Private sector horticultural development transition project

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APRIL TO JULY 2015

Implementing agency: AFGHANISTAN NATIONAL HORTICULTURE DEVELOPMENT ORGANIZATION (ANHDO)
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Reporting Quarter: 2- 2015

Summary:

During this quarter the fallowing activities done by ANHDO team:

- Register of ANHDO activities with MAIL MIS system
- ANHDO re-defined its vision, mission and long term Goals in brain storming workshop
- ANHDO is revising its organizational chart, by-law.
- ANHDO Board meeting conducted on 14th April 29th April, 3rd June 30th June, 22nd June, 8th July, 22nd July & 26th July.
- PHDCs handover note signed with Transition project (ARIA), ANHDO in presence of PHDPII TA
- Horticulture Survey conducted in Logar, Maidan Wardak Providences.
- ANHDO printed Horticulture Magazine.
- Pistachio nursery, orchards guide (hand out) is printed and distributed.
- Poster on safe use of pesticides is printed and distributed to relevant partners.
- Manual for Fruit thinning importance and methods printed and distributed.
- ANHDO is started pistachio production campaign awareness through local TV and Radio in Herat.
- Third round of TOT trainings conducted in Herat
- Second & Third round of Farmers training conducted in district level, 200 farmers participated in 8 groups
- First round of Second Phase of Framers training conducted in district level, 200 farmers participated in 8 groups
- Cherry Marketing Evaluation Survey has been done.
- Study of Apple production and its current marketing situation in Afghanistan has been done.
- ANHDO technical staff along with farmers visited Morwarid processing and packing Factory in Herat
- Designed, planted and established11 pistachio demo orchards in Herat completed.
- Visit of Export Promotion Agency of Afghanistan (EPAA)
- Improvement of ANHDO data base and website

Implementation of the planned activities:

No	Activity	Achievements, Facts and Figures
1	Management Activities	• **(RAM mission Observation and recommendations point 1.a)** Planning for conducting ANHDO General Assembly ANHDO General Assembly was held on 15th December resulting in a substantial expansion of ANHDO membership. • **(RAM mission Observation and recommendations point 1.b)** Preparation of a business plan for ANHDO long term (self-sustainability plan) - ANHDO continues work on it for its improvement:

		- MAIL has developed an online Management Information System for partners' activity management. All the NGO's are required to add their Outputs and Activities with its required details within the system. A meeting has been fixed with MAIL-MIS and system demo has been taken to efficiently provide the needed information. ANHDO provided relevant information to enter in the system. - ANHDO re-defined its *vision, mission and long term Goals* in brain storming workshop conducted on Sunday 10th and 17th May. ANHDO staff, Board of directors, PHDPII and other stakeholders participated in the workshop. The New vision, mission and long term objectives agreed by participants are : **Vision:** *"A sustainable and profitable horticulture industry for a better life in Afghanistan"* **Mission:** *"Our mission is to enable horticulture stakeholders to improve horticulture industry by providing technical services, upgrading capacities, and promoting private-public coordination"* o **Long-Term Goals:** o *Reform sorting, processing, packaging, and storing systems* o *Ensure product quality to meet international standards* o *Build capacities of horticultural stakeholders by initiating and designing projects for the promotion of good practices and standards* o *Increase the income of producers by introducing new and advanced technology* o *Facilitate the coordination between private and public stakeholders for the development of the horticulture industry* o *Help build business linkages between producers, potential investors, and buyers* o *Support and facilitate the development of a regulatory framework for horticulture industry* - ANHDO is revising its organizational chart, by-law currently ANHDO staff & Board of directors are working for revising the mentioned documents. - PHDPII is going to finish its activities at the end of 2015, so they are preparing a documentary video to reflect the activities done, ANHDO take a major part in preparing documentary with PHDPII. - ANHDO office procedure manuals translated in to Dari for re-review of Board members especially the new comers. - ANHDO is started pistachio production campaign awareness through local TV and Radio in Herat. This campaign will be done by giving tips (importance of pistachio, economical benefit, adaptation in local climate, etc.) through Radio program and through TV program a live program is conducting that the farmers can ask questions by phone and experts will provide information. -
2	Technical activities	**Result 1:** **ANHDO is developed and is functioning as an apex organisation for the development of the private sector horticulture industry.** **To conduct Regular board meetings:** ANHDO Board meeting conducted by: - Kabir Hakimi - Prof. Samadi

