. In total, 1,200 farmers learned about improved onion production practices through demo days.

According to the annual beneficiary survey, 46 percent of the demonstration day and field consultation participants applied improved practices on their own farm successfully, another 24 percent applied new practices, but without positive results yet.

In mid-August demo farmers began harvesting their onion fields and by the end of the reporting period most farmers harvested their onions. Demonstration field yields remained below the expected 60 t/ha, because of the 20 demonstration farmer originally identified, 15 withdrew from the program and new ones had to be identified (see section 1.1 for the reason) resulting in late planting. Also the new farmers selected, were motivated basically by the wish to get subsidized machinery and inputs, and were not necessarily suitable demonstration farmers. Further, because of delays of the provision of seeders (as a result of VAT and tax issues due to the cancellation of the bilateral US-KR agreement) and the cancellation of the acquisition of two-wheel tractors, the demo farmers had to rent large tractors and could not prepare their plots as per recommendations of the STTA. Seeding was done with local manual seeders, which did not work well. Another problem was the high level of rainfall and unstable weather during the production season, which affected the effectiveness of the provided pesticides and especially herbicides.

Four of the demo farmers got a reasonably good yield of 40 t/ha and more, while the average yield of all demo farmers was around 28 t/ha. The farmers mainly sell to wholesalers at a price of 10-12 soms per kg. The four farmers with high yield earned between 2,870 and 1,530 USD per ha, which is a good result given the many problems encountered.

Originally field days to demonstrate mechanized harvesting of onions were planned but the project was not able to purchase onion harvesters (see section 1.4 for the reason). Field days were modified to include a review of the results and economic analysis of improved onion practices in comparison with traditional ones.

### **2.2(A) IDENTIFY REGIONAL AND NATIONAL MARKET OPPORTUNITIES**

The onion VC study conducted in Q1 explored potential markets for dried onions and found that while there is some demand in Russia, there are no domestic drying facilities. The high cost of drying (energy costs) and low returns were cited as reasons for not investing in dried onion production.

The Agro Horizon team met with onion wholesale traders from Istaravshan in Tajikistan that export early and regular-season onions to Russia. The traders expressed interest in buying good quality onions from Kyrgyz farmers. At the end of the reporting period, it was not yet known whether a business deal with them would be concluded.

## **I.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES**

Each demonstration farmer received a 100 percent in-kind grant for production inputs including seeds of hybrid variety Manas F1, 65 kg of urea mineral fertilizer, 50 kg of potassium chloride and 100 kg of ammonium phosphate, and 0.225 liter of the herbicide Goal, 1.125 kg of the fungicide Ridomil Gold, 0.03 kg of the insecticide Karate Zeon, 0.5 liter of the insecticide BI-58, 1.8 kg of the fungicide Kurzat, and 0.675 liter of the herbicide Fusillade Forte.

The project first delayed and ultimately cancelled the planned acquisition of two wheel tractors and onion harvesters. The project could not procure these because with VAT and customs duty (due to the cancelled bilateral KR-US government agreement), they were too expensive for the farmers and the project.

The absence of the Bilateral Agreement impacted the timely procurement of the imported seeders. Finally, the seeders were distributed to the 20 demo farmers who paid 30 percent of the cost. Further, motorized sprayers were purchased and distributed to 20 demo farmers with a 30 percent contribution from the farmers.

## 2.1 INCREASE SME COMPETITIVENESS

The goal of Year 2 was to increase productivity of farms. SME competitiveness was planned for Years 3 and 4.

## LESSONS LEARNED AND NEXT STEPS

By end of reporting period almost all demonstration plots were harvested. The majority of the demo farmers had yields far below expectations. On average, farmers harvested 27t/ha instead of the planned 60t/ha. The reasons for this are explained above. It may be better to cancel an intervention instead of planting a crop so late and without the complete package of improved practices. As several demonstration farmers noted, they were dissatisfied that the project did not deliver on the verbally agreed machinery. Explanatory visits by the DCOP were time consuming yet necessary to solve the problem. In future, the project will inform farmers early on if similar issues arise.

## CROP 5: MAIZE

### VALUE CHAIN OBJECTIVES

Livestock farming is a significant economic activity in Kyrgyzstan. Maize is a main forage crop, primarily used for livestock feed. Maize production has steadily increased over the last decade as livestock numbers rise. Exports to neighboring Tajikistan also contribute to the increase in maize production. The project aims to increase saleable yield of maize producers by introducing hybrid maize production techniques with a specific focus on linking producers to quality seed input suppliers and providing technical assistance.

The maize value chain concept focuses on increasing maize yields through extension services to increase knowledge of production practices and new technologies, machinery services, and packages of agricultural inputs to the farmers. The maize value chain activity covered 2,200 farmers with plots of 0.5 hectare (1,100 hectares) in two southern regions, Jalal-Abad with 1,200 farmers and Osh with 1,000 farmers. Initially, 6,000 maize beneficiary farmers were planned, but on request by USAID, the number was reduced to 2,200.

Karasuu, Aravan, Nookat and Uzgen rayons in Osh oblast and Suzak, Bazarkorgon and Nookan in Jalalabad oblast are the main maize growing areas in the ZOI and were therefore selected for the maize intervention. As per Agro Horizon baseline survey, the average maize yield in the ZOI is 4.8 t per hectare, while according to government statistics, in the southern oblast it is 5.9 t per hectare on average. The intervention aimed at enabling farmers to harvest around 10 t per hectare.

## ANNUAL ACCOMPLISHMENTS

- The project conducted a value chain survey with 663 farmers in maize-growing areas of the southern three oblasts to determine interest in advanced maize growing and willingness to take interest-free loans to finance the required modern inputs.
- For mobilization of beneficiary farmers and the provision of extension services (trainings, field consultations, field days) throughout the growing season, two service providers were contracted; RAS Jalal-Abad for Jalal-Abad oblast and TES Centre for Osh oblast.
- The project provided subsidized inputs (hybrid seeds, fertilizer, an herbicide, a fungicide and an insecticide) and machinery services (land preparation, sowing, application of fertilizers and agro-chemicals, inter-row cultivation and harvesting) to beneficiary farmers. The farmers share in seed and input costs was 50 percent for male household heads and 25 percent for female household heads. Machinery services were fully financed by Agro Horizon in order to ensure complete agro machinery service was provided. The idea was to demonstrate the benefits of these improved technologies.
- 1,000 farmers in Osh and 1,200 in Jalal-Abad participated in the project. They harvested on average around 10 tons of maize per hectare, which is double the average yield with common farmers' practices. Farmers either use maize for their own livestock or sell it at a price of 10-11 KGS/kg. With production costs of 7 KGS/kg, this results in a profit per ha of around 35,000 KGS. Conventional maize gives a profit per ha of approximately 14,000 KGS.
- Eight machinery service businesses were engaged in the project. The project supported them with 30% contributions to purchase of diverse array of machinery (see table below). In turn, MTSs provided machinery services to beneficiary farmers as well as other farmers.

**Table 7: Indicator Targets for Maize Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of rural households benefiting directly from USG assistance	2,200	2,907	2,200 primary direct BNFs, the remainder were secondary direct BNFs or field day participants
Number of target value chain private enterprises assisted	12	121	2 ASP, 3 MTS/warehouses, 5 MTS, 6 warehouses, 2 input suppliers
Number of individuals trained	3,100	2,826	2,200 primary direct BNFs, the remainder are secondary direct BNFs or field day participants In fact, over 3,000 individuals were trained in the reporting period, but not all BNF forms have yet been submitted by the partners
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	2,600	2,321	2,200 primary direct BNFs +121 organizations including 8 MTS, warehouse, CBO etc.
Number of jobs attributed to implementation	2	28.5	In MTS 57 seasonal jobs were created (for 6 months on average). The achieved number is so high because the

Indicator	Year 2 Target	Year 2 Achieved	Comments
			project did not anticipate that support to MTSs will result in more jobs such as tractor drivers.

## ANNUAL PROGRESS

### I.1 IDENTIFY PRODUCER GROUPS

A value chain survey in Q1 showed the following: many farmers were highly interested in learning how to grow maize with hybrid seed and modern inputs and wanted to participate in the project; in Osh and Jalal-Abad the majority agreed with the terms of an interest-free loan, while in Batken farmers did not want to take loans from banks for religious reasons; around 75 percent of the farmers grow local or unknown maize varieties and only 25 percent grow hybrid varieties of various origin; average maize yields are around 5 t/ha.

The project defined the following selection criteria for beneficiary farmers: commitment to plant hybrid maize on 0.5 ha of suitable land and apply all recommended practices, willingness to pay the defined share in the input costs (50 percent for male household heads and 25 percent for female household heads).

The contracted partner extension organizations mobilized and concluded cooperation agreements with 1,200 farmers in Jalal-Abad oblast (460 in Suzak, 340 in Bazarkorgon, and 400 in Nookan rayon) and 1,000 in Osh oblast (620 in Kara-Suu, 100 in Aravan, 80 in Uzgen, and 200 in Nookat rayons) for participation in the project. 548 of them were women and 294 of them young people below 30 years of age (60 of them female). The partner organizations organized farmers into groups of on average 20 persons based on territorial proximity.

### I.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS AND I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

The project surveyed potential maize buyers regarding quantities, qualities, terms of payment and average prices paid. Interviewees included poultry and livestock feed producers, large poultry and livestock farms and some maize traders. The information was compiled and distributed to maize BF's.

The contracted maize specialist STTA, together with the seed supplier, the extension service providers, and the project team, elaborated an information sheet (two A4 pages) for the farmers highlighting the advantages of hybrid maize, a technological card with type, quantity and costs of recommended inputs and cropping practices with their costs, the conditions of cooperation between farmers and the project and contact data of a range of potential maize buyers (poultry and livestock feed producers and livestock farms). The information sheet was given to all beneficiary farmers at the time of input distribution.

The contracted ASPs provided extension support to beneficiary farmers throughout the growing season. Farmers participated in three training sessions with theory and practice sessions and in seven on-farm field consultations. Topics covered included every step of maize cropping practices from selection of seed and land, soil management, plant protection, safe use of agro-chemicals, irrigation, harvesting, and storage. On average over 85 percent of the targeted beneficiary farmers participated in the extension events, demonstrating the high level of interest and satisfaction with the quality.

The ASPs organized six field demonstration days; three in Osh (Kara-Suu, Uzgen and Aravan rayons) and three in Jalal-Abad (in all three rayons with BF's). These demo days were conducted towards the end of the maize season to

demonstrate the specifics of hybrid maize cultivation. In some cases, the efficiency of harvesting with a combine was demonstrated. Cost comparisons of manual versus combine harvesting were calculated to show that combine harvesting is cheaper and saves farmers' time. 991 additional farmers participated in the various demonstration days, during which short Agro-WASH sessions were held focusing on safe handling and use of agro-chemicals.

At the end of the reporting period, harvesting of beneficiary farmers' fields was on-going. Yields averaging around 10-11 t/ha were reported with some farmers harvesting 12-13 t and a few farmers only 8-9 t. The final results regarding yield, sales and profits will be provided in the Q1 report of Year 3. The preliminary yield data show that the promoted practices result in a doubling of yields.

## 2.2(A) IDENTIFY REGIONAL AND NATIONAL MARKET OPPORTUNITIES

### 1.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES

Originally, the project planned to facilitate access to interest-free loans from banks to purchase inputs for beneficiary farmers, and to pay the interest with project resources. However, this approach was rejected by USAID and therefore, the approach was changed to the provision of subsidies for inputs and machinery services.

The project provided the 2,200 beneficiary farmers with two packages of subsidized inputs. The first package was provided to farmers in March and contained 10 kg of the hybrid maize variety PL 71, 100 kg of Ammophos fertilizer and 2.25 l of the herbicide Pendimetalin. The second package was distributed the end of April and contained 200 kg of urea fertilizer, 1.5 kg of leaf feeding fertilizer Nutrivant Grain Plus, and 0.5 l of the herbicide Rimsulfuron. Local authorities participated in the input distribution events and mass media covered them widely. 181 female-headed beneficiary households (8 percent of all beneficiary farmers received the inputs with a 75 percent subsidy of costs, while the other beneficiary farmers paid 50 percent of the costs themselves.

The BF's were very impressed by the use of mechanization, in particular combine harvesters. The combines reduced harvesting times from 10 days to 2 hours, freeing up household labor to do other things, and manual harvesting labor cost 15,000 soms compared to 10,000 for combine services, saving each farmer 5,000 soms. Moreover, manual harvesting results in 30 percent loss of yield compared to 1 percent loss with combine harvesting.



*Fertilizer application and interrow cultivation by an MTS in Jalalabad.*

The project selected and contracted eight machinery technical services (MTSs) (four in Osh and four in Jalal-Abad), which provided plowing, harrowing, sowing, fertilizer and pesticide application, inter-row cultivation and harvesting services to farmers. The MTSs and the farmers negotiated schedules for services and were supervising machinery service provision in their fields. The ASPs together with the project team continuously monitored the schedule and quality of the machinery operations. MTS services were provided free of cost to the farmers to enable them to experience the benefits of using quality machinery services and compare them with their common mainly manual labor practices, and in this way encourage them to use machinery services also in future.



The eight partner MTSs were supported in the acquisition of additional agricultural machinery and implements as per their needs. The following table shows the MTS, the purchased machinery, the costs and the grant share of the project.

**Table 8: MTS Machinery Grants**

Name and location of MTS	Machinery purchased	Total costs (USD)	Share of Agro Horizon (USD)
Abdikerim Agronom (Nooken)	Combine harvester Claas Dominator 130	106,000	32,185
	Maize cutting machine		
	Tractor Claas ARION 430	30,000	8,907
		62,300	18,452
Maryam LLC (Jalal-Abad city)	Combine harvester 4YZB-8 (Sin Xiang Institute of Mechanics) – two units	178,000	54,000
	Interrow cultivators KRN 4.2 – three units		
		15,000	4,512
Kench cooperative (Nooken)	Combine harvester 4YZB-8	90,000	27,000
PE Moydinov Hashimjan (Suzak)	Combine harvester 4YZB-8	90,000	27,000
Ziabidin Ata (Uzgen)	Interrow cultivator	4,960	1,490
Kok-Jar (Nookat)	Sprayer	1,675	500
Marko (Aravan)	Sprayer	1,500	480
Abiyir LLC (Kara-Suu)	Interrow cultivator	4,900	1,472
	Sprayer	1,600	480
	Tractor	19,800	5,950

## 2.1 INCREASE SME COMPETITIVENESS

The above described support to MTSs improves not only access to machinery services to farmers, but strengthens also the MTSs' business operations.

## LESSONS LEARNED AND NEXT STEPS

The results of the maize value chain activities proved that the assumption underlying the project's concept for maize that advanced maize production practices with hybrid seeds, adequate use of inputs and use of machinery instead of manual work results in a doubling of yields. It requires significant investments from the farmers, as production costs are 40 percent higher than with conventional practices, but in the end, the farmers have 2.5 times higher profits per ha. This profit level is particularly remarkable in the current year: maize prices are relatively low, because with sufficient rains the volumes of fodder available in the market is good. With a higher maize price, the profits with advanced maize production practices would be even higher.

The project increased the volume of maize production without identifying downstream market opportunities. This led to the unintended consequence of burdening farmers to actively search for buyers since they can no longer sell

high quantities from their farm gates. The project provided farmers with contact information of buyers of large quantities of maize, but that was not a sufficient linkage to potential markets. Recognizing this as a lesson learned, the project approach moving forward is market-driven, private sector led, and promotes inclusive value chain development

## CROP 6: NURSERY, APPLE, APRICOT, PLUM, CHERRY, PEACH

### VALUE CHAIN OBJECTIVES

Agro Horizon is building on Year 1 nursery value chain activities and scaling up efforts to strengthen fruit nursery production as an essential part of fruit value chains. A main objective of the nursery intervention is the production of certified seedlings. This process will take up to two years and requires establishing mother gardens. During Year 2 the project plans to build the foundation for certification of seedlings, thus paving the way to sustainable nursery businesses in the ZOI, exports of certified seedlings, and eventually increase in fruit farmers' incomes. This intervention plans to reach 460 farmers in Year 2 through demonstrations and training programs.

