



USAID
FROM THE AMERICAN PEOPLE

CENTRAL ASIAN REPUBLICS

USAID AGRICULTURAL VALUE CHAINS (AVC) ACTIVITY ACTIVITY MONITORING AND EVALUATION PLAN (AMEP)

31 AUGUST 2015

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

USAID AGRICULTURAL VALUE CHAINS (AVC) ACTIVITY

ACTIVITY MONITORING AND EVALUATION PLAN (AMEP)

Program Title:	USAID Agricultural Value Chains (AVC) Activity
Sponsoring USAID Office:	USAID/Central Asian Republics, Uzbekistan Country
Office Contract Number:	AID-176-C-15-00001
Contractor:	DAI
Date of Publication:	August 2015
Chief of Party:	Charles May
Project Manager	Kat Cooley

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

CONTENTS

Contents

- CONTENTS 3**
- ABBREVIATIONS 4**
- OVERVIEW..... 5**
 - BACKGROUND..... 5
 - AGRICULTURAL VALUE CHAINS PRINCIPLES 5
 - USE OF CAUSAL MODEL AND LOGFRAME 6
 - MONITORING, EVALUATION, ANALYSIS AND COMMUNICATION..... 6
 - AVC APPROACH 7
 - ME&L UNIT 8
- DATA COLLECTION, ANALYSIS AND COMMUNICATION 9**
 - ESTABLISHING THE BASELINE, COLLECTING AND STORING THE DATA..... 9
 - REGULAR DATA ANALYSIS AND ADAPTIVE LEARNING 9
 - DATA QUALITY..... 10
 - REPORTING 10
 - UPDATES TO AMEP 10
 - ASSUMPTIONS 10
- INDICATORS..... 12**
 - TARGETS 13
- CALENDAR PLAN 15**
- THE AMEP INDICATOR TABLE 16**
- ANNEX A: INDICATORS AND TARGETS..... 17**
- ANNEX B: INDICATOR INFORMATION TABLE 18**
- ANNEX C: INDICATOR REFERENCE SHEETS 20**
- ANNEX D: PERFORMANCE INDICATOR TRACKING TABLE (PITT)..... 30**
- ANNEX F: DATA COLLECTION PROCESS 34**
- ANNEX G: CAUSAL MODEL..... 36**

ABBREVIATIONS

AMEP Activity Monitoring and Evaluation Plan

AVC USAID Agricultural Value Chain Activity in Uzbekistan

COP Chief of Party

DAI Development Alternatives Inc.

EOP End of Project

FY Fiscal Year

ha hectare (10,000 square meters, 100 meters by 100 meters, 2.47 acres)

LOP Life of Project

MIL Master Indicator List

M&E Monitoring and Evaluation

ME&L Monitoring, Evaluation, and Learning

MOU Memorandum of Understanding

PPR Performance Plan and Report

USAID US Agency for International Development

USG United States Government

RDCS Regional Development Cooperation Strategy

TAMIS Technical and Administrative Management Information System

OVERVIEW

The Agricultural Value Chains (AVC) Activity supports Development Objective #1 under the RDCA - Expanded Diverse and Competitive Trade and Markets. Specifically, the activity will support Intermediate Result (IR) 1.1 - A More Diverse and Competitive Private Sector; and IR 1.2, Enhanced Agricultural Competitiveness and Food Security. In support of the Development Objective, the AVC activity will seek to: (1) create employment opportunities; (2) improve incomes; (3) increase fruit yield and quality; (4) increase packed and processed output; (5) increase targeted fruit and vegetable exports; (6) link USAID's producers and processors to international markets; (7) strengthen relationships between educational institutions and the private sector. This Activity Monitoring and Evaluation Plan (AMEP) describes the indicators in AVC's monitoring and evaluation system along with a roadmap to collecting, analyzing, and reporting results.

BACKGROUND

The Activity Management and Evaluation Plan (AMEP) is an important tool for managing and documenting AVC performance. It enables timely and consistent collection of comparable performance data in order to make informed program management decisions. When selecting indicators for this AMEP, efforts were made to minimize the cost of data collection and reporting. Indicators were based on the results expected listed in the Contract.

The AMEP will assist the team to plan and manage the process of assessing and reporting progress towards achieving program objectives. It is a critical tool for planning, managing, and documenting how performance data is collected and used. An AMEP serves to:

- Define specific performance indicators, determine baselines and set targets
- Plan and manage the quarterly and annual report data collection process to meet quality standards
- Incorporate relevant data collection requirements into activities
- Communicate expectations to beneficiaries and partners responsible for producing the outputs intended to cause measurable changes in performance

An AMEP contributes to the effectiveness of the performance of the project by ensuring comparable data is collected on a regular and timely basis. With a wide variety of activities it is essential that all AVC staff and clients understand the AMEP requirements and their respective contributions and roles. Using the AMEP to document indicator definitions, sources, and methods of data collection increases the likelihood the program will access comparable data over time - even if key personnel change. AMEPs also support reliable data collection by documenting the frequency and schedule of data collection and assigning responsibilities.

AGRICULTURAL VALUE CHAINS PRINCIPLES

The best monitoring systems combine appropriate indicators, cost-effective data collection systems, rigorous analysis, and efficient reporting procedures to provide a representative picture of project performance and specific achievements. These principles have been integrated into the design of the AVC AMEP.

To achieve its project objectives AVC will adhere to the following basic principles:

- **Competition:** It is competition that makes markets work well. AVC will work to foster open competition within the marketplace. It will seek to use competition to raise the bar on standards and quality of products and management of agricultural crop commodities.

- **Transparency:** In keeping with its emphasis on competition, AVC will provide support to firms and farms within its project scope that express needs and a desire to meet those needs. The project will assist its clients to reach the maximum of their capabilities and needs. The project is particularly concerned that woman-owned firms have a fair opportunity to compete for project resources.
- **Market-based; Demand-driven:** AVC is a market-based demand driven project; the emphasis is on the market. AVC reverses common thinking of selling what you can produce to producing what you can sell.
- **Focused Activities:** AVC will be focused and seek depth within the sectors it works, rather than going after breadth of sectors covered.
- **Flexibility:** AVC will work in a flexible manner responding to the changing marketplace for it and its clients.
- **Maximize Local Talents & Build Capacity:** AVC will work to implement its monitoring and evaluation system in a manner that utilizes local capacity while demonstrating to clients the usefulness of auto-collection and analysis of firm level data to enhance performance.

The AMEP detailed here provides a roadmap for how we will link tasks to anticipated results in a system that allows AVC to 1) enable ongoing adaptive learning to optimize performance toward achieving project targets, 2) foster meaningful stakeholder engagement, and 3) measure gender disaggregated and regional impact.

USE OF CAUSAL MODEL AND LOGFRAME

The AVC causal model shows how project activities (*inputs*) lead to *outputs* (often project milestones or deliverables) and *outcomes* (observed changes, often behavioral, among project clients or other value chain actors). Last, this chain causes *impacts*, the high level results sought by the project. The AVC indicators in the Indicator Table in Attachment 1 correspond to different points along the causal model chain and measure a mixture of inputs (such as training and technical assistance), outputs (such as number of people trained), outcomes (such as changes in beneficiaries behavior so that they invest in and adopt new techniques) and impacts (greater value chain actor income). This causal model provides the AVC hypothesis of how we will affect change. It also helps to provide attribution of impacts to our project activities should the changes we expect from the causal chain be observed at multiple points along the chain. Conversely, if changes do not take place as planned (or re-planned), this will call into doubt the link between our activities and project results.