- Hedayatullah Omerkhil
- Fawad Rahimi
- Haji Bashir Pupal
- Haji Sahwali

on 14th April 29th April, 3rd June 30th June, 22nd June, 8th July, 22nd July & 26th July and discussed the following points:

- Administrative and financial position of ANHDO
- ANHDO projects log frame should be translated to Dari
- To take practical actions for developing ANHDO magazine and tasks to division to ANHDO Board of directors.
- Preparing a proposal for CARD-F project in Parwan
- Revision of Organizational Chart
- Revision of By-Law (Organization Constitution)
- Review of Pistachio activities in Herat
- Presenting Technical review & report of pistachio activities by Prof. Samadi
- Report and discussion of Haji Bashir and Fawad for financial audit done in December 2014.
- Translation of officer procedure manuals done in to Dari
- Report of HTDP project and Kapisa survey done in 2012 provided by Najibullah Enayat.
- Delegating responsibilities to BOD members for revising the by law.
- Revision of Organizational Chart: Couple of meetings conducted to revise the organization chart, and widely studied deferent options which will be suitable for organization itself, donor and Afghan government.
- On On 10th & 17th of May ANHDO board meeting participated in brain storming workshop for redefining ANHDO vision, mission and long term Goals
- **To conduct Annual general meetings**

ANHDO first General Meeting conducted 15 December 2014. The meeting was attended by H.E. Deputy Minister of MAIL, high level officials of MAIL, PHDPII, partner organizations & ANHDO members, more than total 50 participants and the ANHDO membership was increased to 32 participants.

- **Regular reporting to Ministry of Economy and MAIL:**

During the reporting period 6 monthly report of Ministry of Economy drafted and request of MAIL confirmation has been send.
Project Narrative report (6 monthly) drafted and sends to relevant parties.
Regularly monthly reports disseminated to relevant department of MAIL.

- During the reporting period Ministry of Economy auditors visited ANHDO office and monitored field activities.

Ministry of Economy auditors in a field visit monitoring ANHDO field activities

- **Memorandum of understanding made with MAIL.**

The ANHDO MoU with MAIL updated in December 2014 and will be in force for the next 4 years.

ANHDO signed MoU with Herat DAIL and ANHDO has signed that ANHDO will

• Training of technicians and farmers

- **Memorandum of understanding with Technical Assistance.**

Close coordination and regular meetings conducting with PHDPII TA,

- **Recruitment of additional staff from outside PHDP2**

All technical positions are recruited.

- **Coordination with member associations and other industry interest groups**
- ANHDO continue to be an active member of the Citrus Promotion Group and of the Pistachio Promotion Group.
- ANHDO also continue to be coordinated with ANNGO.
- Meeting with CAMP project Mr. Philip, regarding CAMP trainings on post-harvest for better coordination and information sharing. CAMP conducted training for ANHDO farmers (beneficiaries) and technical staff also participated.
- ANHDO met IAO for conducting pistachio quality testing program, conducting study tour to Italy on 6th May
- The major activities in this regard are carried out through the partner project HPS
- **Preparation of accounts, set up QuickBooks**

Standard accounting system and QuickBooks is practicing currently.

- **Development of work plans/reporting system as per Afghan government & Donor regulations**

ANHDO strictly following Afghan Government and donor regulations in day to day activities.

ANHDO HDTP financial audit of 2014 conducted by AHLN audit company.

- **Follow up and close coordination with transition project (PHD Centers)**

- A handover note of the 6 PHDCs include equipment, laboratories, Demo-Orchards, model nurseries, training centers and the management of the National Collection signed by ANHDO, Transition project (ARIA) and PHDPII. (Annex I)

- Participation in planning workshop for PHDCs.