### ANNUAL ACCOMPLISHMENTS

- Agro Horizon supported two additional nursery cooperatives, TOP Agro with members in Aravan, Kara-Suu and Osh city, and Kench in Nookat rayon of Jalal-Abad oblast, in addition to Arpasai Bereke Bagi, which was formed and supported by the project in Year 1.
- A regional nursery specialist STTA from Tajikistan provided ToT on key nursery know-how for ASP trainers and leader members of TOP Agro cooperative.
- Field day demonstrations of intensive gardening reached 176 new farmers interested in seedlings produced by partner nurseries
- The contracted ASPs conducted a series of technical trainings with members of cooperatives in Kadamjay and Nookan. An STTA provided training support to TOP Agro on seedling growing technology, plant protection, soil fertility, and economic analysis to increase farmers' technical knowledge and skills.

**Table 9: Indicator Targets for Nursery Value Chain**

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of rural households benefiting directly from USG assistance	360	265	The original target was reduced to 360 by USAID with the aim of focusing more on quality. Of this number 160 are primary direct BNF nursery farmers. Some field day participants are not yet included in the M&E database and remaining field days will be conducted in the project year – 3.
Number of target value chain private enterprises assisted	1	5	3 nursery cooperatives, TES Centre, RAS-Jalal-Abad. The initial work plan identified only one cooperative; however, it was determined that the approach should be multiplied to extend the reach.

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of individuals trained	600	279	The original target of 1,000 was reduced to 600 by USAID with the aim of focusing more on quality. Some field day participants are not yet included in the M&E database and the remaining field days will be conducted in the PY-3.
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	600	203	The planned import of rootstocks and budwood was postponed to spring 2017 because after conducting a tender it turned out that part of the desired varieties with the selected supplier in the Netherlands cannot be exported from there. The improved technology was supposed to be the improved variety from the imported woodstock. The Annual BNF survey results identified 70.8% of this VC beneficiaries and organization applied; i.e. 198 farmers plus 5 organizations
Number of jobs attributed to implementation	1	0	

## ANNUAL PROGRESS

### I.1 IDENTIFY PRODUCER GROUPS

The nursery cooperative Arpasay Bereke Bagy was established with Agro Horizon support in 2015. The project continued to support this cooperative in Year 2 with extension support by TES Centre.

Two new nursery cooperative partners were identified. Top Agro in Osh and Kench in Jalal-Abad both agreed to expand membership and increase production. RAS Jalal-Abad provided extension support to Kench and the Agro Horizon project team supported TOP Agro directly. A nursery expert from Tajikistan, Yuraboi Yangibaev, supported the nursery cooperatives and the service providers.

In total the project supported 160 nursery farmers directly, of which 24 are women.

Of the total 265 farm households reached through direct cooperation and field days, in 71 cases a woman was the BF and 49 were young people below 30.

### I.2 FACILITATE MARKET LINKAGES FOR PRODUCER GROUPS AND I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

In February 2016, Arpasay Bereke Bagy and TOP Agro nursery cooperatives participated in the annual agricultural exhibition in Osh where they sold nearly 5,000 seedlings with a value of 5,000 USD.

Cooperative Arpasai Bereke Bagy participated in the Apple Festivals in Nookat and Kadamjai rayons, promoting their saplings and distributing catalogues of saplings and business cards to cooperative members and other potential customer farmers.

Arpasai Bereke Bagy members sold in late winter/early spring 2016 137,700 certified saplings of apple, apricots, pear, cherry and plum at prices that were 20-25 percent higher than normal sapling prices.



The sales season of fruit saplings produced in the course of 2016 will take place in February and March 2017; therefore, at this point in time no economic results for Kench and TOP Agro can be provided.

## **1.4 INCREASE PRODUCER GROUPS' ACCESS TO INPUTS AND SERVICES**

The project arranged four trainings for nursery farmers of the three partner cooperatives. The topics included varieties and agro-technology of multiplication of dwarf and semi-dwarf fruit trees, grafting and budding, soil fertility management in nurseries, plant protection (types of pests and diseases, prevention and control measures, safe use of agro-chemicals), economic analysis of different ways of fruit sapling production.

The STTA, together with the seed inspection and the agricultural department of Kadamjay rayon, worked with Arpasai Bereke Bagy in the identification and approbation of good local varieties of fruit trees for future use as grafting material on imported rootstocks. As a result, the cooperative got approbation of five varieties – one peach, two apricot and two apple varieties, allowing them to sell these saplings varieties as certified.

The ASPs organized two field days for 197 additional interested farmers where participants learned about pruning, grafting, plant protection, compost making and training of young trees. ASPs plan to organize two additional field days on certification and multiplication of saplings in next quarter (Q1 of FY17).

## **2.1 INCREASE SME COMPETITIVENESS**

RAS Jalal-Abad provided training on cooperative management and strategic planning for the cooperative, Kench. Members of the cooperative planned cooperative activities and learned about agriculture-specific taxation and accounting regulations.

TOP Agro cooperative intends to purchase refrigeration equipment and label printer co-financing of 50 percent of the cost. At the end of the reporting period the procurement process was underway.

The planned import of rootstocks and budwood was postponed to spring 2017 because after conducting a tender it turned out that part of the desired varieties with the selected supplier in the Netherlands cannot be exported from there.

During the course of the year, the project changed its co-financing requirements for imported rootstocks and budwood. Initially, the cooperatives were expected to cover only VAT and customs duty, however, the project required 50 percent leverage contribution. The farmers of Apasai Bereke Bagy and Kench cooperatives expressed unwillingness to contribute funds to the cost of the purchase of these planting materials. They expected to receive free planting materials.

## **2.2(A) IDENTIFY REGIONAL AND NATIONAL MARKET OPPORTUNITIES**

### **LESSONS LEARNED AND OPTIONS FOR MOVING FORWARD**

After the project changed the co-financing requirements during the course of the project from around 15 percent (VAT and customs duty) to 50 percent, two of the cooperative rejected the purchase of rootstock and budwood for mother gardens and rootstock multiplication. The project had already invested significant amounts of capacity building efforts in these cooperatives. As there are very few organized nursery farmers, finding alternative partner nurseries will be not easy. If the project wants to complete the planned nursery interventions, it must find alternative nursery partners (individuals or organized ones) or re-negotiate co-financing conditions with the current partner cooperatives. Setting expectations of beneficiary contributions through leveraging is an important part of creating a sustainable approach; however, when the terms are changed during implementation, the negative consequences are detrimental. The leveraging structure must be finalized prior to mobilizing beneficiaries.

# IMPLEMENTATION- SUPPORTING ACTIVITIES

Supporting activities are those that are not embedded within the specific value chains above.

## TASK I: PRODUCTIVITY

### TASK OBJECTIVES

Agro Horizon productivity activities focus on two interrelated activities—enhancing economic success of smallholder farmers in target value chains and developing a pluralistic advisory services market to improve sustainability of benefits beyond the life of project.

### ANNUAL ACCOMPLISHMENTS

- In October 2015, the Union of Water Users Association (WUA) trained 2,558 of its members on efficient use of water to enhance water and crop productivity.
- The following productivity-related grants and sub-contracts started in Year 1 concluded during the reporting period: strawberry in Jalal-Abad, first year seed potato multiplication in Chong-Alai, berries, vegetables and apricots for processing and fresh market in Osh and Batken, organic raspberries in Jalal-Abad, first year of apricot improvement in Batken, first year of nursery improvement in Kadamjay, as well as vegetable production and marketing in Osh, Batken and Naryn.
- Local STTAs conducted assessment studies of rural and agricultural advisory services and business development service systems. The study on the rural and agricultural part of the system is completed while the one on the BDS system still requires a final revision.
- An STTA from Helvetas head office conducted a desk study on non-traditional advisory service provision and certification models as possible options for Kyrgyzstan.
- The project conducted a capacity building needs assessment among ASPs, resulting in a priority list of self-identified topics.
- Partner ASPs participated in various staff capacity building opportunities, partly offered by other organizations, including trainings in marketing and financial management, integrating gender and nutrition in agricultural extension services, study tour to Turkey on drip irrigation technology and markets, and training in requirements for fresh produce exports to EEU countries.
- Manuals on advanced apricot management practices and on hybrid maize production for advisory staff were drafted. Production began on an accompanying extension video on advanced apricot management practices with an accompanying information booklet on apricots for farmers.

**Table 10: Indicator Targets for Supporting Activities Task I Productivity**

Indicator	Year 2 Target	Year 2 Achieved	Comments
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Number of rural households benefiting directly from USG assistance	200	2,648	The achieved number is so high because it includes 2,467 households from water management training planned for Year 1 but implemented in Q1 of Year 2.
Number of individuals trained	400	2,746	The achieved number includes 2,562 water management trainees that were planned for Year 1 but were trained in Q1 of Year 2.
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	320	1,854	The annual beneficiary survey does not provide data on water management training, therefore, the achieved number of 1,854 is based on the adoption rate of 70% of other value chains determined in the annual beneficiary survey.,
Number of jobs attributed to implementation	10	0	The Y1 activities focused strongly on supporting farmers to increase productivity and finding more profitable markets. Job creation was somehow neglected.
Organizational capacity increase (score)	3%	n/a	Due to the new project strategy only a few organizational capacity development activities for ASPs were conducted and no systematic capacity assessments were conducted. Therefore, no data are available for this indicator.

## ANNUAL PROGRESS

### I.3 INCREASE SALEABLE YIELD OF PRODUCER GROUPS

The Union of Water Users Associations trained 2,558 its member farmers (71.5 percent men and 28.5 percent women) on efficient use water for irrigation based a variety of factors including crop requirements, soil type and quality, landscape, and climate. Members also learned how to measure irrigation water based on the water canal location and the volume of water needed for specific crops. In total, 89 trainings were provided in 68 villages in Kadamjai rayon of Batken oblast, and Aravan, Kara-Suu and Chong-Alai rayons of Osh oblast. Every training included an add-on session on Sanitation and Hygiene (WASH).

In the reporting period, a range of grants and sub-contracts from the 2015 agricultural season were completed. The table shows summary of key activities in the reporting period and key results of grant implementation.

**Table II: 2015 Carryover Grants Completed in Year 2**

Grant name and grantee	Activities	Results
Production and marketing of strawberries in Jalal-Abad (RAS Jalal-Abad)	Economic analysis sessions	150 BF's sold 7.5 tons of strawberries to the processing company Lesnoy Product at the price of 85 KGS/kg and the remainder in the fresh produce market at a similar price. In the first year, strawberry

Grant name and grantee	Activities	Results
		yields were not yet high, but the fact that many BF's planned to expand their strawberry area in the next year, supports the conclusion that farmers are satisfied with this new crop and the project's support
Seed potato multiplication in Chong-Alai (TES Centre)	Delivery of second reproduction (R2) seed potatoes in Chong-Alai to early potato cooperatives in Aravan (39 tons) and Kara-Suu (20.8 tons) rayons for early spring planting	The 11 pilot seed potato farmers harvested 143 tons of potato, around half of which served as seed potatoes and the other half as ware potatoes
Berries, vegetables and apricots for processing companies and the fresh market (Training Advisory and Innovation Centre)	No activities took place in Year 2. Only the final report from Year 1 was submitted by the partner in Y2.	This is the result from Year 1 activities: nearly 400 vegetable BF's saw increased profits resulting from yields that were 20-50 percent higher than average. New farmers started to grow strawberry and raspberry, which they sold in the fresh market and 7.5 tons to a processing company
Organic raspberry production and marketing in Jalal-Abad oblast (Bio Service)	Purchase of raspberry seedlings from a nursery in Chui oblast and planting by 200 women farmers in ten villages Trainings and field consultations on organic methods of pest and disease management for participating farmers	The farmers used the harvest either for home consumption or sold it on the local market at 80 KGS/kg and more
Promotion of improved care for apricot orchards and on-farm apricot drying in Batken oblast (Hi Tech)	Trainings on autumn disease and pest prevention measures and on water management and irrigation norms	Although a frost in April 2015 destroyed nearly the entire apricot harvest, the 281 apricot BF's delivered 60 tons of dried apricot to processing companies and sold 79 tons in the bazaar. Because of very low harvest, prices were higher than normally
Fruit nursery improvement in Kadamjay rayon (TES Centre)	Creation of a cooperative of nursery farmers with 43 members Approbation of 500,000 seedlings of fruit crops Participation in Agro Expo in Osh to promote certified fruit seedlings	Total sales of certified seedlings in spring 2016 reached 1,140,000 KGS (USD 15,850). Certified seedlings commanded a 20-25% higher price

Grant name and grantee	Activities	Results
Vegetable production for increasing incomes and nutrition in mountainous regions of Osh oblast (RAS Osh)	Training sessions on “Economic Analysis of Vegetable Production”	These mountainous farmers either kept their vegetable harvest for their own consumption or sold it at the village market, to neighbors or to schools
Increasing incomes from growing vegetables and fruits in Batken oblast (RAS Batken)	Economic analysis training sessions	As a result of meetings organized between farmers and buyers, 155 tons of apple were sold for \$43,804, 59.55 tons of cucumber were sold for \$10,788, and 800.65 (Leylek and Kadamjay rayons) of tomatoes were sold for \$187,737 under agreements to processing companies
Vegetables for nutrition and income in mountainous areas of Naryn oblast and Toguz Toro rayon in Jalal-Abad oblast (RAS Naryn)	n/a	350 poor households (in 80% of the cases the BF were women) with little previous experience in vegetable growing learnt about proper vegetable cultivation They used the harvest for home consumption and sold some in the local market

## 1.5 ENHANCE ASP ABILITY TO DELIVER VC-CRITICAL TOPICS

The **study of the rural and agricultural advisory service system** initiated in Year 1 was completed in the reporting period. The main findings are as follows:

- Kyrgyzstan has a fairly well-functioning, diverse rural and agricultural advisory service system with around 20 core specialized advisory services (all of them non-profit organizations).
- The system is roughly 90 percent financed by donor projects over the past three years with over USD 1.4 million of turnover.
- The core ASPs employ 260 advisers and trainers, most of which work part-time or seasonally. The total full-time equivalent advisor positions are around 100.
- Technical expertise for all Agro Horizon value chains is available with ASPs in the project ZOI.
- The study revealed the following areas for improvement: 1) diversification of financing sources of ASPs, 2) know-how in ASPs for marketing support to farmers, 3) advanced technical know-how of advisory personnel, 4) service quality control mechanisms, e.g. a certification system, 5) involvement and ownership of government in advisory services, 6) coordination among stakeholders of the system, and 7) knowledge management in the system (e.g. a knowledge web platform, regular exchange and sharing mechanisms).

The **study of business advisory services system** is awaiting its final revision by the contracted consultant. Its main findings are the following:

- Less than 10 percent of business advisory services are provided in the agricultural sector.
- Of the business advisory services in the agricultural sector, 20 percent of the clients are donors, 60 percent agribusinesses, and 15 percent farmers and their organizations.
- Only three of 15 interviewed service providers are independent of donor funding.

- Business advisory services prefer to provide services on management issues, while the demand of the agribusinesses is highest for services in technical issues (equipment servicing, new products, quality control etc.).

A local STTA, in collaboration with project staff, tested **gender assessment methodology and tools with** eight ASP project partners in Year 1. The local expert started the assignment, but but did not completed it due to personal reasons. She was not paid and in agreement with USAID the assessment is not considered conducted. Because of priority changes, the gender assessment was not further pursued. Nevertheless, a summary of results is available. The main insights are in the following table.