MONITORING, EVALUATION, ANALYSIS AND COMMUNICATION

Monitoring progress and evaluating results for performance information plays a critical role in planning and managing decisions. Evaluation—the periodic assessment of a project’s relevance, performance, efficiency, and impact in relation to stated objectives—identifies results that are attributable to the project. Analysis and communication are also important elements of a complete management system. AVC will collect both performance and impact data. The staff will then analyze the data and synthesizing it with context in order to interpret the meaning. The process is analogous to a value chain for information: raw material (data) is converted to information through analysis. This information is then communicated to beneficiaries (knowledge sharing) to achieve impact.

This document presents the AVC Monitoring, Evaluation, Analysis and Communication (MEAC) system that provides the foundation for tracking the project’s delivery of expected outputs; determining qualitative and quantitative impacts to measure progress; and flexibility to respond to USAID Uzbekistan’s planned and unplanned informational needs. The overall goal of the MEAC system is to

establish a means of providing critical information for decision-makers to assist them in guiding implementation of project activities towards attainment of project objectives. This goal recognizes that specific elements of the implementation program may require adjustment to respond to evolving conditions either within or external to the project. Hence, the MEAC system is a management tool for systematically reviewing project progress, troubleshooting problems and issues during project implementation, and assessing areas where project activities may need to be refocused to ensure plans, schedules, and assignments remain current. Also, where there are real successes or new opportunities beyond what was contemplated, management decisions can be made to channel more resources into these growth areas. The AVC AMEP will help project staff track and communicate the project's outputs and impacts. The AMEP is a management tool for systematically reviewing project progress, troubleshooting problems and issues during project implementation, and assessing areas where project activities need refocusing to ensure plans, schedules, and assignments remain current. Real successes and new opportunities beyond those originally planned can be identified and more resources channeled into these growth areas. The AMEP is based on an impact design, linking project implementation to desired outcomes and impacts. Implementation of the AMEP involves the entire AVC technical and management team and provides:

- **Efficiency:** The AVC technical team has first-hand knowledge of activities and immediate results in its technical work, and is best suited to collect, supervise collection, and verify basic AMEP data with clients.
- **Ownership:** The AMEP belongs to the entire team, ensuring that the information sets generated are relevant and consistent with the interests of the team and AVC clients.
- **Feedback:** Having collected and analyzed AMEP information, AVC technical team members receive first-hand information on project progress and use the information to guide project implementation.

AVC APPROACH

The AVC implementation approach is based on updated, on-the-ground, information and team consensus. As a results-oriented, market-based, demand-driven project, it is appropriate to keep the approach simple, focused at high-level results and comparable across clients.

AVC proposes a list of life of project (LOP) indicators that:

- capture major project impacts,
- supply information concerning major activities undertaken through AVC technical assistance,
- provide a picture of implementation progress, and
- contribute to USAID's information needs.

AVC's monitoring and evaluation system has four primary elements:

- A robust AMEP with clear, simple, well-defined, and measurable outputs and impacts;
- Ambitious, realistic targets;
- Regular training in data collection, quality, and validation for all AVC staff; and
- A system for data collection, storage and retrieval (TAMIS).

AVC will employ a two-pronged approach to MEAC:

- Data collection by project staff
- Client participation

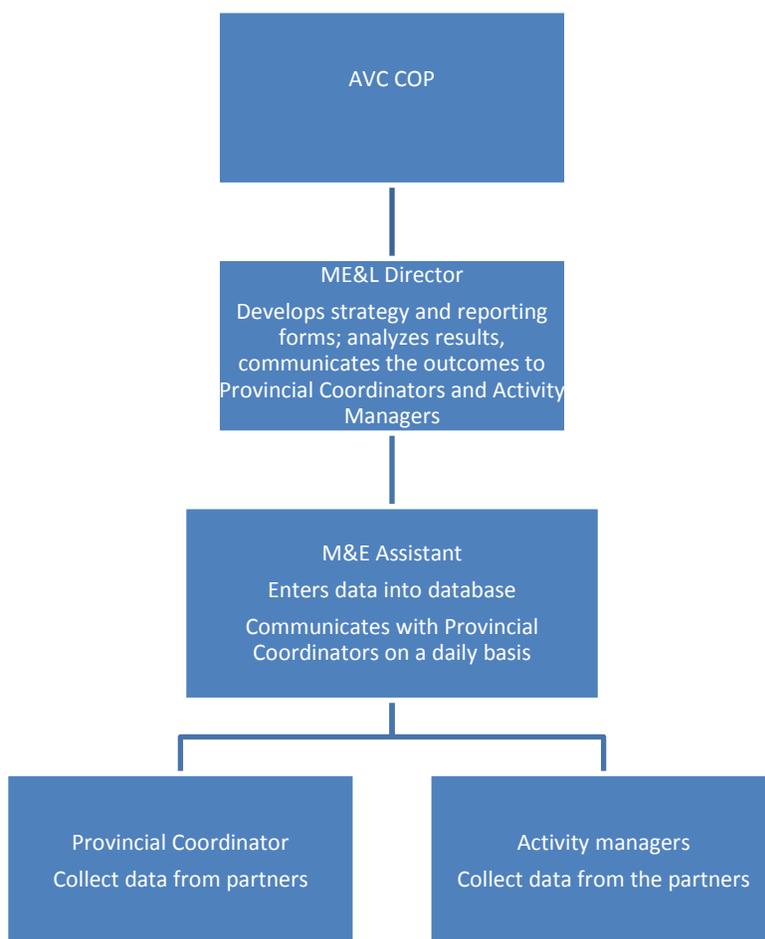
Data collection by project staff. The information needed for MEAC comes from different sources. The various administrative and technical records of the project are the main sources of data from which AVC will collect basic data.

Client participation. The main source of data is the project’s clients (input and service providers, producers, agro-processors and relevant public agencies). Where needed, AVC will work with selected clients to strengthen their own capacities by helping them build data spreadsheets and databases to monitor results.

The list of information to be provided by AVC-assisted clients covers a package of information needs to assess supply and demand conditions, areas of growth, firm and individual impact, all disaggregated by commodity and where appropriate, gender. “Where appropriate” because enterprises and associations generally do not exhibit gender, whereas their employees or members do.