- ANHDO Participated in meeting conducted in coordination with PHDPII, ARIA, Transition project (PHDCs project) The meeting was called for clarifying issues and the process of handover of mentioned points, to the MAIL-PHDCs, and to start the real handover of currently running transition project.

- ANHDO established Pistachio demo orchard in Herat PHDC, Urdo Khan

Land Size 1800 m2

Date of planting: 08.07.2015

Number of sapling: 58

- ANHDO Participated in meeting conducted in coordination with PHDPII, ARIA, Transition project (PHDCs project) The aim of the meeting was to finalize the prove reading of the apricot register and get MAIL approval for printing it. The technical experts cleared to MAIL the purpose of the register is not releasing verities, but describing the existing national collections in six

PHDCs, in addition more technical information discussed and very suitable decisions taken by ARIA to speed up the MAIL verification and approval for coming velum of fruit register books. The meeting conducted in ARIA meeting Room.

- **Coordination with Transition project (PHD Centers) and inventory handover**
- For official hand over of PHDCs inventory MAIL require the prices purchased of each item, most of the procurement is done through EU system and ANHDO requested EU to provide price lists to be inserted in the inventory list and officially handed over.
- ANHDO Participated in meeting conducted in coordination with PHDPII, ARIA, Transition project (PHDCs project) The meeting was called for clarifying issues and the process of handover of mentioned points, to the MAIL-PHDCs, and to start the real handover of currently running transition project. The meeting conducted in ARIA meeting Room.

Paricipants:

Shirshah Stanizai (MAIL-PHDCs Curator of National Collections), Khaksar Weqar (ANHDO HDTP Database manager), M.Jawad Yaqubi (MAIL-PHDCs database manager, Ah.Shekib Mashal (MAIL-PHDCs database assistant), Haji Qudos (MAIL-PHDCs Project Co-Ordinator), Pablo Degl'Innocenti (PHDPII Nursery industry development expert), Giuliano Masini (TL of PHDPII), Najibullah Enayat (General Manager ANHDO), Qudrat Sofizada (MAIL-ARIA), Qasim Obaidi (MAIL-ARIA), Dr. Usmanzai (MAIL-ARIA), Mak Hutton (LML, Finance), Sabaahat (LML, Finance), Sayed Rahman (MAIL-PHDCs Finance Manager)

Points discussed

- **Database & Website**

ANHDO took over, the management of the website www.afghanistanhorticulture.org at the end of 2012. The website include links to ANNGO, the PHDPII, the PHDCs, etc. and deal with both research and extension topics.

Consistently with the transition process, the part of the website related to the National Collection and adaptive research (Which all of them are available in the Database) should be taken over by ARIA, and put it in its own website.

MAIL-ARIA will create its own separate website dedicated to agriculture research, including horticulture, the 6 PHDCs and the NC.

For this purpose resources are available within MAIL-PHDCs and ANHDO could support if ARIA needed.

ANHDO could continue to manage the old website, focusing more on private sector and extension (in coordination with MAIL extension directorate and various extension projects), but keeping the links with the ARIA website and reflecting the public-private partnership in adaptive research.

- **Office Space**

There are many paper files related to the database that containing the UPOV description, archive of passport data, documentation concerning the import of varieties and etc.

So for taking the ownership of database and all related hard-copy files, ARIA will manage the proper office space for the related positions of MAIL-PHDCs staff, to install the database and put all the folders managed.