**Table 12: Gender Assessment Findings**

Positive aspects	Aspects with development potential
The majority of the ASPs have a supervisory board consisting of women and men farmers	None of the ASPs has a gender policy or strategy
One of the eight assessed ASPs is led by a woman	None of the ASPs allocates resources specifically to address gender issues
Around 30 percent of advisory staff are women	Not all ASPs collect gender-disaggregated data on clients
Around half of all client farmers of the ASPs are women	Achievements in gender issues are rarely presented in reports
Women and men equally participate in decision making in accordance with their positions	The depth of understanding of gender issues is limited with most staff members
Internal organisational events are inclusive with participation of male and female staff	Gender reporting is limited to numbers of men and women participating in projects. There is no further reaching analysis on gender-based differences in outcomes or on outcomes specifically for women clients
No differences in employment duration between men and women	
60 percent of the staff had some kind of gender training	

The project conducted a **capacity building needs assessment of ASPs** involving the majority of the core ASPs. The resulting long list of capacity building needs was prioritized in consultation with the ASPs resulting in a range of priority topics:

- Procedures and regulations for export of agricultural products to the EAEU
- Art of sales / how to support farmers in marketing of farm products
- Organization of export of farm produce
- Farming as a business, business management and financial literacy for farmers
- Intensive fruit production
- State-of-the art crop production practices, in particular pest and disease management
- How to run advisory organizations as a business, marketing advisory services
- Strategic management for advisory organizations
- Capacity building for village advisors



- Innovative advisory approaches and methodologies

As instructed by USAID the Project did not implement all the above capacity building activities for ASPs and emphasized productivity and market linkages activities in support of smallholder farmers.

The following ASP capacity building activities were conducted in the reporting period.

The project supported a **learning tour on drip irrigation technologies and markets to Turkey** in collaboration with the Helvetas Micro-Irrigation Technology (MIT) project. Fourteen participants across stakeholder groups in the drip irrigation market of Kyrgyzstan took part in the tour, including equipment suppliers and installers, technical specialists, a financial institution representative, and the Ministry of Agriculture. The group attended an agricultural exhibition, met with drip irrigation equipment manufacturers and retailers, saw firsthand how farmers utilize drip irrigation, met with a logistics company, and with government representatives.

The project supported the participation of ASP personnel in **short training courses on marketing and financial management** offered by the Kyrgyz Republic-Japanese Centre. Eleven staff from six ASPs (five in the marketing training and six in the financial management training) attended on a co-financing basis. Seven of the project-supported participants were below 30 years of age.

Representatives of the project's partner ASPs BioService, TES Center, RAS Osh, RAS Batken, TAIC, RAS Naryn, and RAS Jalal-Abad together with the project's gender and nutrition specialists participated in a 3-day **training on Integrating Gender and Nutrition within Agricultural Extension Services**. Topics such as "Why Gender and Nutrition", "Exploring Gender Myths", and "Gender & Nutrition in Agricultural Value Chains" were organized by the USAID-funded INGENAES (the acronym stands for the training topic) project; participants came from Kyrgyzstan, Tajikistan, Uzbekistan, Azerbaijan, Armenia, Kazakhstan, Turkmenistan and the trainers from the US.

A two-day **training on requirements for export of fresh agricultural produce to the EAEU** was organized for project's partner ASPs; BioService, TES Center, RAS Osh, RAS Batken, RAS Naryn, and RAS Jalal-Abad. New project agribusiness partners also attended; Atalyk Group, Vestra Food, Ecoproduct Asia, Mol Tushum. Regional and national cooperatives together with the project's Market Research & Training Manager and Women's Agro-enterprise Development Specialist participated in the training. Training topics encompassed phytosanitary requirements, technical regulations of the EAEU and Kyrgyzstan, aspects of traceability, marking, packaging, laboratory testing and the declaration of compliance and other required documentation. The participants learned how to prepare necessary documentation. Ecoproduct Asia shared their practical export experience of fresh agricultural produce to Russia and Kazakhstan providing the opportunity for participants to ask practical questions.

The project hired two specialized STTAs to develop **advisory manuals on hybrid maize and apricot production**. Both manuals are available in draft form and are being reviewed by other technical specialists. Once finalized, they will be shared with Kyrgyz government representatives for validation. A **brochure for apricot growers** has been elaborated based on the apricot manual.

For the production of an **advisory and information video on apricot and a short promotional video on hybrid maize production**, the video production studio City Lab was contracted in an open competition based on the following main criteria: solid experience in production of educational and documentary films, availability of equipment for production of high quality films and an adequate financial proposal. The production studio conducted initial trips to Batken and Jalal-Abad to meet apricot and maize farmers and make the first video shootings. In first quarter of Year 3 the maize promotional video will be released. The video production of the apricot video will continue over the coming apricot production year. The project also started preparatory work for a **series of videos on livestock management**.

Ten male and twelve female representatives of ASPs and educational institutions took part in a workshop to collect ideas for **attracting young people to the advisory service profession**. Representatives of educational institutions were from the Kyrgyz National Agrarian University, Manas Kyrgyz-Turkish University and the Agency of Vocational Education. The goal of the event was to share experiences and lessons learned as well as to develop models to attract and build the capacity of young advisory service professionals which Agro Horizon can support. During the first half of the workshop, participants identified and discussed hands-on and academic experiences, which provided information and ideas for working groups which met during the second half of the day. Based on the workshop outputs, the project developed an intervention concept and an RFA for attracting and building the capacity of young rural advisory professionals including five possible models. This RFA was cancelled per USAID as a result of the change in the project strategy. The issue of involving young people in agricultural services will be addressed in Years 3 and 4 in the form of capacity building for fruit service businesses.

A **desk study to identify non-traditional advisory service provider models with potential for Kyrgyzstan** from international practice determined that no magic bullet models exists; however, five case studies were identified that provide useful learning for Kyrgyzstan's system:

- Local Service Provider model (Bangladesh): Capacity building of community-level service providers dealing with a specific value chain. LSPs provide fee-based technical, business and financial services to farmers and facilitate group formation.
- Business Membership Organization model (Bangladesh): Capacity building of local agri-business membership organizations to organize farmer groups and facilitate linkages of existing farmer groups with their member businesses for input supply, and with government advisory services for training and consultations.
- Agri-clinic and Agri-business Center model (India). The government supports the establishment of agripreneurs who are running local agri-clinics and agri-business centers. These centers offer technical advice, access to inputs, and market linkages against payment.
- Micro-Finance cum Advisory Services model (India). The model combines credit, agricultural and business development and institutional development services to rural communities. Farmer organizations pay for the advisory services.
- Profit-sharing Advisory model (China). The government seconds agricultural and agri-business specialists to rural areas as advisers. These conclude profit-sharing agreements with farmers, whom they advise on how to improve productivity and profitability.

## 1.6 STRENGTHEN ADVISORY SERVICES INDUSTRY

In January, the project arranged an **Advisory Service Roundtable** with the participation of 45 stakeholders of the rural/agricultural and business advisory service system (mainly ASPs and BSPs, some government representatives). The results of both studies were presented. A session was devoted to working groups on possible accreditation and certification mechanisms for the AS system, better cooperation with the government and preferred models for coordination in the AS system. A group worked to determine the capacity building needs of business services in the agricultural sector. Finally, the preliminary results of the pilot Gender Audit of ASPs conducted by project staff was presented.

The search for **international experience on certification systems for advisory services** by an STTA showed, somewhat surprisingly, that in the sphere of rural advisory services there are very few experiences. Consequently, only one model – Turkey – was studied and described. In the above mentioned Advisory Service Roundtable different **options for an advisory services certification and/or accreditation system** were presented and discussed including Turkey's agricultural advisor certification system, licensing of educational institutions by a separate agency under the



Ministry of Education in KR, certification of business consultants by the Institute of Management Consultants in KR, and use of international certification agency such as for example SGS. The majority of the participants considered a certification system for individual advisors necessary, while the opinions were divided as to whether advisory organizations need to be certified, licensed or accredited. It was clear that certification, licensing or accreditation has to be voluntary for individuals as well as for organizations.

The project planned to hire a local STTA to assess the **regulatory framework for government financing of advisory services**. However, two meetings were sufficient to ascertain that the Law on Local Self-Government and the Law on Social Procurement allow local authorities and the Ministry of Agriculture to procure advisory services for the population, if they consider such services a priority.

A presentation of the rural advisory services and business advisory services system studies combined with a discussion of how the government could engage more in the advisory services system at the Ministry of Agriculture had to be deferred as a result of USAID's instructions to put on hold all activities with the government. This presentation was envisaged to be the starting point for the planned dialogue with the government on a **strategy for the advisory service system**, which consequently also was deferred.

In response to a request from the Minister of Agriculture, the project intended to **support the Ministry in acquiring copies of extension booklets on various topics** of currently high relevance. The project reviewed eleven proposed booklets on the respective topics. Four of them were found to be outdated or have significant flaws and were therefore rejected. The project agreed to purchase 1,177 copies of the other booklets and hand them over to the Ministry for distribution to their regional departments and local government. However, as a result of USAID's instructions to suspend activities with the government, the activity was not carried out. This will be revisited together with USAID once the bilateral agreement is back in place.

The project issued an RFA inviting eligible entities providing advisory or technical services to farmers and other rural businesses to submit applications for **actions with the purpose to set up or expand innovative business models which combine the provision of technical and advisory services** in order to enhance access to knowledge services independent of donor funding. A total of 17 applications were submitted, of which a large part was not relevant or not in the project ZOI. Six applications were shortlisted. Meetings with the applicants led to the rejection of two of these. The remaining four fit to a varying degree into the project's strategy for Year 3 and 4, but require major adaptations. These are being discussed with the applicants (apple farmer cooperative Altyn Almasy in Nookat, Batken RAS, the input supply cooperative Mol Tushum in Batken, Agro Inform Asia).

## LESSONS LEARNED AND NEXT STEPS

As a result of changes in the project strategy, the project did not follow up on the majority of the grants and sub-contracts of Year 1. As a result, we don't know the final outcomes of these activities, and we could not provide further support to make outcomes sustainable where such support would have been necessary.

For strengthening the agricultural advisory system in Kyrgyzstan, a government strategy, ideally with partial public financing of advisory services in the public interest, would be very important. Unfortunately, Agro Horizon cannot work on this issue unless the bilateral agreement between the US and the Kyrgyz government is reinstated.

The project team invested substantial efforts and resources to activities that were either cancelled or not further pursued because of changes in the project's approach in consonance with USAID's priorities.

## TASK 2: MARKETING

## TASK OBJECTIVES

Agro Horizon marketing activities are critical for establishing strong market infrastructure that will enable businesses to realize international market opportunities. The focus in Year 2 will be on the development of SMEs to form strong relationships with their supplying smallholder farmers as well as secure solid market positions locally.

## ANNUAL ACCOMPLISHMENTS

Agro Horizon implemented several activities in Year 2 to increase sales of agricultural products to increase farmers' incomes. Major outcomes in this area include:

- More than 3,500 people from Osh, Batken, and Jalal-Abad oblasts attended the Silk Road 2016 Agro Exhibition in February. Total sales volume of exhibitors, most of which were input suppliers selling to farmers, amounted to KGS 15 mln (approximately US\$ 214,000). Exhibitors signed 52 futures contracts totaling KGS 219 mln (approximately US\$3.1 mln). With Agro Horizon's support, two nursery cooperatives, Arpasay Bereke Bagy and Top Agro sold about 5,000 seedlings totaling KGS 350,000 (approximately US\$ 5,000) during the exhibition.
- With Agro Horizon's support, Aravan Agro Service, a potato cooperative with 217 members, earned over KGS 3.5 million (approximately US\$ 51,470) in gross income compared to a net loss of KGS 4.18 million (approximately US\$ 61,470) the previous year.
- B2B and export market development activities initiated in Q 4 resulted in 20 agreements between beneficiary SMEs and buyers from domestic and foreign markets totaling \$5.4 million. Additionally, four matchmaking roundtables held in Bishkek and Osh in August resulted in nine contracts worth over \$365,000 between a leading Kyrgyz retail operator and local farmers.

## ANNUAL PROGRESS

### 2.2 IMPROVE MARKET ACCESS AND TRADE

#### 2.2.4 Assess and help export-ready firms

In Quarter 3, Agro Horizon supported the Aravan Agro Service cooperative in marketing and sales of early potato, resulting in sales of 600 tons of early potato to large retail chains. From May-June, Aravan Agro Service had KGS 3.5 million in profit compared to a loss of KGS 4.2 million in 2015. This significant improvement is a direct result of Agro Horizon interventions using better quality seed, adding value by grading, sizing and packaging, and signing advance purchase agreements. Beneficiary farmers achieved margins of almost 50 percent with less risk of falling prices. Farmers sold at a higher price due to value-added production support coordinated by the cooperative, namely, grading, sizing and packing themselves. Inspectors were trained in quality assurance and participated in the shipment to buyers during harvesting.

From June-September Agro Horizon hired BT Innovations Financial Fund to conduct an assessment of post-harvest, storage and processing facilities and identify upgrading options. Findings supported the refinement of the project's approach and supporting work plan to reduce losses, increase total outputs of the value chains, and improve Kyrgyzstan's competitiveness in the project's priority value chains. The scope of work included a desk study, an assessment of post-harvest, storage and processing facilities in Kyrgyzstan and in competing countries, the ability of facilities to meet market requirements, the identification of sources of inefficiency and lack of competitiveness, and the development of recommendations to address inefficiencies, including policy and donor support.

BT Innovations conducted 130 interviews and 20 focus group discussions in Kyrgyzstan, Tajikistan, Kazakhstan, Russia and Belarus for a comparative analyses of facilities in these countries. Recommendations regarding marketing management, quality and safety of products, equipment and technologies, skills of personnel, and pre-harvest activities were also provided. Outcomes of the study were used by Agro Horizon to explore options for targeted assistance to SMEs and verify its approach. The results were shared with the Ministry of Agriculture to assist them with the development of its support to the food processing industry.

From June-August, Agro Horizon initiated business-to-business (B2B) and market development activities with two local subcontractors with a focus on improving capacities of downstream players to expand shares in domestic and export markets. Both activities were quite successful in delivering supply contracts signed between local suppliers (farmers and SMEs) in target zones and buyers.

The first activity, implemented by M-Vector, explored B2B opportunities and export market potential. A market analysis identified target markets, lead generations, export requirements and an analysis of the capacity of local SMEs to comply with them. Three B2B matchmaking events and 120 bi- and multi-lateral meetings involving 16 local suppliers (SMEs), 15 foreign and 12 domestic buyers resulted in 20 supply contracts between SMEs and buyers totaling US\$ 5.4 million. Of these contracts, 16 were with foreign buyers from Russia, Kazakhstan and China, and four were with local buyers. Of note, the majority were supply contracts for relatively high value-added products like tomato paste, fruit and vegetable pre-serves, jams, juices and purees. The results are summarized in the table below.



*Representatives of a Kazakh distribution and wholesale company show their interest in Kyrgyz products.*

**Table 13: Main outcomes of B2B and export market development activities**

#	Indicator Description	Outcome
1	Number of large <b>B2B activities</b>	3
2	Number of buyer-seller contacts and <b>B2B meetings</b>	120
3	Number of <b>local suppliers</b> involved in B2B activities	16
4	Number of <b>foreign buyers</b> involved in B2B activities	15
5	Number of <b>local buyers</b> involved in B2B activities	12
6	Total number of <b>export contracts and MoUs</b> achieved	16
7	Total number of <b>local contracts and MoUs</b> achieved	4
8	<b>TOTAL number of contracts and MoUs</b>	<b>20</b>
9	<b>TOTAL value of contracts and MoUs</b>	<b>USD 5.4 million</b>

Domestic B2B and market activities were researched by a second subcontractor, Agrolead. Four B2B roundtables took place in Bishkek and Osh in August with leading grocery chains and local suppliers including farmers, processors, and consolidators in target value chains, most of whom were or will be project partner. The roundtables resulted in nine contracts between Frunze, a major retail chain, and local suppliers totaling more than US\$ 365,000. The contracts were for processed products mainly from dried fruits, processed fruits, juices, compotes and processed milk products. This is complemented by contracts for 800 – 1,000 tons of fresh vegetables, depending on availability and quality with Frunze, with a further 2,000 tons to be discussed for the autumn campaign.