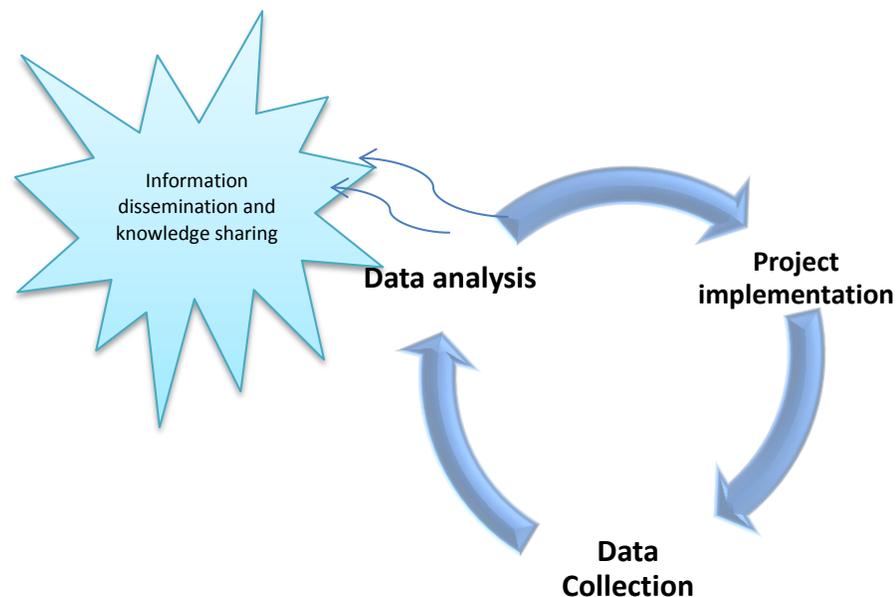
ME&L UNIT

AVC’s Chief of Party will have ultimate responsibility for the AMEP and its implementation. COP will be supported by a dedicated ME&L team led by Director of ME&L, who will work with provincial coordinators, one in each target region, and Component Leaders (whichever is relevant) to collect data from activity participants and partners. Using locally based coordinators ensures that farmers and local partners have an established relationship based on trust. Coordinators will cycle through participating rural communities regularly to respond to farmer inquiries and collect necessary information and feedback.



DATA COLLECTION, ANALYSIS AND COMMUNICATION

Monitoring progress and evaluating results for performance information plays a critical role in planning and managing decisions. Evaluation—the periodic assessment of a project’s relevance, performance, efficiency, and impact in relation to stated objectives—identifies results that are attributable to the project. Analysis and communication are also important elements of a complete management system. AVC will collect both activity and impact data. The staff will then analyze the data and synthesizing it with context in order to interpret the meaning. The process is analogous to a value chain for information: raw material (data) is converted to information through analysis. This information is then communicated to beneficiaries (knowledge sharing) to achieve impact.



ESTABLISHING THE BASELINE, COLLECTING AND STORING THE DATA

To track AVC progress, the project will gather baseline data for relevant indicators included in the AMEP from directly implemented activities and the impacts and outputs of those activities. The major data sources for the AMEP are project clients (producers, agro-processors, consolidators, cold store operators, input providers, and relevant public agencies). ME&L staff will conduct a baseline survey, customized for each stakeholder group, and implemented through AVC Provincial Coordinators and Component Leaders to ensure close relationship and mutual trust (whichever is relevant). The ME&L Director will provide them with training on data collection. The baseline data for new beneficiaries and partners will be collected routinely as they begin work with the project. Once the baseline is established, DAI will continue to collect data on a regular basis—either monthly, quarterly or annually, as appropriate for each indicator. Data collection survey tools include annual stakeholder surveys, evaluation forms, and qualitative stakeholder interviews. All data will be stored in DAI’s TAMIS, which enables and customizes data exports for analysis and presentation.

REGULAR DATA ANALYSIS AND ADAPTIVE LEARNING

Data will be regularly analyzed by Director of ME&L, Chief of Party, and Deputy Chief of Party/Senior Advisor. The ME&L team, including the Communications and Outreach Specialist, will work closely with the AVC Component Leaders and Provincial Coordinators, and capture and disseminate AVC learning to the broader stakeholder community through regular reporting, success stories, and other forums for broad engagement. This work will be facilitated by DAI’s TAMIS. DAI’s reporting on program outputs, outcomes, and impacts will be supported by quantitative and qualitative data. AVC leadership will encourage staff to test development hypotheses, respond to stakeholder feedback, and adapt to the local context and stakeholder needs. AVC will remain flexible during implementation to allow AVC to adapt tasks and capitalize on

new opportunities as they arise.

Adaptive learning will be ongoing, and include regular meetings between AVC senior leadership, the ME&L team, and senior technical personnel. Learning will be explicitly integrated into the AVC annual workplan development process. On an annual basis, the Director of ME&L will review and interpret all M&E data collected by the AVC team, and use it to gather stakeholder feedback. Learning from this annual project-level M&E deep dive will enable USAID and AVC to make results-driven, adaptive management decisions at the task level. AVC will use M&E data to collect feedback and continually refine each project task to ensure maximum effectiveness. The Director of ME&L, Chief of Party, and Deputy Chief of Party/Senior Advisor, will work alongside AVC Component Leaders to support effective response to this feedback. Performance data will constantly flow into the AVC main office for analysis. At the task level, data flows will enable Component Leaders to refine activity tasks to improve relevance and impact for different stakeholder groups. At a project level, results data will inform and drive project work planning and investment decisions.

DATA QUALITY

It is important that appropriate standards for data quality are in place. To measure and attribute results accurately—for both reporting and management needs—the ME&L team will guarantee that collected data meet specific standardized evaluation criteria. The ME&L team will also be responsible for carrying out annual Data Quality Assessments and ensuring the quality of data collected by implementing partners.

The ME&L Director will train relevant project personnel in basic M&E methodology and data quality standards, provide them with regular updates on project progress, and mentor them on an ongoing basis. Data quality training will help staff and implementing partners avoid common pitfalls, by focusing on key questions such as whether there is a direct relationship between the activity and what is being measured.

The project will use simple but statistically sound procedures to collect the project metrics. When project indicators are informed by multiple data sources, the ME&L team and project management will critically review and compare each dataset. The team will check all data for integrity and accuracy. After data are entered into a project wide database and stored in our TAMIS, we will use simple validation checks to look for missing data, outliers, or other data consistency issues. Typically, to confirm accuracy of data entry, project staff will check 100 percent of hard copies against entered and compiled data.

REPORTING

Reporting to USAID will occur quarterly, with the October report serving as an annual report. Preparation for these reports should begin the month before the due date in order to ensure that data are available for reporting. Depending on the level of detail requested, reports may include information broken out by commodity value chain or for the project as a whole. If needed, national or regional level data may be included to provide context to project outcomes.

UPDATES TO AMEP

The Activity Monitoring and Evaluation Plan will be updated annually if required, based on the analysis of the results and data gathered. Updated AMEP will be submitted together with the AVC Annual Report.

ASSUMPTIONS

The AVC indicators are presented in the Attachment and are within the manageable interest of the project and measure impacts that can be directly attributed to the project. The proposed indicators, as well as the associated life-of-project (LOP) targets, are selected based on the following basic assumptions:

- No extreme movements in commodity prices as a result of shifts in world markets. Extreme price movements would render any indicators concerning commodity values unstable.
- No major agro-climatic shocks to commodity systems where AVC intervenes. These include major shocks such as drought, floods, freezes, earthquakes and other weather hazards. Also included are agronomic shocks such as major pest outbreaks, plant diseases, or other epidemics in the commodity groups.
- Absence of socio-political instabilities, including national and regional political and civil instability.
- Generally stable fiscal and monetary policy.

INDICATORS

The Agricultural Value Chains (AVC) activity supports Development Objective #1 under the RDCS - Expanded Diverse and Competitive Trade and Markets. Specifically, the activity will support Intermediate Result (IR) 1.1 - A More Diverse and Competitive Private Sector; and IR 1.2, Enhanced Agricultural Competitiveness and Food Security. In support of the Development Objective, the AVC activity will seek to: (1) create employment opportunities; (2) improve incomes; (3) increase fruit yield and quality; (4) increase packed and processed output; (5) increase targeted fruit and vegetable exports; (6) link USAID's producers and processors to international markets; (7) strengthen relationships between educational institutions and the private sector.