## 2.2.8 Provide trade information services and providers

In Q2, Agro Horizon supported the Silk Road 2016 Agro Expo attended by over 3,500 people from the Osh, Batken, and Jalal-Abad. Sales volumes of exhibitors, the majority of which were input suppliers selling to farmers, reached KGS 15 mln (approximately US\$ 214,000). In addition, exhibitors signed 52 futures contracts for nearly KGS 219 mln (approximately US\$ 3.1 mln). Two nursery cooperatives, Arpasay Bereke Bagy and Top Agro sold nearly 5,000 seedlings totaling KGS 350,000 (approximately US\$ 5,000) during the exhibition.

## 2.2.9 Increase SME compliance with regulations and standards

B2B meetings and roundtables revealed the need for SMEs to become HACCP compliant and to address buyers' requirements regarding quality, packaging, delivery, and documentation. Compliance to these standards are one of the main barriers for local SMEs in expanding their markets. Agro Horizon started to analyze the gaps in partner SMEs' ability to meet food safety requirements. The Years 3 and 4 work plan specifies the scope and timeline for assistance to partners in implementation of safety standards to enable them to access and expand markets.

## LESSONS LEARNED AND NEXT STEPS

Although the Year 2 work plan put a heavy focus on productivity and foresaw market development activities in Years 3 and 4, Agro Horizon began to apply a market systems development approach early in Year 2. Q 2 and Q3 were marked by the start of activities to ensure sales of target VC products, including the development of strong relationships between SMEs with their supplying smallholder farmers. Agro Horizon identified more than 20 SMEs partners to establish consolidation, storing, and processing facilities. These partners, selected primarily for their marketing and financial strength, are ready to invest in new facilities that will lead to increased productivity and improved quality of supplying farmers in Year 3. Agro Horizon will leverage partners' inputs to achieve project's target indicators.

## TASK 3: ENABLING ENVIRONMENT

### TASK OBJECTIVES

The objective of Task 3 is to improve communication between the Government of the Kyrgyz Republic (GOKR) and key stakeholders in the agricultural sector to advance the policy and regulatory environment so that it is favorable to local production, private investment and international trade.

### ANNUAL ACCOMPLISHMENTS

**Table 14: Indicator Targets for Enabling Environment**

Indicator	Year 2 Target	Year 2 Achieved	Comments
Value of agricultural and rural loans	\$3,000,000	\$390,167	The target was partly based on proposed payment of interest for 6,000 maize growers who were projected to borrow \$2.8 mln. However, payment of interest was found to be non-compliant with USAID regulations. The balance of \$200,000 was intended for maize beneficiaries. Of the \$390,167, 55% was for two MTS loans, 41% was for loans in the potato value chain, and 5% was for micro loans for seed packages for kitchen gardening.

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of beneficiaries using financial products in the last 12 months	13,000	2,456	The target was partly based on proposed payment of interest for 6,000 maize growers who were projected to borrow \$2.8 mln. However, payment of interest was found to be non-compliant with USAID regulations.
Number of policies in a development stage	1 (stage one)	Put on hold	Put on hold due to suspension of work with Government per USAID instructions due to the denunciation of the Bi-lateral agreement.

Following the denunciation of the bi-lateral agreement between the Government of the Kyrgyz Republic (GOKR) and the US Government in August 2015, most of the activities of the Agro Horizon project in relation to work with the GOKR were put on hold per USAID instruction.

## ANNUAL PROGRESS

### 3.1 SUPPORT INSTITUTIONAL REFORM

#### 3.1.1 Build capacity of Policy Unit (within MOA)

In 2016, Task 3 team conducted an in-depth capacity assessment of MOA's Policy Unit (PU) to determine the nature and effectiveness of collaboration between MOA departments. The assessment revealed that the MOA's PU lacked capacity to conduct evidence-based policy development, had high staff turnover, and a structure that does not provide a cohesive approach to policy development in agriculture. It also revealed that its staff allocates nearly 40 percent of their time for data collection and stakeholders in the agriculture sector indicate that reliable market information for evidence-based decision-making in the private and public sector is lacking. This gap represented an opportunity for Agro Horizon to provide support to the PU to strengthen their role in providing accurate and timely market information. Agro Horizon adapted its strategy to provide technical support to the MOA's PU in relation to data collection along with the National Statistics Committee. However, these activities were put on hold per instruction from USAID due to the absence of the bilateral agreement.

#### 3.1.2 Establish Inter-agency Agro Policy Working Group (APWG)

In the first half of the Year Two, the Agriculture Sector Policy and Regulations Road Map was finalized by AIRD to improve communication between the public and private sectors, specifically key actors in the GOKR, private sector associations and civil society. The roadmap focuses on institutional development to advance the policy and regulatory environment so that it is favorable to local production, private investment, and international trade. It was developed in close collaboration with the MOA. Due to the denunciation of the bilateral agreement the implementation of the road map on hold.



In January, the Agro Horizon project team discussed the significance of establishing the Inter-agency Agricultural Policy Working Group (APWG) with the Parliamentary faction "Onuguu-Progress", the majority faction that heads the Parliamentary Committee for Agricultural Policy, Water Resources, Environment and Regional Development tasked with leading agricultural sector policy development. Following the discussions, the faction requested MOA to closely collaborate with Agro Horizon and sent an official request to the USAID Mission in the Kyrgyz Republic to provide technical support in their efforts to establish the APWG. These efforts are currently on hold until a new bilateral agreement is signed.



*The Agro Horizon project team presents at the Jogorku Kenesh of the Kyrgyz Republic*

### **3.1.3 Facilitate improvement of VC-related policies**

With USAID's approval, Agro Horizon carried out an assessment of the food-processing sector within the project's priority value chains in the ZOI. The findings of this assessment will inform the State Program for the Food Processing Industry to help with policy changes to foster a competitive environment. In May, Agro Horizon selected local consulting firm BT Innovations, to conduct the assessment of existing post-harvest, storage, and processing facilities based on the request from the GOKR as well as the Agro Horizon project needs. The report included recommendations on policy support, including upgrading opportunities for facilities in target value chains. The report was submitted to USAID for review and approval. Agro Horizon will share the report with the Government and other stakeholders once approved by USAID.

### **3.1.4 Develop capacity building for relevant agencies**

In Q1, the MOA initiated the development of a National Program on Drip Irrigation following the drip irrigation study tour to Turkey that included government representatives. Several meetings took place to start a working group comprised of members of MOA, Agro Horizon and Helvetas' MIT Project. Agro Horizon negotiated the structure, scope of work, and terms of reference of the working group with the goal to launch the National Program on Drip Irrigation. The launch of the development is contingent on the approval from USAID.

Also in Q1, the MOA requested support to protect 1,250 hectare of apricot trees from potentially devastating early spring frost in Batken, which happened the previous year. The Batken local administration specifically requested technical support in testing new methods of frost protection and materials to protect the trees. After discussing several options, Agro Horizon and the MOA developed a leaflet on frost protection and conducted a series of frost protection trainings in the Agro Horizon's ZOI. In addition, representatives of local governments (rayobladministratsiya, meriya and aiyl okmotuu levels) were invited to the trainings and learning events organized by the project (e.g. quality standards and food safety trainings, trade-fairs, field days etc.).

Further work has been suspended per instruction of USAID until a new bilateral agreement is in place.

## **3.2 SIMPLIFY ENABLING ENVIRONMENT**

### **3.2.1 Collaborate with GOKR and donors to harmonize customs procedures**

In order to identify technical assistance needs, Agro Horizon held consultations with the state enterprise, “Tulpar” (Single Window) under the Ministry of Economy of the Kyrgyz Republic (MOE) that helps promote international trade. The consultations revealed that the state enterprise lacked the ability to support Kyrgyz agri-business to prepare for export activities. Agro Horizon planned an international STTA to provide trainings “Tulpar” staff on export readiness audits and branding and marking requirements. The STTA will develop a procedural manual for staff on how to offer services to local enterprises. These activities were also put on hold and will commence as soon as USAID lifts the suspension.

### **3.2.2 Support business associations to advocate regulatory reforms**

At the request of the Association of Fruit and Vegetable Enterprises of Kyrgyzstan (AFVE), the project discussed the draft State Program of the Food Processing Industry with MOA. During discussions, it was established that the current version of the program is in need of further improvement. As a result of successful public-private dialogue, MOA sent a request to the Agro Horizon project for technical support in improving the current version of the program. In consultation with USAID, it was agreed that Agro Horizon would carry out an assessment of the food-processing sector with particular focus on the Project’s priority value chains. See 3.1.3 above for results.

### **3.2.3 Support business associations to educate members on regulations**

Agro Horizon assessed the capacity of market support institutions and identified support opportunities that were consistent with a market systems approach. Prior to the assessment, the project approach to build the capacity of market support institutions focused on training agro business associations. However, the assessment revealed that this approach was not sustainable and did not lead to lasting results. Agricultural business associations have received support from international donor organization for years, which swayed their attention from thinking of financial sustainability by widening their membership base and providing new services to instead achieving short-term deliverables set by donor-funded projects. Hence, Agro Horizon developed a strategy that is in line with MOA PU capacity building plan to support information systems across value chains including disseminating information on foreign market requirements and demands. This strategy is also supportive of business associations’ efforts of developing new services for their members, which contributes to the sustainability of joint efforts.

In addition to market information systems, Agro Horizon investigated market gaps related to health and safety standards in the country. Agricultural SMEs looking to export livestock products are not compliant with HACCP and other export standards. Agro Horizon will support capacity building in PYs 3 & 4 of local technical consultants in the project’s ZOI to address this gap. The technical assistance will be designed for professionals who have experience in production, management, testing and quality control of food products. It is anticipated that these experts will also be the staff of local business association members.

## **3.3 ADVANCE PLURALISTIC ADVISORY MODEL**

(See Activity 1.6 - Strengthen advisory services industry)

## **3.4. INCREASE FINANCIAL PRODUCTS**

In Year 2, the maize value chain concept was developed and seven banks expressed interest in their participation. Four commercial banks were shortlisted, two of which were selected as potential partners in the program. In addition to the meetings with commercial banks, meetings and consultations with representatives of machinery services providers and maize farmers were conducted to ascertain their interest in participation in project and their potential loan



needs. In particular, there were a number of meetings with the representatives of Bai Tushum Bank and First Microcredit Company to develop new loan products within the maize value chain. Agro Horizon negotiated the partnership agreements with Bai Tushum Bank and First Microcredit Company to provide loans for maize farmers in Osh and Jalal-Abad oblasts whereby Agro Horizon would cover about 32 percent of the interest on the loans. Loans were planned to be disbursed directly to the suppliers of inputs and services required for farmers to grow hybrid maize. Participating farmers would repay the principal amount of the loan after harvesting and sales of yields by using mobile banking through mobile payment instrument. Ultimately, this loan mechanism was not further developed recognizing that this approach would distort the financial market by subsidizing interest rates. It was good lesson learned and influenced subsequent project planning with the financial institutions.

Agro Horizon identified ways to improve and expand financial products using DCA, including mobile money services with BT Innovations Fund. To increase SMEs' access to agricultural equipment and machinery services, Agro Horizon facilitated talks between the representatives of BT Innovation and eight MTSs, one SME and one processing company proposing a leasing mechanism whereby Agro Horizon contributes 30 percent of the purchase price of agricultural machinery. Ultimately, eight grant agreements for the purchase of machinery and equipment were signed with a 70 percent leverage contribution by the private sector partner. Two of the grant agreements involved cooperation with two financial institutions for leasing purposes: Aiyl Bank and BT Innovations. Also, Agro Horizon supported Demir Kyrgyz International Bank with an STTA Consultant who worked with the bank and developed the Environmental and Social Risk Management Regulation and the Environmental and Social Risk Management Procedure. These documents were approved by the Board of Directors of the Demir Kyrgyz International Bank.

In June, at the Development Partners' Coordination Council forum on "Rural Finance: Current Trends and Future Perspectives", Agro Horizon presented the financial services component of the project to identify opportunities to find partners to improve the array of financial products, expand mobile money services, and utilize DCA agreements. The Kyrgyz Value Chain Finance program (KVCF), a Euro 9 million agro-financing project funded by KfW, a German development bank, and Agro Horizon explored ways to increase access to financial services in the agriculture sector. Agro Horizon met with the Business and Finance Consulting Company, a firm that provides technical support to commercial banks selected for the KVCF program, including the Commercial Bank Kyrgyzstan, Optima Bank, Demir Kyrgyz International Bank and Aiyl Bank. The KVCF program is for five years and loans will be disbursed in local currency. Cooperation between our programs is foreseen in the future.

There were several meetings conducted with the representatives of KICB Bank and Kyrgyzstan Bank to identify opportunities for collaboration with the Agro Horizon project and its beneficiaries, including the integration of mobile payment systems into business operations of the Agro Horizon project's partners and their business relations with farmers and suppliers. The partnership on mobile payment systems will be implemented in the project years 3 and 4, after tri-party meetings among commercial banks, the Agro Horizon project and business partners.

Agro Horizon will continue to work on improving access to formal financing. However, at this time, embedded financing looks most promising as direct players in the value chain stand to gain the most in making financing available to farmers. In the last quarter of the project, several proposals were received whereby downstream players plan to provide financing in the form of inputs and services. In other cases, financing will come in the form of pre-payment to farmers for their produce by processors, traders and consolidators.

### **3.5 IMPLEMENT USAID FORWARD COMPONENT/HUMAN AND INSTITUTIONAL CAPACITY DEVELOPMENT**

In Q1, Agro Horizon developed a set of standardized approaches and organizational capacity assessment toolkits to support performance improvement activities of various local organizations. In particular, the Organizational Capacity



*The Agro Horizon team develops the Value Chain Stakeholders Analysis and Mapping Matrix*

Assessment Handbook was developed to help project staff, local service providers, and other development professionals implement organizational capacity assessments. The accompanying Organizational Capacity Assessment Facilitator's Guide outlined the process for facilitating a participatory, organization-led capacity assessment and analysis. Guidelines were provided to assess strengths and weaknesses, identify capacity development strategies and activities, and develop an institutional strengthening plan. Additional materials included an organizational capacity development tool generator, a sample participant invitation letter, an overview handout for participants, a list of pre-OCA documents to request and review, as well as a sample OCA workshop participant evaluation.

In Q2, the project developed a value chain stakeholder analysis and mapping matrix to identify potential local organizations for USAID Forward. The selection committee, consisting of seven people, identified and screened around 30 potential local organizations and then ranked them based on the selection criteria such as does an organization work in the Agro Horizon project zones of influence; number of farmers covered, client volume, finance volume, and size of staff. According to final ranking, six organizations were identified; the Association of Fruit and Vegetable Enterprises, also known as Food Industry Association of Kyrgyzstan (AFVE), Training and Extension System Center - TES Center, Training, Advisory and Innovation Center (TAIC), Agro Lead, and Rural Advisory Services RAS Jalal-Abad and RAS Naryn. As the RAS Network of organizations received funding for organizational capacity development from GIZ, Agro Horizon decided not to work with RAS Jalal-Abad and RAS Naryn. The Agro Horizon team met with the selected local organizations to assess their interest in participating in the human and institutional capacity development program and explained the process and requirements of the USAID Forward component.



*OCA workshop with a partner organizational AFVE*

In Q3, an in-depth organizational capacity assessment was conducted with the pre-selected partner organization, Association of Fruits and Vegetable Enterprises of Kyrgyzstan (AFVE), using the USAID Organizational Capacity Assessment tool. The OCA addressed the following seven areas of organizational capacity: governance and legal structure, financial management and internal controls systems, administration and procurement systems, human resources systems, program management, project performance management and organizational management and sustainability. The assessment helped AFVE reflect on its processes and functions, and allowed it to score itself against benchmarks. As a result of a full four-day organizational capacity assessment, the Association's key staff,

including its executive director, accountant, an assistant and the several members of the board of directors assessed the organization's strengths and weaknesses, identified areas for improvements and prepared an institutional strengthening plan of AFVE. The leadership shaped and set priorities for actions to strengthen its organizational capacity.