The following 10 indicators corresponding to Expected Results listed in the contract are selected to evaluate project activities:

1. Increased Income (*Impact indicator*)

Measures change in income for the AVC-assisted value chain actors, as measured by sales.

2. Improved Agricultural Productivity *Impact indicator*

Farm productivity is measured by yield and will measure the increase in total farm production relative to total production area for all targeted crop commodities for all producers assisted by AVC. AVC will compare results of cooperating farmers with the baseline year.

3. International Competitiveness *Impact indicator*

Measures change in export value for the AVC-assisted value chain actors. Tracks international competitiveness for targeted crops; provides consumer, market access and growth info. The export indicator monitors where AVC assisted production is being sold to inform the project and clients of growth opportunities. Data will be collected by partner and commodity to provide insight into amounts and values exported and domestically consumed. The indicators presented will be percentage of total production that was exported to capture the relative importance of exports by crop commodity.

4. Improved consulting services *Outcome indicator*

Number of private sector service providers that offer consultations on related topics. Measures # of service providers that offer relevant consultancies to value chain actors, aiming at dissemination of advanced technologies thus contributing to increased income.

5. Improved practices (private sector competitiveness) (MIL 4.5.2.-2) *Outcome indicator*

Tracks successful adoption of technologies and management practices to improve incomes of value chain actors. Quantitative indicator presenting number of hectares under improved technologies or management practices

6. Improved technology (MIL 4.5.2-5) *Outcome indicator*

Measures the rate under improved technologies by project beneficiaries.

7. Value of investments (MIL 4.5.2-38) *Outcome indicator*

Total amount invested in the targeted value chains in \$US, by project beneficiaries (including producers, service providers, brokers, exporters, etc). For the purposes of this indicator, investment includes any money, which will be spent on the business in order to increase future (multi-season) returns. This includes equipment, facilities, and capacity building activities.

8. Improved education *Outcome indicator*

Tracks successful adoption of project produced materials and tools by educational institutions including higher agricultural universities as well as vocational colleges.

9. Number of beneficiaries (PPR/MIL 4.5.2-11) *Output indicator*

Tracks private sector capacity building to increase agricultural sector productivity. Adoption of project proposed technologies and practices indicates usefulness and relevance of promoted AVC activities. This

indicator measures the rate of adoption of improved technologies by project beneficiaries and shows number of project beneficiaries. Total number of producers' organizations, cooperatives, WUAs, trade and business associations and community-based organizations receiving U.S. Government assistance. Assistance is support to, for example, member services, storage, processing and other downstream techniques, and management, marketing and accounting.

10. Number of person-hours or training completed in private sector capacity supported by USG assistance (MIL 4.6.2-11) Output indicator

An essential element for the success of the project is the provision of training to the various participants in the project: producers, processors, consolidators, service providers, educational institutions, etc. This indicator measures enhanced human capacity, a key to transformational development.

JUSTIFICATION FOR PROPOSED INDICATORS

The indicators included in the Proposal were reviewed, discussed and critically evaluated for their relevance to local conditions and credibility of the data to be collected. As a result, the following 4 indicators were eliminated: # 3 – Production volume, #5 – Number of jobs, #10 – Number of Contracts, #13 – Number of Rural Households and #15 - Educational Institutions offering internships. One indicator was added: Value of Investments; and other indicators were reorganized to meet the USAID requirements:

According to the Paragraph C.5 of the Contract, “the primary purpose of this activity is to increase employment and incomes through improved competitiveness of selected agriculture value-chains. Progress toward achievement of this purpose may be measured by the following indicators:

1. Increased incomes of farmers in target value chains (measured by change in value and percent change in sales) (*AMEP Indicator #1*)
2. Increased productivity of farmers in target value chains (measured by change in yield per hectare) (*AMEP Indicator #2*)
3. Increased value and share of processed produce against total output of farmers in target value chains (measured by percent change in value and by percent change in share of total output) (*This one was eliminated due to the fact that producers get most of the income from fresh produce as the quality and price for those are the highest. What is processed is usually the leftovers from fresh sales. Thus, it is not feasible to promote increase of the processing in relation to fresh sales*)
4. Improved marketing channel efficiency (measured by number and value of concluded contracts). (Covered by AMEP Indicator #1. Ultimate goal is increased income through different channels, including marketing. Therefore, the AVC will collect and monitor change of income of different value chain actors with the appropriate disaggregation)
5. Increased international competitiveness (measured by percent change in total value of exports of fresh and processed grape and horticultural products by target farmers and compared to the overall change in value of export of fresh and processed grape and horticulture nationally) (*AMEP Indicator #3 – will measure in compare to baseline*)
6. Increased capacity of national and local organizations and beneficiaries to sustain the USG investments (measured by number of firms newly certified to export to WTO and Customs Union; number of people trained who report and/or are observed to be applying skills and teaching others on good agricultural practices and use of modern agricultural technology, etc.). (*Covered by AMEP Indicators #5, 6, 7, 8, 9 and 10*)
7. Improved cooperation mechanism among actors in value chain (measured by the number of existing contracting arrangements between producers and customers that have been improved using USG funds and the number and type of quality control measures put in place, and by responses to satisfaction surveys from producers and customers). (*Covered by AMEP Indicators #5, 6, 7, 8, 9 and 10*)

TARGETS

Annual targets for each indicator identified are presented in the AMEP Indicator Table. While we have used the best available data and information in setting targets for the indicators, these targets will require and undergo continuous refinement. The project will analyze project achievements against these targets in regular and annual reports making recommendations to update the targets as necessary.

Targets have been established for each of the ten proposed AVC indicators. These values are based on existing historical information and trends within the Uzbek agriculture sector. AVC will continue to refine these targets as more information is gathered from targeted clients. Please see the AMEP indicator table that presents each indicator and its respective target by fiscal year.

AVC will collect data at a disaggregated level from the annual sample of participating partners. The targeted sample size is roughly 25% of the total number of assisted partners.

CALENDAR PLAN

Year 1

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Develop forms/ train personnel			█															
Identify baselines				█														
Set up forms in TAMIS			█															
Review AMEP with team			█													█		
Routine data collection			█															
Quarterly reports								█										
Annual Report by Oct. 15				█													█	

Years 2, 3 and 4

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Review and update AMEP with team											█	
Routine data collection	█											
Data analysis					█			█				
Quality assurance	█				█			█				
Quarterly reports					█			█				
Annual Report by Oct. 15	█											█

Year 5

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Review and update AMEP with team								
Routine data collection	█							
Data analysis					█			
Quality assurance	█							
Quarterly reports				█				
Final Report by Apr. 15							█	

THE AMEP INDICATOR TABLE

The AMEP indicator table provides the list set of indicators for AVC. Included are outcomes specified in Section C of the RFTOP and additional targets identified by project staff as important to project success. Throughout the life of the project, the staff will use these indicators to direct collection of relevant data from project activities to measure project performance and enable AVC managers to make strategic decisions about project direction and activities, including prioritizing project investments to achieve goals and objectives. The AMEP table contains the types, definition, justification/ management utility, unit of measure and disaggregation, data source and frequency, preliminary baseline, and life-of-project targets for each indicator. These indicators capture major project impacts, supply information concerning major activities undertaken, provide a picture of implementation progress, and contribute to USAID's information needs. DAI has chosen these indicators because they are ambitious, valid, reliable, and timely as required by Automated Directives System (ADS) 203.3.5.1.