*OCA workshop with a partner organization TAIC*

In Q4, Agro Horizon conducted two additional organizational capacity assessments with two additional partner organizations; Training, Advisory and Innovation Center (TAIC), based in Bishkek and Training and Extension System Center - TES Center, headquartered in Osh, with and a field office in Bishkek.

Based on the results of the OCAs, individual institutional strengthening plans for each partner organization will be developed and carried out in project years 3 and 4.

## TASK 4: NUTRITIONAL STATUS OF WOMEN AND CHILDREN

### TASK OBJECTIVES

Agro Horizon aims to narrow the gap between available and accessible food and the food needed for a healthy and balanced diet using a nutrition-sensitive agriculture approach. This is in recognition that improved productivity and competitiveness of the agricultural sector does not automatically lead to improved nutritional outcomes at the household level. The entry point for interventions are the communities (via health committees) and households assisted through improve agricultural productivity activities.

### ANNUAL ACCOMPLISHMENTS

- 1,600 households in remote, mountainous areas, produced 11 types of vegetables in household plots and learned production, storage and preservation, dietary diversity and AgWASH and family budgeting skills.
- Nutritious broccoli and spinach were grown for the first time and beneficiaries were pleased with the yield, health benefits and reported they liked the taste.
- 16,880 beneficiaries received AgWASH messaging through the cascade trainings and social events via village health promoters and volunteers, previously trained by project staff.
- 13,460 people received AgWASH information, learning about safe usage of pesticides and other agro-chemicals.
- The MOH requested access to the AgWASH brochure and printed and distributed 10,000 copies to other areas of Kyrgyzstan from their own budget.
- The home economics trainings brought together couples to learn together the basics family budgeting with a focus on diversified diets.

### Table 15: Indicator Targets for Nutrition

Indicator	Year 2 Target	Year 2 Achieved	Comments
Number of individuals trained	15,000	18,989	
Women's Dietary Diversity Score	5.30	6.64	The overall target achieved up to 125.3%
Percentage of households with soap and water	85%	n/a	Activities were not planned for these two indicators based on the results on the first baseline study which revealed that the second indicator (percentage of people knowing handwashing moments) over achieved in Year 1 at 164 percent, resulting in a 113 percent for LOP. These two sanitation related indicators' activities were combined into one that was focused on AgWASH in the first quarter of the Year 2.
Percentage of people knowing handwashing moments	65%	n/a	

## ANNUAL PROGRESS

### 4.1 INTEGRATE MESSAGING INTO AGRICULTURAL ACTIVITIES

Agro Horizon integrated nutritional messaging into all agricultural activities so rural households can transfer the benefits of increased yields and income into improved nutritional and health practices. Secondary beneficiary farmers received leaflets and posters on sanitation & hygiene at agro fairs and field days. In 2016, ASPs delivered add-on trainings on farm hygiene and WASH to 13,460 individuals.

#### 4.1.1 Create add-on SPRING-based nutrition module to all agriculture trainings

Agro Horizon incorporated the SPRING-based nutrition module on dietary diversity into all agricultural trainings reaching 1600 farmers. 6,200 cookbooks developed by the USAID SPRING project were printed and will be distributed to project beneficiaries at dietary diversity trainings this year and beyond. Additionally, 3,000 posters on childhood nutrition during the first 1000 days developed by the SPRING project were printed during the reporting period and distributed to project beneficiaries.

AgWASH add-on trainings were incorporated into all value chain trainings, reaching 7,685 beneficiaries, of which 2,156 were unique beneficiaries. Beneficiaries, particularly youth and women, indicated that the safe use of pesticides was a new and useful topic for them.

The project developed a brochure on AgWASH, translated it into Russian and Kyrgyz languages, and solicited approval from the Ministry of Health and the Republican Centre of Health Promotion. The MoH requested permission to reproduce 10,000 brochures with their own funds for distribution to districts of Kyrgyz Republic beyond the project's ZOI.



*Cookbook developed by USAID SPRING project and a AgWASH brochure were distributed to participants.*

#### Kitchen gardening activity



The kitchen gardening activity was designed with a nutrition-sensitive agriculture approach to expand and diversify vegetable production in the high altitude areas of Naryn, Jalal-Abad, Osh, and Batken oblasts where the summer growing season is short, leaving families without garden vegetables for most of the year. The goal of the activity was to extend the growing season using greenhouses and low plastic tunnels, seeds specific to mountain regions, and use of early start seedlings.

USAID Agro Horizon provided tomato, cucumber, onion, eggplant, pepper, garlic, late cabbage, spinach, legume, broccoli, and fresh herbs seeds to promote the consumption of these nutrient-rich vegetables and diversify diets of rural households. The project strengthened the technical skills of 1,600 farmers in sustainable multiple cropping of vegetables, off-season production under low plastic tunnels, and growing vegetables that store well over longer periods. Farmers were also trained on food preservation techniques to ensure winter access to nutritious foods. Participants developed new skills on freezing, drying and pickling vegetables.



*Mrs. Ajibaeva demonstrates variety of vegetables grown in her new garden that expand her dietary diversity.*

An additional 400 farmers received training sessions on different topics, during eight field days. The aim of field days was to extend information about vegetable production beyond the 1,600 primary beneficiaries. These field days are part of the project's initiative to improve nutrition of rural households, focusing on women and children. The initiative includes capacity building of farmers in cultivation and processing of nutrient-rich vegetables, budgeting, and awareness raising on the benefits of balanced diets. Participants learned how to grow vegetables with plastic tunnel in cold climates. Each field day covered several topics including of vegetable production, pest and disease management, storage, preservation for wintertime, dietary diversity, and AgWASH. At each field day, five stations were created by topic allowing groups of 10 people to rotate from station to station every 30 to 40 minutes. Each participant had a chance to interact with a trainer, ask questions, discuss, and visit the best fields. At the last station, trainers demonstrated salads cooking, pickling and drying technologies.

In-kind grants included fertilizers, minerals, and sprayers, totaling US\$ 40,000 for all 1,600 farmers. The cost of seeds totaling US\$ 18,560 was repaid by the beneficiaries to the project.

In total, 2,000 participants (1,600 primary beneficiaries and 400 participants of field days) were trained on intensive agro-technologies of kitchen gardening, pest management, proper handling, storage and disposal of mineral fertilizers, pesticides and fungicides and farm hygiene principles.

Economic analysis conducted during field days revealed that on average each farmer earned around US\$ 250 from a 0,02 ha plot of land by selling extra seedlings in spring, and selling tomatoes, cabbage, broccoli, peppers and cucumbers to neighbors and in local markets in September and October. Most importantly, these households had increased access to nutritious foods that they did not need to buy in the market. All farmers recognized the value of using high quality seeds and indicated that they will procure the same varieties (Holland hybrid) next year along with plastic tunnels. Farmers noted that their garden is an excellent means of mitigating financial constraints while increasing the availability and accessibility to nutritious food. A significant number of farmers are eager to establish greenhouses for greens and vegetable production in the target zones of the project. A young couple from the kitchen gardening activity in Alay have already constructed a greenhouse on 200 square meters and have started to produce cucumbers.

A vocational school took part at the kitchen gardening activity in the Alay district, which provided expanded the reach to youth and taught them how to grow, cook nutritious food, and even sell the products.

#### 4.1.2 Conduct cascade training on nutrition, sanitation, and/or water message in coordination with SPRING



*Buvaisha Kurmanbekova grew vegetables at an altitude of 2,250 meters above the sea level in remote Chong-Alai using plastic tunnels to start seedlings.*

Results of the beneficiary survey revealed that 92 percent of project beneficiaries already knew three out of the five critical moments for hand washing, indicating that further training on WASH would have diminishing returns. Therefore, WASH add-on trainings were further refined from trainings on general water and sanitation hygiene practices to cover specific farm-related hygiene practices with a focus on the safe handling of pesticides and other chemicals.

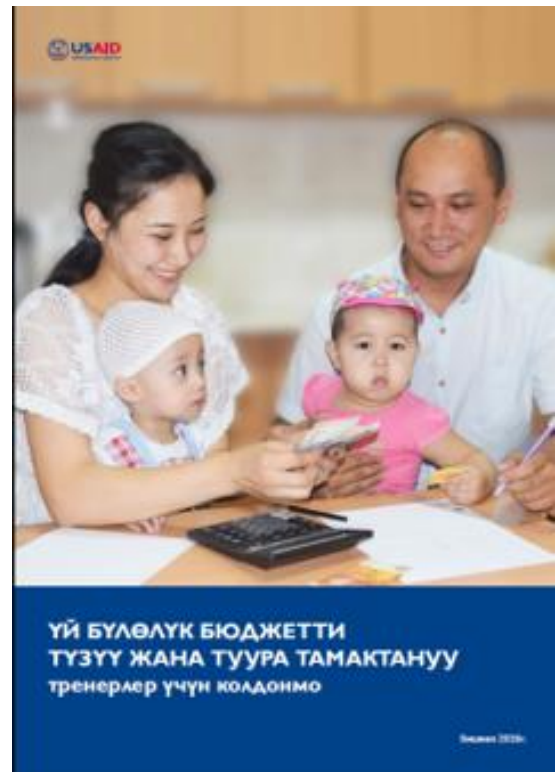
Agro Horizon conducted a training for trainers (TOT) for all 46 implementing partners on AgWASH in Q2.

#### 4.1.3 Facilitate home economic trainings through ABSPs

Home Economics training module was developed to expand farmers' ability to budget household income with a priority given to nutrition. Trainings emphasized the importance for households to allocate money to the purchase and consumption of nutritious foods. 1,600 vegetable growing farmers learned household budgeting basics as a part of the home economics training.

While food purchasing patterns are different among families, research revealed that a large part of monthly expenses goes toward meals. Household economic trainings taught couples how to create a family budget, record expenses and make joint decisions on household expenditures. Participants were surprised to learn that eating healthy was not more expensive and in some cases, was less expensive than their typical food expenditures.

Group discussions related to budgeting indicated that rural families spend a large portion of their income on holidays, funerals, weddings, and entertainment instead of education, healthcare, debt repayment, and income generating activities.



*Home economics trainings helped couples manage joint household budget decisions, especially related to nutritional food purchases.*

### 4.2 PROMOTE GOOD PRACTICES

#### 4.2.1 Strengthen village health committees and workers

The Association of Village Health Committees (AVHC) through the year delivered farm hygiene messaging to 16,849 beneficiaries of 14, 964 households Agro Horizon’s nutrition team and STTA expert on AgWASH conducted trainings of trainers (TOTs) for 111 rayon-leveled trainers of the AVHC. Ninety percent of trainers are women who further trained village health committees’ volunteers and organized 32 rayon-level public events on AgWASH in Naryn Osh, and Jalal-Abad and Batken oblasts in the last quarter. In Batken, oblast 28 rayon trainers trained 1,030 VHC members, which work in 206 VHCs.



*The Association of Village Health Committees teaches the safe application of chemicals in AgWASH trainings.*

Agro Horizon led the collaborative work to develop, test, and seek Ministry of Health approval for a brochure on farm hygiene. Working with the National Republican Center of Health Promotion, the Ministry of Health and State Disease Prevention and Sanitary Inspection Department, 8,000 copies were published and disseminated among population, and will be used during add-on trainings to Task 1 and Task 2 trainings.

AVHC health promoters and volunteers trained and disseminated AgWASH messaging to 16,849 individuals. In Batken ob-

last, cascade trainings were used at three levels; rayon level, ail okmotus level, and the village level. Cascade or train-the-trainer systems involve training a small group who then pass on what they know to the rest of the workforce. This project proved how planning and preparation, monitoring and coaching are crucial while cascading.

Cascade approach was used to transfer information on AgWASH from lead rayon trainers and village volunteers to community members. Rayon-level trainers delivered cascade approach trainings for 206 Village health committee’s promoters of Batken oblast. In their own turn, promoters delivered trainings sessions for communities in villages on the above-mentioned topic.

## ENVIRONMENTAL COMPLIANCE

### ANNUAL ACCOMPLISHMENTS

- Environmental Compliance Specialist works closely with the grant department and components leaders to ensure timely detection of possible negative environmental impacts.
- All pesticides and agricultural inputs procured for project implementation were screened and crosschecked against programmatic PERSUAP and state catalogue of pesticides and agrochemicals approved for use in the Kyrgyz Republic.
- During Year 2 Agro Horizon conducted a series of AgWASH trainings for farmers on safe handling, application and storage of pesticides and other agricultural inputs.
- Agro Horizon hired a Batken-based company, Jash Ka, and built the capacity of 86 young men in apricot tree spraying, safe application of pesticides, personal hygiene and importance of personal protective equipment.



- Agro Horizon hired an STTA to develop Environmental and Social Risk Management Regulation as well as Environmental and Social Risk Management Procedure for Demir Bank. Both documents were approved by Demir Bank's Board of Directors. Environmental and Social Risk Management Regulation is essential for accesses to USAID Development Credit Authority (DCA)

## ANNUAL PROGRESS

During Year 2, Agro Horizon continued to ensure timely detection of possible negative impacts and subsequent development of mitigation strategies within all program activities. The Environmental Compliance Specialist (ECS) developed environmental review checklists for seven project activities implemented by Agro Horizon. Environmental reviews included Environmental Monitoring and Mitigation Plans that were approved by the USAID Mission Environmental Officer. In particular, for projects that involved the procurement and use of pesticides, Agro Horizon developed mitigation measures to protect the health and safety of farmers. During the reporting period, the ECS conducted a number of environmental monitoring visits to project sites implemented by Agro Horizon.

## LESSONS LEARNED AND NEXT STEPS

This year Agro Horizon faced negative reaction from Organic Cooperative "Alysh Dan" whose representatives posted misrepresenting claims in social media about pesticide (Bi-58 New) as well as unjust charges that project's apricot spraying program negatively affected organically managed orchards. After number of meetings with organic movement representatives the conflict was resolved, Agro Horizon volunteered to create GIS Mapping of organically managed orchards in order to establish buffer zones.

Agro Horizon is following programmatic PERSUAP while procuring and using pesticides and agricultural inputs. The PERSUAP is stricter than host country regulations and only permits class III and IV toxicity pesticides for procurement and use. The case with Organic Cooperative showcased that there is need to organize discussions and information dissemination about the type of agricultural inputs that will be used within the framework of the project not only with stakeholders but with wide public as well. We have learned that it is essential to address environmental issues in the very early stage of project implementation so that mitigation measures can be integrated into project implementation plan. Field monitoring is another principal component of environmental compliance that monitors the progress of project implementation and offers opportunities to adjust mitigation measures accordingly. The ECS coordinates with Agro Horizon staff to ensure that all environmental compliance procedures and timeframe are met. In year 3, Agro Horizon will continue its work on environmental compliance to make sure that all implemented activities will not have a negative impact on the environment, potential issues are identified and mitigation measures are developed.

## COMMUNICATIONS

There was no communication plan included in the Year 2 workplan. A general communications strategy was developed but without detailed outreach activities attached to specific project related achievements resulting in the project being more reactive than proactive in its communication; catching up rather than setting the tone, refer to lessons learned under the section on Environmental Compliance. External communications efforts targeting key stakeholders to promote project progress and achievements were underutilized resulting in lack of engagement and transparency. With the advent of social media, it has become very easy for people to spread misinformation, making a solid communications plan that targets audiences with clear messaging imperative.

## PROJECT FUND

### ANNUAL PROGRESS

Agro Horizon's 5.4 million Project Fund, a flexible mechanism to build local capacity, foster innovations, leverage resources, and stimulate private sector investment to address value chain constraints, serves to incentivize investments by grant recipients, but not as a sole funding source. A portion of the Project Fund is used to contract ASPs to deliver training and technical assistance to select producer groups, agribusinesses, and other VC actor and to conduct researches on post-harvest, storage and processing facilities assessment and upgrading options, B2B and market development and SME assessment.