ANNEX A: INDICATORS AND TARGETS

#	Indicator	Variable	USAID Indicator	Unit	Frequency	Responsible Person	Base-line	2016	2017	2018	2019	EOP targets
1	Income Change in income for the AVC-assisted value chain actors, as measured by sales	Impact	N / A	Percent	Annual	ME&L Team	T B D	10%	20%	30%	40%	50%
2	Farm Yield Percent difference in annual farm yields for all targeted crop commodities between AVC producer clients and a control group; yield per hectare	Impact	N / A	Percent	Annual	ME&L Team	0	10%	20%	30%	40%	50%
3	Export Values (International Competitiveness) Change in share of total production that is exported for targeted commodities from AVC clients	Impact	N/A	Percent	Annual	ME&L Team	T B D	10%	20%	30%	40%	50%
4	Consulting services Number of private sector service providers offer consulting services as result of AVC implementation	Outcome	N/A	Number	Quarterly	ME&L Team	0	5	10	20	30	40
5	Hectares Under Improved Technologies Number of hectares under improved technologies or management practices as a result of U.S. Government assistance	Outcome	4.5.2.-2	Number	Quarterly	ME&L Team	0	2,000	4,000	5,000	6,000	7,000
6	Value of Investments Value of new private sector investment in the value chain leveraged by AVC implementation	Outcome	4.5.2-38	\$ million	Quarterly	ME&L Team	0	1	2	3	4	5
7	Number Who Have Adopted Improved Technologies Number of producers, processors and others who have adopted new technologies or management practices as a result of U.S. Government	Outcome	4.5.2-5	Number	Quarterly	ME&L Team	0	2,000	4,000	5,000	6,000	7,000
8	Improved education # of institutions that integrated and are using project materials and tools in education process	Output	N/A	Number	Quarterly	ME&L Team	0	2	3	4	5	6
9	Number of Organizations Assisted Total number of producers' organizations , cooperatives, trade and business associations and community-based organizations receiving USG assistance.	Output	4.5.2.-11	Number	Quarterly	ME&L Team	0	50	100	150	175	200
10	Number of person hours of training Person hours of training completed in private sector productive capacity supported by USG assistance	Output	4.6.2.-11	Number	Quarterly	ME&L Team	0	8,000	15,000	20,000	40,000	50,000

ANNEX B: ACTIVITY LOGFRAME

	Narrative Summary	Indicators	Data Sources	Assumption
Project Objective	Expanded Diverse and Competitive Trade and Markets	<ul style="list-style-type: none"> International Competitiveness: % change in value of exports of targeted agricultural commodities as a result of USG assistance 	Annual surveys; project records	<ul style="list-style-type: none"> Minimal macroeconomic shocks affecting demand for products in domestic and/or export markets Limited extreme weather events reducing product output
Intermediate Results & Impacts	1.1: A More Diverse and Competitive Private Sector	<ul style="list-style-type: none"> Private Sector Competitiveness: Number of private sector firms that have improved management practices as a result of USG assistance 	Annual surveys; project records	<ul style="list-style-type: none"> Limited price controls, export bans, and other policy and regulatory measures curtailing product/process improvements No major price spikes affecting the cost of energy, transportation, inputs, supplies and ancillary services
	1.2: Enhanced Agricultural Competitiveness and Food Security	<ul style="list-style-type: none"> Farm Yield: % difference in production on AVC participant producers to baseline. 	Project records, annual surveys.	
Outcomes	Market linkages improved, by product line and buyer-seller relationships within targeted product lines.	<ul style="list-style-type: none"> Value Chain and Market Efficiency: Income increase of the beneficiaries along the whole target value chain 	Project records; service provider records	<ul style="list-style-type: none"> Widespread access to market information, including production, trade and pricing data Value chain stakeholders are receptive to and apply technical assistance delivered under AVC Banks and other financial institutions willing to participate in value chain (supply chain) financing arrangements
	Knowledge and application of improved production, post-harvest, and processing practices and technologies increased	<ul style="list-style-type: none"> Innovation and Technology: # of farmers, processors, and other who have adopted new technologies or management practices as a result of USG assistance 	Annual surveys; project records; site visits	
Outputs	Producers, processors, traders, associations, and other value chain actors trained in improved production, post-harvest, and processing practices and market analysis, business skills	<ul style="list-style-type: none"> Number of Organizations including producers organizations, cooperatives, trade and business associations, and community based organizations receiving USG assistance Amount of training completed in private sector productive capacity supported by USG assistance. 	Project records	<ul style="list-style-type: none"> Universities and other educational institutions are willing participants in AVC educational linkage activities. Mobile internet services have sufficient coverage and remain affordable
	Educational institutions partner with AVC and develop use project materials and tools, internships, training programs, and strengthen research capacity	<ul style="list-style-type: none"> Improved education: number of educational institutions using AVC developed materials and tools 	Project records; surveys	

- Stock-taking, analysis, and value chain mapping exercises
- Technical assistance in good agricultural practices through demo plots, exchange programs, fairs.
- Support full operation of the tissue culture lab, improve capacity of nurseries and vendors of farm tools
- Facilitate cold chain demo sites and training as well as training in consolidators in grading/sorting/packaging
- Link production and processing to end market requirements
- Increase appropriate technology uptake to improve market linkages/production
- Training to enhance effective participation in domestic and international trade events and business sophistication of VC actors
- Support development and use of MEVA 3.0 and the uptake of international standards (ISO, HAACP, GlobalGAP)
- Work with agrarian universities to train in cold storage, canning and other practices
- Facilitate short courses, internships, and faculty exchanges in collaboration with academic institutional partners
- Build the capacity of local institutions in service provision

Project resources are fully committed; breakdown by product line is as follows:

- Component 1: 20%
- Component 2: 30%
- Component 3: 30%
- Component 4: 20%

ANNEX C: INDICATOR REFERENCE SHEETS

1. FARM INCOME

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Project Impact Goal— Increased Income
Indicator 1: Change in income for the AVC assisted value chain actors, as measured by sales
Does this indicator correspond to a USAID MIL indicator? If yes, which one? No
DESCRIPTION
Precise Definition(s): The percentage of change in income from Year X+1 when compared Year X
Unit of Measure: Percent change
Disaggregated by: Firm, location, gender, value chain.
Justification/Management Utility: General proxy for productivity at the firm level, which is a precursor to income growth.
PLAN FOR DATA ACQUISITION BY AVC
Data Collection Method: Data collected at the firm level, survey
Data Source(s): AVC partners: producers, processors, input and service providers, etc.
Frequency/Timing of Data Acquisition: Annually.
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Information collected by Provincial Coordinators and Component Leaders.
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): Partners may have tax evasion incentives to understate the turnover, total production capacity, costs and revenues. Total production capacity measures may vary by
Actions Taken or Planned to Address Data Limitations: Build confidence with client firms and continually assure data will be kept confidential and only publicly presented as aggregates. Total capacity measures must be consistent across all firms in the sector.
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline TBD after the project registration. Target – 50% overall
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

2. FARM PRODUCTIVITY BY YIELD

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Project impact Goal —Increased Agricultural Productivity
Indicator 2: Annual farm yields for all targeted crop commodities for AVC clients.
Does this indicator correspond to a USAID MIL indicator? If yes, which one? No
DESCRIPTI
Precise Definition(s): The percentage of change in farm income of AVC assisted producers when compared to control group
Unit of Measure: Percent change in compare to baseline.
Disaggregated by: Farm, location, gender of farmer, crop age, and crop type.
Justification/Management Utility: Measures productivity at the farm level which is a precursor to income growth. Control group will be identified by Provincial Coordinators and/or the partnering producers will have a small plot for comparison with those fields where new technologies were applied.
PLAN FOR DATA ACQUISITION BY AVC
Data Collection Method: Data collected at the farm level and aggregated by sector. Survey
Data Source(s): AVC assisted farms and control farms
Frequency/Timing of Data Acquisition: Annually
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Information collected by Provincial Coordinators and Component Leaders.
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): Partners may have tax evasion incentives to understate the outcomes.
Actions Taken or Planned to Address Data Limitations: Build confidence with client firms and continually assure data will be kept confidential and only publicly presented as aggregates. Total capacity measures
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline TBD after the project registration. Target – 50% overall
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

3. EXPORT VALUES (INTERNATIONAL COMPETITIVENESS)

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Impact — Increased agricultural trade is one of the end results of efficient markets
Indicator 3: Change in share of total production that is exported for targeted commodities from AVC clients.
Does this indicator correspond to a USAID MIL indicator? If yes, which one? No
DESCRIPTION
Precise Definition(s): This indicator will measure the change in share of total production that is exported. Exports will be counted from Year X+1 when compared to Year X. Exports include those outside of the country. The commodities to be counted are those that are targeted in the work plans.
Unit of Measure: Percent change
Disaggregated by: Firm type, location, gender of firm owner, value chain
Justification/Management Utility: Measures international competitiveness for targeted value chains; provides
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the firm level and aggregated by sector.
Data Source(s): AVC -assisted farms
Frequency/Timing of Data Acquisition: Annually
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Information collected by Provincial Coordinators and Component Leaders.
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): Partners may have tax evasion incentives to understate the outcomes.
Actions Taken or Planned to Address Data Limitations: Build confidence with client firms and continually assure data will be kept confidential and only publicly presented as aggregates. Total capacity measures must be consistent across all firms in the sector.
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline TBD after the project registration. Target – 50% overall
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

4. IMPROVED CONSULTING SERVICES

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Impact — Improved knowledge
Indicator 4: # of private sector service providers offering consulting services as result of AVC implementation.
Does this indicator correspond to a USAID MIL indicator? If yes, which one? No
DESCRIPTION
Precise Definition(s): The number of value chain service providers that offer consulting services as a result of AVC implementation.
Unit of Measure: Number
Disaggregated by: Firm type, location, gender of firm owner, value chain
Justification/Management Utility: Measures # of service providers that offer relevant consultancies to value chain actors, aiming at dissemination of advanced technologies thus contributing to increased productivity, quality and income.
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the firm level and aggregated by sector.
Data Source(s): AVC -assisted firms – input and service providers
Frequency/Timing of Data Acquisition: Quarterly
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Information collected by Provincial Coordinators and Component Leaders.
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen.
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline 0. Target – 40
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

5. NUMBER OF HECTARES UNDER IMPROVED TECHNOLOGIES OR MANAGEMENT PRACTICES

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Outcome — technology transfer
Indicator 5: Number of hectares under improved technologies or management practices as a result of U.S. Government assistance
Does this indicator correspond to a USAID indicator? If yes, which one? Yes, MIL 4.5.2.-2
DESCRIPTION
Precise Definition(s): This indicator measures the area (in hectares) of land or water (for fisheries) first brought under new technology during the current reporting year. Technologies to be counted here are agriculture-related technologies and innovations
Unit of Measure: Hectares
Disaggregated by: Location, New vs. Continuing: --New = this is the first year the hectare came under improved technologies or management practices --Continuing = the hectare being counted continues to be under improved technologies or management practices from the previous year --Technology type: crop genetics (including nutritional enhancement), pest & disease management, soil-related (fertility and conservation, including tillage), water management, post-harvest handling and storage, processing, and
Justification/Management Utility: Measures the rate of adoption of improved technologies by project beneficiaries
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the firm level and aggregated by sector.
Data Source(s): AVC project records, surveys, training participant lists, etc.
Frequency/Timing of Data Acquisition: Annually
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Country technical staff
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen.
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER NOTES
Notes on Baselines/Targets: LOP – 7,000
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

6. VALUE OF INVESTMENTS

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Outcome — value of investments
Indicator 6: Value of new private sector investment in the value chain leveraged by AVC implementation.
Does this indicator correspond to a USAID indicator? If yes, which one? Yes, MIL 4.5.2-38
DESCRIPTI
Precise Definition(s): Total amount invested in the horticulture sector in \$US, by producers and businesses. For the purposes of this indicator, investment includes any money which will be spent on the business in order to increase future (multi-season) returns. This includes equipment, facilities. "Facilitated by AVC" means that the project showed the beneficiary something new and convinced them of the potential future return that encouraged them to invest. This investment could be a result of: a) Training b) Technical assistance where the links was made by the project c) Trade fair or demo farm attendance d) Study tour attendance e) Staff or STTA advice f) Linked to lender or outside investor. Typical facilitated investments might include: increased planting, orchard expansion, cold stores, greenhouse, pre-cooling, packing and sorting lines, refrigerated vehicles, and other equipment and tools purchased.
Unit of Measure: \$ Million
Disaggregated by: Location, product line, gender, type of investment, type of beneficiary
Justification/Management Utility: Investment is needed to increase sector productivity and the quality of outputs, including the reduction of post-harvest losses. Increased investment will both increase productivity and sales and if done correctly, should have a positive demonstration effect upon VC actors at all nodes. This indicator will show us the types and scale of new investments made.
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the partner level
Data Source(s): Survey.
Frequency/Timing of Data Acquisition: Annual
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Country technical staff
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen.
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Quarterly and Annual Reports
OTHER
Notes on Baselines/Targets: LOP – \$5 million
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

7. IMPROVED TECHNOLOGY

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Outcome — technology transfer
Indicator 7: Number of farmers and others who have applied new technologies or management practices as a result of USG assistance.
Does this indicator correspond to a USAID indicator? If yes, which one? Yes, MIL 4.5.2.-5
DESCRIPTI
Precise Definition(s): This indicator measures the total number of farmers and other primary sector producers, individual processors (not firms), rural entrepreneurs, managers and traders, natural resource managers, etc. that applied new technologies anywhere within the food system as a result of USG assistance. This includes innovations in efficiency, value-addition, post-harvest management, sustainable land management, water management, managerial practices, input supply delivery. Any technology that was first adopted in a previous year should not be included. Technologies to be counted here are agriculture- related technologies and innovations.
Unit of Measure: Number
Disaggregated by: Location, gender, Type of person (producers, people in firms (e.g., processors, service providers, manufacturers) and people in government (e.g., extension workers, policymakers) New/Continuing --New = This reporting year is the first year the person applied the new technology or management practice --Continuing = The person first applied the new technology or practice in the previous year and continues to apply it
Justification/Management Utility: Measures the rate of adoption of improved technologies by project beneficiaries
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the firm level and aggregated by sector.
Data Source(s): AVC project records, surveys, training participant lists, etc.
Frequency/Timing of Data Acquisition: Quarterly
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Country technical staff
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen.
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annual review by technical staff and COP
Reporting of Data: Annual Reports
OTHER
Notes on Baselines/Targets: LOP – 7,000
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET
8. IMPROVED EDUCATION