The Grants and Procurement Department team managed the direct procurement of agriculture related supplies for project beneficiaries and oversaw 50 subcontractors and 15 subgrants. The team maintained a competitive and transparent process to procure high-quality services and commodities that fully comply with all applicable U.S. Government (USG) contracting laws and regulations. The team leveraged bulk purchasing to achieve reliable product availability and cost reductions and incorporated the best-value approach to procurement for all commodities, even when they were not purchased in large volumes. In cases when GPD used sole/single source selection, all justifications and approvals from Chief of Party were properly obtained.

All awards were made based on criteria developed by project staff to achieve project goals and objectives.

For the reporting period, USAID Agro Horizon Project signed sub-contracts valued at **\$1,716,562.35** and sub-grants valued at **\$304,439.69**. All disbursements totaled **\$2,021,002.04**

During the reporting period 3 grants were closed, 10 grants were completed and 2 grants are ongoing

### Tenders

In Year 2, the grants and procurement department announced fourteen (14) requests for proposal (RFPs) and eleven (11) requests for quotation (RFQ). See Table 17 below.

**Table 16: Year 2 Tenders**

Activity Name and Contract Number	Type of Tender (Qty)	Location	Date of Tender
Support the activity for improvement production and quality of apricot (BIS_PO_02)	RFP (1)	Batken oblast	December 15, 2015
Potato Value Chain –Ware potato production in Naryn, Batken, Jalal-Abad oblast (BIS_PO_14; BIS_PO_15; BIS_PO_16)	RFP (3)	Naryn, Batken, Jalal-Abad oblasts	January 26, 2016
Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 in Jalal-Abad and Osh oblasts (BIS_PO_12; BIS_PO_13)	RFP (2)	Jalal-Abad, Osh oblasts	January 11, 2016

Activity Name and Contract Number	Type of Tender (Qty)	Location	Date of Tender
Mass Demonstrations in Onion Value Chain, 2016 season (BIS_PO_17)	RFP (1)	Osh, Jalal-Abad, Batken oblasts	January 26, 2016
Improving Nutrition through kitchen gardening in Osh, Jalal-Abad, Batken and Naryn oblasts”, Nutrition component (BIS_PO_31; BIS_PO_32; BIS_PO_33; BIS_PO_34)	RFP (4)	ZOI	February 11, 2016
Post-harvest, storage and processing facilities assessment and upgrading options (BIS_PO_59)	RFP (1)	ZOI	April 18, 2016
B2B and market development (BIS_PO_60)	RFP (1)	ZOI	April 18, 2016
SME assessment and development plan (BIS_PO_61)	RFP (1)	ZOI	April 18, 2016
Procurement of fertilizers (Ammophos, high grade according of state standard) (BIS_PO_03)	RFQ (1)	Batken oblast	January 25, 2016
Procurement of crop protection inputs – Insecticide “Bi 58 new” or analogs (Active Ingredient: Dimetoad); System fungicide SCORE or analogs (Active Ingredient: Difenconazole); components for Bordo mix (lime and copper (II) sulfate (CuSO4)) (BIS_PO_04)	RFQ (1)	Batken oblast	January 23, 2016
Spraying services provider for improving of apricot orchards in Batken oblast (BIS_PO_05)	RFQ (1)	Batken oblast	January 25, 2016
Procurement of spraying equipment’s: Backpack motorized sprayer 25 liter (BIS_PO_06)	RFQ (1)	Batken oblast	January 25, 2016
Procurement of fertilizers (Ammophos, high grade according of state standard); Procurement of crop protection inputs – Insecticide “Bi 58 new” or analogs; fungicide Ridomil Gold or analogs” (BIS_PO_23)	RFQ (1)	Osh, Naryn, Batken, Jalal-Abad oblasts	February 3, 2016
Procurement of onion hybrid seeds; pesticides; fertilizers (mineral and manure)” (BIS_PO_18)	RFQ (1)	Osh, Jalal-Abad oblasts	January 27, 2016
Procurement of Two-wheel tractor with attachments; Sprayers 10-16 L capacity; Seeder for small vegetable seeds; Onion mini-harvester. (BIS_PO_19)	RFQ (1)	Osh, Jalal-Abad oblasts	January 28, 2016
Procurement of Lot 1: maize seeders, Lot 2: cultivators, Lot 3: Sprayers 600L, Lot 4: Tractor (BIS_PO_36)	RFQ (1)	Osh, Jalal-Abad oblasts	March 1, 2016

Activity Name and Contract Number	Type of Tender (Qty)	Location	Date of Tender
Procurement of rootstocks, graft buds (BIS_PO_25)	RFQ (1)	Osh, Batken, Jalal-Abad oblasts	February 2, 2016
2 wheeled tractors with attachments; 100 liter sprayers (BIS_PO_26_02)	RFQ (1)	Osh, Batken, Jalal-Abad oblasts	February 17, 2016
Procurement of drip irrigation system for Arpasai Bereke Bagy (BIS_PO_26_01)	RFQ (1)	Osh, Batken, Jalal-Abad oblasts	February 16, 2016

The following request for applications (RFAs) and call for applications (CFAs) were announced during the reporting period:

1. Innovative Business Models for Agricultural Advisory & Technical Services. The project plans to provide grant support to providers of agricultural advisory and technical services working in its project area for establishing or expanding business activities that contribute to this goal. A total of 17 applications were received, out of which six applications were shortlisted. Agro Horizon will make a final decision from the six shortlisted, and proceed further to make awards during the next quarter, April 2016;
2. Agricultural Value Chains Development in Naryn and in South Kyrgyzstan in September. The project plans to improve the livestock (meat and dairy), fruits, berries, and vegetable value chains by developing each segment of the value chain as well as its support markets, such as the feed industry in the case of livestock and the fruit nursery business in the case of fruits.

### Awards

Of the 65 activities supported through the Project Fund in Year 2, 50 are subcontracts awarded to 38 subcontractors (see Table 18) and 15 are grants (see Table 19).

**Table 17: Year Two Project Subcontracts**

#	Subcontractor Name	Purpose
1	El-Pikir - Centre of Public Opinion Study and Forecasting	- Support the activity for improvement production and quality of apricot - GIS mapping of potatoes (seed and ware); maize; and onion plots in Agro Horizon zone of influence (ZOI) including Osh, Jalal-Abad, Batken, and Naryn oblasts
2	AgroKhimiya	- Procurement of fertilizers and pesticides for all VCs
3	LLC "Jash-Ka"	- Services of spraying in selected 1250 demonstration orchards for apricot in Batken Oblast (Apricot VC)
4	Innovatech Ltd.	- Supplier of seeders for small vegetable seeds (Onion VC)

#	Subcontractor Name	Purpose
5	PE Pyak Lyudmila	- Supplier of seeders for small vegetable seeds (Onion VC)
6	Golandskie Semena LLC	- Supplier of onion seeds for Onion VC
7	PE Gorbunov Igor	- Supplier of various vegetables seeds for Nutrition component
8	Elet Innovations	- Supplier of maize seeds and pesticides for Maize VC
9	Anel Trans LLC	- Transportation services for delivering of maize seeds and pesticides to Osh and Jalal-Abad oblasts. (Maize VC)
10	PF TES-Centre	<ul style="list-style-type: none"> <li>- Pre-mobilization of farmers on Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 project in Osh oblast</li> <li>- Potato Value Chain - R2 Seed Potato increased production in Chon Alay, and promotion through demonstrations in ware production areas in Aravan and Kara-Suu of Osh oblast. Services: Mobilization of farmers, conducting trainings and providing field consultations.</li> <li>- Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 in Osh oblast</li> <li>- Agricultural Service Provider in Nursery Value Chain</li> </ul>
11	RAS Jalal-Abad	<ul style="list-style-type: none"> <li>- Pre-mobilization of farmers on Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 project in Jalal-Abad oblast</li> <li>- Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 in Jalal-Abad oblast</li> <li>- Potato Value Chain –Ware potato production in Jalal-Abad</li> <li>- Agricultural Service Provider in Nursery Value Chain</li> <li>- Improving Nutrition through Kitchen gardening in Jalal-Abad oblast</li> </ul>
12	RAS Naryn	<ul style="list-style-type: none"> <li>- Potato Value Chain –Ware potato production in Naryn oblast</li> <li>- Improving Nutrition through Kitchen gardening in Naryn oblast</li> </ul>
13	RAS Batken	<ul style="list-style-type: none"> <li>- Potato Value Chain –Ware potato production in Batken oblast</li> <li>- Improving Nutrition through Kitchen gardening in Batken oblast</li> </ul>
14	TAIC	<ul style="list-style-type: none"> <li>- Pre-mobilization of farmers on Hybrid Maize Value Chain Farmer Mass Demonstrations Season 2016 project in Batken oblast</li> <li>- Mass Demonstrations in Onion Value Chain. Season 2016</li> </ul>
15	RAS Osh	- Improving Nutrition through Kitchen gardening in Osh oblast
16	PE Yusupov Abaibek	<ul style="list-style-type: none"> <li>- Supplier of Backpack motorized sprayer for Apricot VC</li> <li>- Supplier of Backpack motorized sprayer for Onion VC</li> </ul>
17	P.E. Moidinov	

#	Subcontractor Name	Purpose
18	Farmworkers economy "Abdikerim Agronom"	- Services on Maize Value Chain – soil preparation, seeding, irrigation, fertilization, plant protection (pest-control) and harvesting
19	LLC "Agroservis Abiir"	
20	Farmworkers economy "Ziyabidin Ata"	
21	Production Cooperative "Kench"	
22	Agricultural Seed Production Cooperative "Kok-Jar"	
23	LLC "Mariyam"	
24	LLC "Marko"	
25	P.E. Bekbaev	- Machinery services
26	P.E. Abdyrakmanov	
27	Forest Users and Land Users	
28	LLC "Mariyam"	
29	LLC "Agroservis Abiir"	
30	Kok-Jar Cooperative	
31	Nookat Agricultural Cooperative of Seed Producers	
32	Mangyt rural justice	
33	Kyzyl-Senir	
34	BT Innovations	- To assess the Project's target value chains' SME support needs; and to develop a support road map for viable SMEs with huge potential to contribute to the development of competitiveness and expansion of markets of the Project's targeted value chains
35	M-Vector LLC	

#	Subcontractor Name	Purpose
36	Public Association Agro Lead	- To focus on developing markets and improving capacities of downstream players to expand markets in the value chains and businesses AHOP works with
37	Promotank LLC	- To assess the Project's target value chains' SME support needs; and to develop a support road map for viable SMEs with huge potential to contribute to the development of competitiveness and expansion of markets of the Project's targeted value chains
38	Association of Village Health Committees of Kyrgyzstan	- Providing services on providing people with skills in WASH and specific farm-related hygiene practices such as the safe handling of pesticides and other chemicals.

**Table 18: Year 2 Project Grantees**

#	Grantee Name	Purpose
1	Micro Credit Agency "Altyn Oroon"	- Seed Potato increased production and promotion through demonstrations in ware production areas in Batken
2	Microcredit agency "Agrocredit Plus"	- Seed Potato increased production in Chong Alay, and promotion through demonstrations in ware production areas in Aravan and Karasuu
3	"Soyuz Konsultantov" LLC	- Seed Potato increased production and promotion through demonstrations in ware production areas in Jalal-Abad
4	Micro Credit Agency "AKOK Credit Agency"	- Ware potato production in Naryn
5	Association of Agro businesspersons of Kyrgyzstan "Jer Azygy"	- "Silk Road 2016 International Agricultural Exhibition"
6	RAS Jalal-Abad	- Strawberry production and marketing in Jalal-Abad
7	Aravan Agroservice	- Project on marketing potential development of agricultural cooperative "Aravan Agroservice"
8	Agricultural seed production cooperative "Kok-Jar"	- Enhancing MTS capacity to increase outreach of mechanized services to maize farmers
9	"Mariyam" LLC	
10	Farmworkers economy "Abdik-erim Agronom"	



#	Grantee Name	Purpose
11	Farmworkers economy "Ziya-bidin Ata"	
12	"Marko" LLC	
13	"Agroservis Abiyir" LLC	
14	Production cooperative "Kench"	
15	P.E. Moidinov Hashimjan Kirgiz-baevich	

In addition to above mentioned grants, during Year 2, GPD issued 4,028 in-kind grant agreements with beneficiary farmers for input support including seeders, sprayers, seeds and fertilizers under potato, onion, maize and apricot value chains. A total of 1,600 in-kind grants to support the improved nutritional status of women and children were also issued. The total amount of all in-kind grants for the reporting year is **492,264 USD**.

### Grant packages for Years 3 & 4

In September, Agro Horizon submitted the Oasis Agro LLC grant package for USAID approval for the project to develop the dairy and meat industries in southern Kyrgyz Republic. Proposals were received from the following organizations:

1. ELDan Atalyk LLC to increase income of involved farmers through garlic and safflower production and sales and to increase availability of oil seed cake as livestock feed;
2. PF TES Center to create a sustainable self-financing chain of production and supply of high-quality milk (with special focus on winter milk) by farmers from Kara-Suu Rayon to Osh City Dairy Factory;
3. Aravan Agroservice to establish a consolidation center for early potatoes and vegetables in the Aravan district;
4. Agroproduct Asia LLC to establish a consolidation and packing house with 500 tons of cold storage for fresh fruits in Uch-Korgon village of Batken oblast;
5. Turan Group LLC to establish a consolidation center with 1,000 tons of storage capacity for fresh fruits and vegetables and a drying facility for fruits in Kara-Suu District, Osh oblast.

# MONITORING, DATA COLLECTION, AND REPORTING

## ANNUAL PROGRESS

The M&E team was more actively involved in project planning, implementation and reporting processes than in the first year of the project. On-going monitoring by the M&E team, including qualitative studies, quickly identified issues

so they could be quickly resolved. During the Year 2, M&E management developed a data management manual, database management manual, and a toolkit for project partners. The manuals provided guidance for M&E, technical staff, and partners.

Eight of eleven outcome indicators in the Year 2 work plan are presented in this report. The three outcome indicators that are not reported on are (1) # 13, “Organizational capacity of assisted organization”; (2) #19, Percentage of respondents who know at least 3 of the 5 critical moments for handwashing; and (3) # 18, “Percentage of HHs with soap and water at a hand washing station community used by family member.”

The reasons these three indicators were not reported for the following reasons:

The unit of measurement for indicator # 13 changed from a score base to a number base. Accordingly, the activities that were originally planned changed. This new approach changed the definition of the indicator that caused results of the original indicator in the report. Therefore, this indicator’s results will be in the narrative part of the Task-3 but not in the indicators’ table.

The approach to the indicators # 18 and 19 changed based on the results on the first baseline study which revealed that indicator #19 over achieved in Year 1 at 164 percent, resulting in a 113 percent for LOP. The two sanitation related indicators’ activities were combined into one that was focused on Agricultural WASH in the first quarter of the Year 2. Since the two indicators were combined into one (AgWASH) set of activities; the indicator table will not present the results of the both indicators. The results of the AgWASH activities are described in the narrative part of the Task-4 report<sup>2</sup>.

## SUPPORT TO PROJECT PARTNERS

### Kick-off Meetings

Overall, fifteen kick-off meetings were organized and conducted by the M&E team in all four ZOI oblasts; Osh, Jalal-Abad, Batken, and Naryn. The key objective of the kick off meetings were to review contract terms, finalize action plans, provide guidance on how to complete M&E forms, and submit reports. The M&E team developed and implementing partner toolkit that includes required forms, policies and regulations, including branding and marking.

### Coaching on M&E form and monitoring visits

The M&E team provided coaching to implementing partners to ensure better quality data collection; i.e., filling in forms and drafting reports on completed tasks. The total number of such support was 32 in all four oblasts. During the coaching activities, M&E staff completed more than 50 field monitoring visits.

### Supporting activities

The M&E team supported the project partners in organizing and conducting events such as business forums, demo days, and over 100 trainings/workshops to ensure the proper collection of BNF data.