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Project Outcome — Improved Ag Education
Indicator 8: Number of institutions that integrated and are using project materials and tools in education process
Does this indicator correspond to a USAID indicator? If yes, which one? No
DESCRIPTI
Precise Definition(s): Number of educational institutions including higher education institutions and vocational colleges that use project developed tools and materials in the education process. Tools and materials include but not limited to handouts, one-pagers, presentations, mobile applications, etc.
Unit of Measure: Number of institutions
Disaggregated by: Location, institution, material/tool
Justification/Management Utility: Tracks successful adoption of project produced materials and tools to improve education.
PLAN FOR DATA ACQUISITION
Data Collection Method: Survey of the institutions
Data Source(s): Institution staff members
Frequency/Timing of Data Acquisition: Annually
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Activity Manager
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): Could be under-reported in case materials are adopted by non-project institutions
Actions Taken or Planned to Address Data Limitations: Request project partners to report on materials disseminated among non-project institutions.
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Annually review by technical staff and COP
Reporting of Data: Quarterly and Annual reports
OTHER
Notes on Baselines/Targets: Baseline 0; LOP Target - 10
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

**INDICATOR REFERENCE SHEET
9. NUMBER OF BENEFICIARIES**

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Project Output — number of beneficiaries
Indicator 9: Number of food security private enterprises (for profit), producers organizations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance.
Does this indicator correspond to a USAID indicator? If yes, which one? Yes, MIL 4.5.2.-11
DESCRIPTION
Precise Definition(s): Total number of private enterprises, producers' associations, cooperatives, women's groups, trade and business associations and community-based organizations, that received USG assistance related to food security during the reporting year. This assistance includes support that aims at organization functions, such as member services, storage, processing and other downstream techniques, and management, marketing and accounting. Organizations assisted should only include those organizations for which implementing partners have made a targeted effort to build their capacity or enhance their organizational functions. In the case of training or assistance to farmer's association or cooperatives, individual farmers are not counted separately, but as one entity.
Unit of Measure: Number
Disaggregated by: Location, type of organization, activity
Justification/Management Utility: Tracks private sector capacity building to increase agricultural sector productivity.
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at beneficiaries level and aggregated by sector
Data Source(s): Project records, survey, etc.
Frequency/Timing of Data Acquisition: Quarterly
Estimated Cost of Data Acquisition: None since clients will provide data as a condition for AVC assistance
Responsible Individual(s): Provincial Coordinators
DATA QUALITY ISSUES
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Quarterly review by technical staff and COP
Reporting of Data: Quarterly and Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline 0; LOP Target - 200
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

INDICATOR REFERENCE SHEET

10. NUMBER OF PERSON-HOURS OF TRAINING

PERFORMANCE INDICATOR REFERENCE SHEET
Level of Indicator: Output — Number of person-hours of training
Indicator 10: Number of person hours of training completed in private sector productive capacity supported by USG assistance
Does this indicator correspond to a USAID indicator? If yes, which one? Yes, MIL 4.6.2-11
DESCRIPTION
Precise Definition(s): The number of person hours of training completed in private sector productive capacity to whom significant knowledge or skills have been imparted through formal or informal means, such producers, consolidators, cold store operators, exporters, service providers, interns, teachers/students and agro-processors.
Unit of Measure: Number of person-hours
Disaggregated by: Location, gender, type of training.
Justification/Management Utility: Measures enhanced human capacity for agricultural value chains actors
PLAN FOR DATA ACQUISITION
Data Collection Method: Data collected at the value chain actor level and aggregated by sector
Data Source(s): Project records, surveys, training participant lists, etc.
Frequency/Timing of Data Acquisition: Quarterly
Estimated Cost of Data Acquisition: None since AVC is recording this data
Responsible Individual(s): Provincial Coordinators, Component Leaders
DATA QUALITY
Date of Initial Data Quality Assessment: August 2015
Known Data Limitations and Significance (if any): None foreseen
Actions Taken or Planned to Address Data Limitations: NA
Date of Future Data Quality Assessments: Annual
Procedures for Future Data Quality Assessments: Continue to review underlying indicator quality
PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING
Data Analysis: Trend analysis; Cross tabulation with disaggregated variables; cross region comparisons
Presentation of Data: Tabulated data, line charts, bar charts by disaggregated variables
Review of Data: Quarterly review by technical staff and COP
Reporting of Data: Quarterly and Annual Reports
OTHER NOTES
Notes on Baselines/Targets: Baseline 0; LOP Target – 50,000
Location of Data Storage: TAMIS – AVC M&E database
Other Notes:
THIS SHEET LAST UPDATED ON: August 2015

ANNEX E: DATA COLLECTION PROCESS

AVC being an agricultural activity depends on agricultural seasoning. Thus field data for major impact indicators including yields, productivity and export rate increase can be reported only once a year, at the end of harvest season (end of USAID Fiscal Year).

AVC Data collection system

A. Annual indicators:

- #1. Income
- #2. Farm Yield
- #3. Export Values

Survey forms are completed through the Provincial Coordinators and Component Leaders (whichever is relevant)

B. Quarterly indicators:

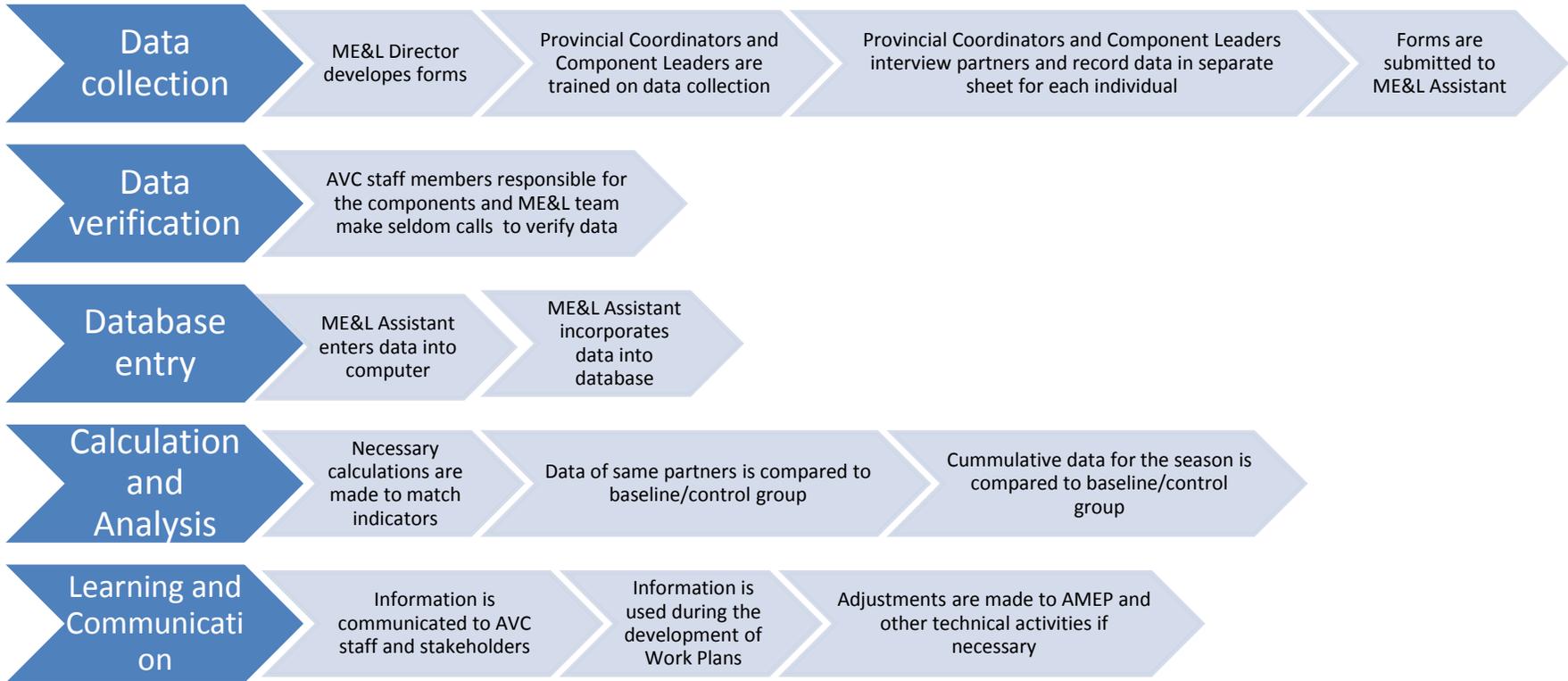
- #4. Number of service/input providers offering consulting services
- #5. Hectares under Improved Technologies
- #6. Value of investments
- #7. Number of those adopted new technologies
- #8. Number of institutions using project materials
- #9. Number of organizations assisted

Survey forms are completed through the Provincial Coordinators and Component Leaders (whichever is relevant)

- #10. Number of person-hours of training

Sign in sheet is completed at each training event. Sheet includes information on the event (name, location, duration) as well as participant details (name, organization, phone number and his/her signature).

Information is incorporated into computer database (Excel and TAMIS).



ANNEX F: CAUSAL MODEL

Activities	Outputs	Outcomes	Impacts	Long-term Economic Growth Impact
Component 1 IMPROVE THE QUALITY AND VOLUME OF AGRICULTURAL PRODUCTION			<i>National level</i>	Expanded Diverse and Competitive Trade and Markets: <ul style="list-style-type: none"> • (IR) 1.1 - A More Diverse and Competitive Private Sector; • IR 1.2 - Enhanced Agricultural Competitiveness and Food Security
1.A. Quality and volume of production <ul style="list-style-type: none"> ■ Provide TA on demo plots; ■ Host National exchange programs and Value Chain Fairs 	<ul style="list-style-type: none"> ■ 32 demo plots supported ■ 20 National Exchange Programs held ■ 20 Value Chain Fairs conducted 	<ul style="list-style-type: none"> ■ 50% increase in yields ■ Improved quality of target commodities 	<ul style="list-style-type: none"> ■ Improved food security ■ Increased supply of target value chain <ul style="list-style-type: none"> — Increased access to fruits — Improved and diversified nutrition 	
1.B. Quality and availability of inputs <ul style="list-style-type: none"> ■ Tissue culture lab activities; ■ S/allele/DNA and seed/leaf analyses; ■ Work w/ agro-dealers and input suppliers 	<ul style="list-style-type: none"> ■ A greenhouse at the tissue culture lab constructed ■ Varieties of target values chain commodities identified ■ Quality input supply market developed 	<ul style="list-style-type: none"> ■ 40 private sector service providers offer embedded or fee-based consulting services 	<i>Subsector level</i> <ul style="list-style-type: none"> ■ Output growth by value and volume ■ Improved gene pool ■ Access to extension materials ■ Improved knowledge sharing through online information system ■ Improved education 	
Component 2 Improve Post-Harvest Handling and Production			<i>Agrifirm and processing company level</i>	
2.A. Advance Cold Storage Practices <ul style="list-style-type: none"> ■ Cold storage demo site activities; ■ National exchange programs for cold storage operators 	<ul style="list-style-type: none"> ■ 20 demo cold stores established ■ 10 National Exchange Programs held ■ 300 cold chain participants (firms) trained in best cold chain practices ■ 5 study tours to Turkey and India conducted (50 participants) ■ 5 permanent harvesting/grading/packin g groups (including women-groups) trained to disseminate attained knowledge and skills 	<ul style="list-style-type: none"> ■ Increased availability of extension materials to public ■ Established network of producers, input suppliers, buyers and researchers ■ Extended shelf-life of produce ■ \$5 million investment by the private sector firms 	<ul style="list-style-type: none"> ■ Increased sales ■ Increased profits ■ Higher productivity 	
2.B. Utilize post-harvest production to reach new markets <ul style="list-style-type: none"> ■ Post-harvest training; ■ Develop commercial opportunities; ■ Build capacity in grading/sorting 			<i>Producer level</i> <ul style="list-style-type: none"> ■ Increased income ■ Increased assets ■ Increased ability for larger scale farm investment 	
Component 3 Facilitate Market Linkages			<i>Consumers (local and international)</i>	
3.A. New linkages in domestic market <ul style="list-style-type: none"> ■ Linkages between producers and local supermarkets; ■ Local trade events 	<ul style="list-style-type: none"> ■ Facilitated participation of beneficiaries in 20 local trade events ■ 200 private enterprises trained in local standards 	<ul style="list-style-type: none"> ■ Domestic sales increased 	<ul style="list-style-type: none"> ■ Increased access to high-quality fruits, grapes, and nuts ■ Improved confidence with safety of fruits, grapes, and nuts 	

Activities	Outputs	Outcomes	Impacts	Long-term Economic Growth Impact
<ul style="list-style-type: none"> ■ Compliance w/ local standards <p>3.B. Linkages w/ new foreign markets</p> <ul style="list-style-type: none"> ■ Courses on new market entry; ■ Relationships w/ buyers in new markets; ■ Process for product modification; ■ Compliance w/ int'l standards 	<ul style="list-style-type: none"> ■ Access to new market(s) explored ■ Facilitated participation of beneficiaries in 20 international trade events ■ 10 courses on new market entry provided ■ 100 private enterprises trained in int'l standards 	<ul style="list-style-type: none"> ■ 50% increase in value of exports of target commodities Strengthened capacity for quality control ■ Export to new markets ■ International awareness of Uzbek products increased ■ Export volume increased 		
Component 4 Link Educational Institutions with Private Sector Demand				
<p>Link educational institutions w/ private sector demand</p> <ul style="list-style-type: none"> • - Development of educational materials and tools; • - Faculty exchanges 	<ul style="list-style-type: none"> ■ 3 study tours to Turkish University conducted (30 people appr.) ■ 3 professors visited Uzbekistan to share their experience 	<ul style="list-style-type: none"> ■ Increased capacity of partnering institutions ■ 10 institutional partners are using project materials 		