## DATA ENTRY AND COLLECTION

### Data entry process

The M&E team entered more than 35,000 forms into the Agro Horizon database during the year. The data collection process greatly improved as the M&E team participated in project activity planning and implementation processes.

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<sup>2</sup> Both indicators were excluded in the modified AMEP; i.e. the M&E indicators table will not track these indicators in the PYs 3 and 4.

Recognizing that this level of data entry was labor intensive, at times requiring all six M&E staff plus three interns, management introduced an electronic data collection (EDC) system. The initial stages are completed, including the development of a mobile application, intermediary database, staff training and initial field testing. In the next two years, Agro Horizon will collect the majority of data through the EDC system.

### **Regular M&E activities**

The M&E team supported the project by conducting spot checks, monitoring visits, and reviewing grant deliverables. In accordance with the AMEP, the M&E should conduct at least one spot check visit in a quarter; that means the overall spot check visits should be in one PY is not less than 64 times. During the PY-2 the M&E coordinators conducted about 80 spot check visits that followed with the reports. The field trips and other spot check activities followed by reports that included two key sections, ‘recommendations’ and ‘follow-up.’ Accordingly, the M&E reports were followed by the follow-up activities that were tracked by the technical and M&E teams.

Also, the M&E managers developed activity and grants tracking system that functioned during the whole PY-2. The activities were based on WP-2 while the grants upon the signed contracts with partners. The intermediary and quarterly results were shared with the technical team members that improved the project implementation process in terms of meeting the timelines.

### **Qualitative data collection**

In Year 2, the M&E staff conducted a study to identify successes and challenges working with our implementing partners. The M&E team developed a qualitative data collection guide and accompanying tools to conduct the study. The M&E team conducted 12 focus group discussions (FGDs) and eight in-depth interviews (IDIs) covering all four ZOI oblasts. The results of the study indicated that participants are satisfied with project interventions and eager to continue cooperation with the Agro Horizon. The timely provision of inputs (seeds and fertilizers) and better MTS services and other subcontractors were named as the top challenges. After such challenges were identified, the M&E team worked with the Grants & Procurement department on lessons learned and took prevention steps.

Qualitative data was also collected in stakeholder meetings to identify successes and challenges. As soon as the challenges were identified, the M&E team worked with Task managers on follow-up activities through the other meetings and spot checks. Potential success stories were shared with the communications team for further development and sharing of project achievements.

### **Research and Studies**

The M&E team were involved in three main studies; baseline of value chains, GIS mapping, and the annual beneficiary survey, conducted by SIAR, El Pikir and M-Vector, respectively. M&E staff were involved in the development of the SOWs, implementation of TOTs, and monitoring field activities.

### **Project database**

During Year 2 the project’s database was simplified to make data entry and retrieval easier. A new user-friendly platform, LEAP (Learning, Evaluation, Analysis Platform), was installed. This portal is a part of the current M&E database and tracks all project indicators.

### **E-data collection (EDC) system**

During the PY the Agro Horizon project worked together with USAID on establishing an EDC system. Several coordination meetings with USAID and other economic growth projects took place. The project contracted “IT Attractor,” a local IT company, to develop the e-data collection system, which is anticipated to be fully functional by the second quarter of Year 3.

USAID requested GIS mapping of beneficiary farmer land plots who received in-kind grants. The total area mapped was 1,386 ha belonging to 3,343 farmer plots covering the maize, apricot, onion, and potato value chains in all four ZOI oblasts. The GIS data will be used by the USAID and the Agro Horizon project management.

### **Professional development**

The M&E staff took part in various learning activities including workshops, e-courses, conferences, and other activities. The M&E Director conducted five M&E sessions for the M&E and technical staff focused on M&E and overall project management strategies in Bishkek, Osh, and Naryn offices. Three EDC workshops, two webinars, two e-courses GIS from the University of California, and several Skype conferences with the AVHQ expert took place. M&E Director and Database Officer attended the ACIDI/VOCA-wide workshop, in Accra, Ghana on best practices related to data collection methodologies with a particular focus on e-data collection. Main takeaways were on best practices in data collection for gross margin (GM)/sales and functionality of database dashboards. Data for GM/sales results will be collected in the first quarter of Year 3. Data collection for the GM/Sale will be separate research in the Q2 of Year3 that will give the results for the Year 2. Thus, in Years 3 and 4, program managers will use dashboards to report quarterly and annual results and the requirement should be included in the AMEP as protocol.

## **LESSON LEARNED & NEXT STEPS**

### **Data collection and entry process**

Since the data collection entry process is time consuming, it required more human resources than the M&E has in its structure. Therefore, the M&E department hired three interns for data entry in Year 2. To resolve this issue, project management and USAID supported the idea to introduce the e-data collection system (EDC). In the Years 3 and 4, project partners will be required to collect data using EDC devices as a part of their contractual obligations. The Project will provide the tablets with programmed information for collection.

### **Support to partner organizations**

Collecting data with the EDC system will require some education and follow-up activities, the M&E team will technically support the data collectors. Although the field project managers and the partners will be trained by STTAs on EDC, they will still need support from the M&E team during the project year. This support is also needed to ensure the timely collection and accuracy of data from the field.

Kick-off meetings and coaching are key activities that must be conducted for each project grant and each value chain activity with the involvement of project task managers and cross-cutting department including M&E, grants, and communications. Likewise, all partners should involve their managers, field officers, financial managers, and other key implementers.

### **Qualitative data**

More qualitative data should be collected by the M&E staff through FGDs and IDIs at least 2 or 3 times during each project year. Also, the M&E team should be actively involved in the development of tools and methodologies used by external research companies.

### **Data collection timelines**

M&E forms that are not submitted in a timely fashion by project managers results in data entry bottlenecks. In order to avoid this in Year 3, all M&E forms with accurate data should be submitted by task managers or partners at least 15 days earlier than the quarter ends and 20 days before the end of each project year. This deadline requirement should be included in partners' scopes of work under Milestones/Deliverables timelines.

### **Data collection & reporting principles**

*Gross margin/Incremental Sales:* In Year 1, data related to income and sales were not accurate since M&E tried to collect this data through the Annual BNF Survey; however, harvesting and post-harvesting sales occurred after the end of the project year. In Year 2 we split the Annual BNF survey into the two stages to ensure that gross margin and incremental sales will be collected and reported on in Q2 of Year 3. The Year 2 Annual Report includes only *preliminary* results of the gross margin and incremental sales.

*Formal Data and Dashboards:* The dashboards from the project's database should be regularly shared with and used by the task managers for drafting and finalizing the project formal reports that are mainly quarterly and annual. Other cross cutting departments, including Grants, Communications, Gender, and Environmental Compliance should receive this data. M&E should present this information quarterly, prior to writing the quarterly report, in a meeting to use the data to identify any adjustments that might need to be made in program implementation.

**Table # 19: Gantt Chart of Performance Monitoring & Evaluation Timeline for Year 2**

Activities and Tasks	Q1: Sep-Dec	Q2: Jan-Mar	Q3: Apr-Jun	Q4: Jul-Sep	Notes and who is responsible
Routine monitoring and data collection (output indicators)					Agro Horizon M&E team in coordination with the project staff and partners
Quarterly reporting					Agro Horizon M&E team in coordination with COP & DCOP
Routine data quality spot check visits					Agro Horizon M&E team
Outcomes data collection (annual survey)					Agro Horizon M&E team with external enumerators
Annual report and annual work plan preparation					Agro-Horizon M&E team in coordination with COP & DCOP
PIRS update					Agro-Horizon M&E team in coordination with COP
Database and MIS development/improvement					Agro-Horizon M&E team with HQ IT specialist
Elaboration and publication of success stories and lesson learned					Communications Manager in collaboration with M&EL team
Internal project review and learning with partners and stakeholders					Agro-Horizon M&E team in coordination with the project staff and partners
Internal data quality assessment					M&E Director

# MANAGEMENT, CROSS-CUTTING, AND ADMINISTRATIVE

## MANAGEMENT

### AGRO HORIZON COLLABORATION TABLE

The following table lists critical stakeholders and partner institutions that the project has worked with during Year 2.

**Table 20: Project Collaborations with Stakeholders and Partner Institutions**

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Abdykerim Agronom	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers in Jalal-Abad oblast
Abiir LLC	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers in Osh oblast
Adal Azyk LLC	Built partnership on implementing integrated value chain activities in meat sector in Kochkor town, Naryn oblast
Agro Asia	Meeting with Director of Agro Asia to discuss issues of acquiring, consolidating, analysis of market information and dissemination of such market information among the project's beneficiaries and partner organizations. Also, the issue of mapping of agro industry stakeholders/players
Agro Elita cooperative	Working on setting up a fruits and berries drying and blast freezing facility in Osh
Agro Product Asia	Built partnership on establishing a fruits and vegetables consolidation centre in Uch Kurgan
Agrolead	Conducted successful B2B events with participation of farmers, SMEs and buyers
Aiyl Bank	Initiating collaboration between Agro Horizon and Aiyl Bank
Alaiku Organics LLC	Working on setting up a milk collection and processing facility in remote and mountainous Alaiku region
Agricultural cooperative “Aravan Agro service”	Support to Cooperative for marketing and sale of early potato

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Agricultural seed production cooperative "Kok-Jar"	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers
Agro Inform Asia	Meeting with representatives of the Agro Inform Asia company to discuss issues of acquiring, consolidating, analysis of market information and dissemination of such market information among the project's beneficiaries and partner organizations.
Agro Product Asia	Development of fruit VC intervention model: Consolidation center for fruits in Uch Korgon district, Batken oblast
Agricultural cooperative Agro Elita	Development of fruit VC intervention model: Dried fruit processor in Osh city, Osh oblast
Ak Tilek LLC	Development of livestock VC intervention model: Milk processor in Jalal-Abad oblast
Aravan Agro Service cooperative	Successfully collaborated on marketing of early potato. Built partnership on setting up a cold storing facility for vegetables in Aravan
Association of Fruit and Vegetable Enterprises (AFVE)	The Association has requested support to analyze the fruit/vegetable and meat/dairy industries in Kyrgyzstan
Association of Producers and Suppliers of Meat and Dairy Products of Kyrgyzstan	Meeting with the Executive Director of the Association to discuss potential collaboration
Association of Village Health Committees (AVHCs) under Ministry of Health	Obtained USAID approval for developed project proposal for cascade training on nutrition, farm hygiene and WASH messaging
Atalyk Group Agroservice	Development of vegetable VC intervention model: Garlic processor in Uzgen district, Jalal-Abad oblast
PE Avaz Abduraimov	Discussions on collaboration in Y3/4 for potato processing and consolidation in Osh
Bai Tushum Bank	Negotiation on financing maize farmers
Bai Tushum Innovations Financial Fund	Financing acquisition of machinery and equipment by SMEs
Batken Administration	Frost protection measures of apricot trees in Batken oblast



PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Batken Azygy association	Development of apricot VC
Bio KG (Federation of Organic Agriculture Development)	Discussions on co-existence conditions for organic and conventional apricot farming
Business and Finance Consulting Company	Initiating partnership with BFC Company (technical consultant on KfW grant for agro financing)
Business Association "JIA"	Meetings with the Deputy Executive Director and other representatives to discuss potential collaboration and current state of affairs in the private sector (agriculture) and the Association's interest to participate in the public private collaboration in the framework of the inter-agency Agro Policy Working Group
Concept master LLC	Working on establishment of integrated tomato production and processing operation in Jalal Abad
Cooperative AiKOK	Project partner on early potato in Batken oblast
Cooperative Altyn Alma in Nookat	Meeting to discuss possible collaboration in Y3/4
Cooperative "Alysh Dan"	Discussion on plant protection methods and issue of some organic farmers joining project on apricot productivity increase in Batken region
Cooperative Arpa-Sai Bereke bagy in Kadamjai rayon	Project partner on nursery in Batken oblast
Cooperative ArsKOK	Project partner on early potato in JA oblast
Cooperative BiyKOK	Project partner on early potato in Batken oblast
Cooperative Kench in JA oblast	Project partner on nursery in JA oblast and MTS
Cooperative Mol Tushum	Apricot processing company in Batken and project partner on F2B meeting in Batken
Cooperative NUKOK	Project partner on seed potato supply in Osh oblast
Cooperative Top Agro in Osh oblast	Project partner on nursery in Osh oblast
Cooperative Zoloto Doliny	Project partner on early potato in Osh oblast
Chamber of Commerce in the Jalal-Abad oblast	Participated at the round table in the Jalal-Abad city organized by the Chamber of Commerce of the Jalal-Abad, UNDP and the Ministry of Foreign Affairs of

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
	Finland on consolidating all stakeholders' efforts to have comprehensive and effective measures in stimulating regional trade, attracting investments and establishing new forms of cooperation. The round-table addressed the role of agriculture in the economic development of the region
Dary Lesa LLC	Working on expanding berry production and processing operations in Jalal Abad
Demir Kyrgyz International Bank	Agro Horizon supported Demir Kyrgyz International Bank by attracting SITTA Consultant who worked with the bank and developed the Environmental and Social Risk Management Regulation and the Environmental and Social Risk Management Procedure.
El Pikir	Implementing partner for apricot value chain. Also, partner for GIS mapping of the VCs in all ZOI oblasts
ERfruit	Development of fruit VC intervention model: Fruit juices and purées processor
Farmers Organic Garden LLC	Working on expanding juice production and fruit drying operations in Jalal Abad
Farmworkers economy "Ziyabidin Ata"	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers
First Microcredit Company	Financing maize farmers
Frunze Hypermarket	Collaborated on linking producers with local buyers, where Frunze agreed to buy from farmers and SMEs in Osh oblast
GIZ, SDC	Participation in steering committee meeting of their Jalal-Abad Sustainable Economic Development program
Government of the Kyrgyz Republic (Department of Agro-industrial Complex)	Establish an inter-agency Agro Policy Working Group (APWG)
International Business Council (IBC)  United Nations Development Program in the Kyrgyz Republic (UNDP)	Meetings with the Executive Director and representatives of the IBC's Sustainability and Corporate Social Responsibility Committee and representatives of UNDP to discuss the current regulatory framework for public private partnership and challenges in the implementation of the law on Public Private Partnership in the light of possibilities of capital investments in the development of the irrigation systems in Kyrgyzstan
IT Attractor	Modification process of the M&E Database to e-data collection system
Jalal-Abad Oblast Administration	Implementation of Business Forum in Jalal-Abad city was organized with the help of the JAO Administration
Jash Ka company	Spraying services for apricot farmers

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Jer Azygy Association of Agro businessmen of Kyrgyzstan	AHOP supported conduction of Silk Road 2016 agricultural exhibition
Jogorku Kenesh, the Parliament of the Kyrgyz Republic	Work with the Committee on Agrarian Policy of Jogorku Kenesh to identify main directions of agriculture sector
JSC Kelechek	Development of livestock VC intervention model: Meat processor in Osh city, Osh oblast
K-Max	Meeting with representatives of K-Max company to discuss issues of acquiring, consolidating, analysis of market information and dissemination of such market information among the project's beneficiaries and partner organizations
Kyrgyz Association of Forest and Land Users	Meeting with Director of the Association to discuss current challenges in land and water management and irrigation systems in Kyrgyzstan and potential collaboration with the Agro Horizon project
Kyrgyz Investment and Credit Bank (KICB)	The Agro Horizon project cooperated with KICB on promotion of use of the 'mobile wallet' system - Elsom
"Kyrgyzstan" commercial bank	The Agro Horizon project cooperated with the commercial bank "Kyrgyzstan" on promotion of use of the mobile banking / mobile wallets systems
Mariyam LLC	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers in JA
Moidinov PE	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers in JA
Marko LLC	Enhancing MTS capacity to increase outreach of mechanized services to maize farmers
MCA Financial Fund “BT Innovations”	The vendor provides services on post-harvest, storage and processing facilities assessment and upgrading options
MCA Soiuz konsultantov LLS	Project partner on seed fund establishment in JA
MCA Altyn Oroon PF	Project partner on seed fund establishment in Batken
MCA Agrocredit+ PF	Project partner on seed fund establishment in Osh
MCA AKOK PF	Project partner on seed fund establishment in Naryn
M-Vector LLC	This vendor responsible for providing services on B2B and Export Market Development

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Ministry of Agriculture and Amelioration of the Kyrgyz Republic (MOA)	Capacity building activities for the Policy Unit of MOA, support with the elaboration of the National Program on Drip Irrigation in KR, frost protection measures of apricot trees in Batken oblast
Ministry of Economy of the Kyrgyz Republic (MOE) State Tax Agency of the Kyrgyz Republic (STA)	VAT exemption of agricultural equipment for project beneficiaries
Oasis Agro	Development of livestock VC intervention model
Organic Apricot producing Cooperative “Alysh Dan”	Discussion on plant protection methods and issue of some organic farmers joining project on apricot productivity increase in Batken region
OSKO and AgroPlast	Development of fruit VC intervention model: Dried fruit processor in in Kyzyl-Kiya, Batken oblast.
Promotank LLC	Promotank provides services on SMEs assessment and will make development plan
Public Association “Agro-Lead”	AgroLead provides services on B2B and Domestic Market Development
RAS Batken	Contracted to implement kitchen gardening project in Kadamjay rayon of Batken oblast to improve dietary diversity of women and children Implementation of ware potato VC activities Discussions on potential collaboration on livestock feed in Y3/4
RAS Jalal Abad	Contracted to implement kitchen gardening project in 5 rayons of Jalal Abad oblast to improve dietary diversity of women and children Implementation of Nursery, Maize, Ware potato VC activities
RAS Naryn	Contracted to implement the project in 6 rayons of Naryn oblast to improve nutrition through the kitchen gardening Implementation of Ware Potato VC activities
RAS Osh	Contracted to implement the project in 3 rayons of Osh oblast to improve nutrition through the kitchen gardening Implementation of Ware Potato activities
Russian-Kyrgyz Development Fund	Initiating and exploration of possibilities for collaboration

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
State Disease Prevention and Sanitary Inspection Department	Collaborate in Behavior Change Communication materials development on farm hygiene promotion
State Tax Agency of the Kyrgyz Republic (STA)	VAT exemption of agricultural equipment for project beneficiaries.
SIAR research and consulting company	Implementation of PY-2,3 Value Chain Baseline Survey
SUN alliance	Discussed ways to integrate nutrition messaging into agricultural activities through local NGOs involved in nutrition sensitive agriculture projects
TAIC (Training, Advisory and Innovation Center)	Implementation of onion VC activities
TES Centre	Implementation of nursery, seed potato, maize VC activities
Toibos	Development of livestock VC intervention model: Slaughter house in Kochkor town, Naryn oblast
Totuke farmworkers economy	Project partner on early potato in Naryn oblast
Trade House "Vkus Solnza"	Meetings and discussions with representatives of the Trade House on value chain development, marketing and promotion of VCs and processed products (fruit and vegetables) and potential collaboration with Agro Horizon project.
Trainings, Advisory, Innovations and Consulting Centre (TAIC)	Implementation of onion VC activities
Turan LLC	Built partnership on establishing a fruits and vegetables consolidation centre in Kara-Suu
Union of Cooperatives of Kyrgyzstan	Cooperation in development of value chains. Meetings regarding USAID FORWARD
UNDP, OSCE, GIZ, SDC	Collaboration in organizing business forum in Jalal-Abad
USAID Collaborative Governance Program (CGP)	Meetings with the Chief of Party and other representatives of the USAID Collaborative Governance Program (CGP) to discuss possibilities/opportunities within the State Social Procurement System to support the development of pluralistic approaches in provision of agricultural advisory services
USAID Good Governance and Public Administration	The Agro Horizon project team collaborated with GGPAS in the area of Human and Institutional Capacity Development (HICD), including organizing a

PROJECT/ GOVERNMENT BODY	YEAR 2 PROJECT COLLABORATION
Strengthening (GGPAS) Program	joint one-day workshop entitled "Practical Instruments of Performance Improvement on Examples of Organizations in Kyrgyzstan" held in Bishkek on October 30, 2015
USAID SPRING Project	Received module on dietary diversity

## CROSS CUTTING

### GENDER MAINSTREAMING

#### ANNUAL PROGRESS

##### Gender Audit of ASPs

To increase the capacity of partnering ASPs on gender equity, in Quarter 2 the project carried out a gender audit of eight contracted ASPs and shared the results with stakeholders at a roundtable earlier this year. The audit revealed that almost none of the organizations had a gender policy, gender components or gender specialist, despite having attended gender trainings by different donor organizations. Only RAS Osh had a gender person in the past who conducted trainings to increase staff capacity, who participated in different gender- and women-related events, and who planned and tracked women-related project activities.

All organizations had a culture where women and men roles at work and in society were recognized and respected. Organizations were very family-friendly; staff with extra family or health issues were entitled to take flexible working hours upon management's approval. Although staff salaries were not based on sex, no balance of staff was maintained and no policies were in place to retain women professionals.

None of the organization had a monitoring and evaluation capacity, therefore, no gender-disaggregated information was collected and analyzed on a regular basis. Advocacy and communication of gender achievements were implemented only in cases where project deliverables required it. All staff knowledge on gender was limited to women and women-related interventions.

These findings will be used to collaborate with other project ASPs and SMEs partners in years 2 and 3 to increase their understanding of achieving gender equity in agriculture.

##### Value Chain Gender Analysis

In Year 2, the project conducted a gender analysis of the berry value chain. An international consultant with a background in agriculture and gender mainstreaming collaborated with local gender staff to develop the analysis methodology and visit all four project oblasts to conduct a survey, focus group discussions, and interviews with key informants. Final observations described gender roles and constraints of men and women farmers in strawberry, raspberry and black currant value chains, existing services and input suppliers, different stakeholders and market for berries in the country.

The analysis revealed that the berry value chain is mainly women-centric with small-scale production. While men or husbands help prepare the land, apply chemicals and fetch water, women and children select and buy the runners, plant, trim and weed, apply water and fertilizers, harvest, sort and sell the berries in the market. Usually women collect



the proceeds from sales and decide how to spend it. Household members do not conduct economic analysis or business planning at the household level. Women and men farmers have equal access to different production inputs, including runners, seeds, fertilizers, insecticides, pesticides, machinery, loans, labor force, and extension services. However, differences exist in frequency and commonality of how much women and men farmers make use of the inputs. Women tend to use more of their own labor, apply more organic fertilizer, use less extension services, loans and machinery services than men.

### **Value Chain Activities**

In the reporting period, the project developed a number of berry value chain concept notes with a focus on expanding production areas and increasing the number of women growers to include marketing of frozen and fresh berries to processing companies in the south, Bishkek and Russia.

The project aims to increase women's involvement throughout entire value chains. The project is currently identifying additional women-owned SMEs for partnership. To date, seven potential SME partners working in processing of berries, meat, and vegetables, as well as a logistic center, have been identified. While two companies are owned by men, they provide jobs mainly to women.

### **Gender Mainstreaming Guidelines**

ACDI/VOCA's Gender Mainstreaming Director, Jenn Williamson helped to strengthen the project's gender strategy. She helped write gender-sensitive implementation guidelines and principles, internal gender procedures, as well as a gender checklist for activity development.

Agro Horizon activities focus on empowering women and men equally to foster the principle of equality on the following three main disempowerment domains 1) access to and absence of decision-making regarding credit, 2) group membership and 3) workload. Further, Agro Horizon activities implement specific activities that foster the empowerment of women regarding input to productive decisions, ownership of and decision making over assets as well as speaking in public.

## **LESSON LEARNED & NEXT STEPS**

The baseline survey shows that women in the Zone of Influence demonstrate a high WEAI of 63.1 percent, indicating that women are quite empowered. However, based on the SME assessment carried out in Q4, it was found that only 15 percent of owners or managers of SMEs engaged in agriculture in the ZOI are women. Based on this information and direction from USAID, Agro Horizon will focus on strengthening women in agribusinesses by making a deliberate effort to support women owned/managed SMEs and SMEs/farming activities that are dominated by women in the priority value chains. In line with USAID's guidance, the project will de-emphasize further gender studies/analysis including: gender analysis of the customs process and other trade policies and practices to assess the impact on women, gender analysis of the business environment to confirm gender differences in the impact of the current policies, for example, a fixed tax payment scheme ("patent"), and other similar studies.

## **ADMINISTRATION**

### **SUMMARY OF ADMINISTRATIVE/STAFFING ISSUES**

In late January, Agro Horizon COP, Martin West fell ill and was evacuated from Kyrgyzstan. DCOP Alisher Amanbaev became acting COP until Agnes Luz joined the project as COP in mid-March.

In Year 2, Agro Horizon created the following new positions; Agro Enterprises Coordinators (2), Regional M&E Manager, Public Private & Partnership Training Coordinator, Market Research Training Manager, Value Chain Coordinators, Grant & Procurement Director, Grant Coordinator, Procurement Coordinator, and Procurement Assistant. The STTA contract for the Communications Manager position expired and was expanded into two long term positions; Communication & Learning Manager in Bishkek and Communication & Writing Coordinator in Osh. The Women's Agro-enterprise Development Specialist and Value Chain Coordinator were hired in Osh. The IT Manager resigned and a new IT Manager was hired. In Task 3, the Enabling Environment Director resigned and an Access to Financial Service Manager was hired. Both contracts for the Procurement Assistant and the M&E Assistant were converted from short term agreements to full-time employees. By the end of Year 2 all three offices were nearly 100 percent staffed.

During Year 2, 11 local STTAs and 5 international consultants were mobilized. See Annex V for details.

The following HQ assignments took place in Bishkek and Osh: Project Manager, Art Gandilyan visited Bishkek from March 20 – 26; Jenn Williamson, Director of Gender Mainstreaming & Women's Empowerment from January 30-February 11; Charlotte Block, Director of Nutrition from February 19 to March 1; Rebekah Bakewicz, Project Coordinator from February 15-March 5, Jacob Grey, Technical Director of Local Capacity Building from March 3- 20, Scott Vickland, Vice President, IT from February 20 – March 9, and Art Gandilyan, Project Manager, from March 20-26.

# ANNEX VI: SUCCESS STORIES



**USAID**  
FROM THE AMERICAN PEOPLE

**KYRGYZ REPUBLIC**

## SUCCESS STORY

### Maize fields double their yield

In 2015, the USAID Agro Horizon project promised double the yield to 1,200 maize farmers.



Photo caption: Mr. Kadyrbek Baratov standing in front of his maize yield playing with his kids.

Photo: Sevara Baibulatoba/USAID AHOP

***"I will keep a part of the yield to feed my cattle during the winter. I will sell the rest and with the profit I'll purchase coal for heating the house in winter and buy a bicycle for my kids."***

*Kadyrbek Baratov,  
Jalalabad maize farmer*

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Nearly all farmers in the southern oblast of Jalal-Abad in Kyrgyzstan grow maize according to traditional methods learned during Soviet times. Maize is primarily used as livestock feed during winter. Low productivity levels related to outdated techniques and high manual labor costs limit the profitability of maize. Even when grown for feed for their own animals, farmers' yields are so low that they must buy additional animal feed to get through the winter.

Mr. Kadyrbek Baratov, a 35-year-old farmer, always knew he would follow in his father's footsteps and grow maize. But when his father passed away when he was 18, he felt enormous pressure to take care of his mother and younger sister. He farmed the way his father taught him, barely surviving during the most difficult times.

Mr. Baratov is married now and has a family of his own. In 2015, when he learned that USAID's Agro Horizon Project was looking for maize farmers interested in learning new agricultural technologies that promised to double his yield, Mr. Baratov jumped at the chance. In fact, he told his neighbors about the opportunity and before he knew it, he created a group of 20 farmers that joined the project.

Mr. Baratov applied what he learned on his own fields and the promise of doubled the yield came true.

"In the past, 50 acres would give a maximum of 3 tons of maize. My entire family, including my wife, my sons, aged nine and seven, and my five-year-old daughter helped me in the field. We had to work hard together. This year, with the help of USAID, I seeded high resistance hybrid seeds and harvested twice the yield on the same amount of land. It's like a present to my family. Because of the mechanized services, my wife spent more time with the kids at home. Most importantly, I didn't have to take my kids out of school to help work the fields. Even I had more time to complete the construction of our house," says Mr. Baratov.

Mr. Baratov was one of 1,200 maize farmers that USAID Agro Horizon supported in Jalalabad. Through training sessions and hands-on field demonstrations learned best practices for advanced maize growing. Farmers cost-shared 50% of the cost of high quality hybrid maize seeds, fertilizers and pesticides. The project provided mechanized services including soil preparation, harrowing, spraying, cultivation and harvesting at no cost to the farmers.

*The USAID Agro Horizon Project aims to raise smallholder farmers' incomes by expanding markets and increasing the competitiveness of targeted agro sectors. The project increases employment in the agricultural sector, especially for women and youth, while improving the availability of nutritious foods.*





**USAID**  
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# KYRGYZ REPUBLIC

## SUCCESS STORY

### Aravan potato farmers achieve record profit

**In 2015, oversupply led to an abrupt drop in prices, and farmers lost money because their expenses exceeded revenue.**



Photo caption: Mr. Abdunabi Temirov standing in front of his early potato field

Photo: Said Kyrgyzbaev/TES Center

***"Last year I couldn't repay my car loan. With this year's profits, not only can I repay my bank loan, I can buy two cattle, four sheep, quality potato seed and fertilizers for next year, and pay for my daughter's wedding."***

*Abdunabi Temirov,  
Aravan early potato farmer*

Aravan rayon is a populous agricultural valley with limited land resources in the southern Kyrgyzstan. Every year around 500 ha are planted with late potato plants in Aravan rayon but potato production is rarely profitable for local farmers because late potatoes are harvested when the market is oversupplied and prices are low. Last year, Mr. Abdunabi Temirov, a potato farmer, took a bank loan to buy a car relying on his potato income to repay the debt. Despite working hard throughout the farming season with his wife, two sons and daughter, profits were so low that he could not cover half of the loan. Low quality potato seeds, inability to hedge market price and lack of direct links with wholesale buyers are the main reasons Mr. Temirov's potato harvest didn't meet his expectations.

Mr. Temirov is one of 217 potato farmer members of the Aravan Agro Service (AAS) cooperative that switched to early potatoes and learned advanced agro technologies through training sessions and field demonstrations organized by the USAID Agro Horizon Project. The project helped him purchase high quality potato seeds, fertilizers and pesticides at 50% of the total cost.

With this support, the cooperative members increased yields from 10 to 25 tons per hectare, totaling 600 tons with after sales earnings of about 9 million of KGS. Mr. Temirov planted the high quality seeds and applied the techniques that he learned from the project's regular consultations and saw impressive results. By the end of June, Mr. Abdunabi Temirov harvested over than 10 tons of early potatoes from 57 acres and sold for the high price of 18 KGS per kg. His gross margin is nearly in ten times more than before.

*"Last year I planted a late potato variety on 54 acres and harvested ten tons. The potato had a strange elongated shape that didn't meet market requirements so I sold only part of my harvest at low prices between 5-12 KGS per kilo, earning only 12,000 KGS. This year I planted early potato varieties on 57 acres and harvested 10.3 tons. I sold all my harvest at good prices and made 115,550 KGS profit -- enough not only to pay for bank loan, but also to buy two cattle, four sheep, quality potato seeds and fertilizers for next year, and pay for my daughter's wedding expenses,"* Mr. Temirov said.

USAID Agro Horizon Project helped the AAS cooperative establish a revolving potato seed fund that ensures farmers receive high yield, disease free, and good quality seeds year after year.

*The USAID Agro Horizon Project aims to raise smallholder farmers' incomes by expanding markets and increasing the competitiveness of targeted agro sectors. The project increases employment in the agricultural sector, especially for women and youth, while improving the availability of nutritious foods.*

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