ARIA discussed that they will raise a request letter to the MAIL, to find the proper

		rooms for it.
		After a joint verification of the inventory of files available a formal hand over document should be signed between ANHDO and MAIL-PHDCs/ARIA.
		- **Procurement**
		The items purchased with Agriconsulting funds, belongs to Agriconsulting (part of the fee)
		The items purchased by PHDPII with EU funds (incidentals) for support to ANHDO and ANNGO belongs to ANHDO and ANNGO
		The items purchased by the PHDPII with EU funds incidentals and the items purchased by EU directly belongs to ARIA for the exclusive use of the PHDCs.
		List of these items has been already handed over.
		- **Vehicles**
		All the new vehicles are in ported for MAIL in PHDPII name and are for PHDPII and partners. PHDPII handed over 5 new pick ups to the ARIA PHDCs and one is in Herat DAIL waiting to be handed over to the PHDC Herat.
		One new Prado is at MAIL waiting to be handed over to PHDPII/ARIA when the old vehicle is returned. Another new Prado is with PHDPII and will be handed over to ARIA /PHDCs at the end of the project.
		If ARIA/PHDCs wish to keep some of the old vehicles purchased in 2007, it is necessary that they discuss directly with the MAIL concerned officers.
		- **HR**
		MAIL-ARIA will work and accelerate the process to put the positions of MAIL-PHDCs in the MAIL's TASHKEEl.
		From the ARIA side, they met with the HR of MAIL and they accepted the structure of MAIL-PHDCs, wanted ARIA to recommend the positions that they want to include in TASHKEEL, then it will be defended at Independent Council of Administration - AFG, once approved by them, then MAIL will include it.
		- **Co-Ordinations**
		A close co-ordination will be existed between MAIL-ARIA, PHDP and ANHDO, if any party wanted to discuss the issues so it will be open to do.
		As well PHDP already instructed the staff to clearly co-ordinate with MAIL-PHDCs.
		- The above points are discussed between MAIL-ARIA, PHDP, ANHDO, MAIL-PHDCs and LML staff.
		- **Negotiating with MAIL a sustainable Private Public partnership related to the national collection management and adaptive research.**
		Adoptive research program ad National collections coordination issues with MAIL transferred to HPS project.
		- ANHDO supported ARIA for conducting Horticulture coordination meeting, & ANHDO General Manager presented the main focal points of adoptive research still supported by ANHDO in coordination with ARIA:
		- National Collection of varieties of fruit and nuts characterization
		  o Post of Curator transferred to transition project
		  o Ongoing support for completion of all crop registers by 2017
		  ▪ Continued support to Field Horticulturists and MAIL staff at PHD Centers as necessary
		  o Additional pomology laboratory work supported by ANHDO/HPS for harvesting and post harvesting work related to variety use by fruit growers (continued joint working with MAIL staff
		  o Pomology laboratory techniques developed for transfer to private sector for quality control of fruit crops for optimal storage

- Introduction of varieties of almonds and apricots to meet horticulture industry (private sector) needs.
- Use of traditional plant breeding techniques to develop new varieties of almond and apricot
- New varieties of almond selected based on consultation with traders, with almond growers being involved in further testing before release
- Consultation with industry including growers and traders

- ANHDO (HPS) support to development of new rootstocks, in conjunction with PHD Centres and private sector
- Testing of cultural treatments such as gibberellin treatments at PHD Centres as well as with commercial growers
- Preparation of information for private sector via leaflets, shows Agfairs etc

- **Coordination with project implementing unites (EU, AFD, etc.) with technical assistance (PHDPII)**
- Regular communication is on-going for the progress and facilitation of the dedicated activities.
- **ANHDO board represent of the main Value Chain**

ANHDO Board of director consists of seven members representing different component of the horticulture sector and value chain.

- Muhammad Kabir Hakim	Dry fruit exporter
- Fawad	Agriculture economist
- Ghulam Rasual Samadi	Prof. of Agr. Faculty & head of Horti. dep.
- Hidayatullah Omerkhil	Samsur Ban co, Nursery Industry
- Haji Bashir	Dry & Fresh fruit exporter
- Yahya	Amin Haroon Co, Processing factory in exporter
- Shawali Khan	Babook packing factory

Result 2:

The level of investment in the horticulture industry is set at an increasing level to provide greater impact on rural livelihoods.

- **Collate information on varieties, cultural information**

During the reporting period ANHDO technical staff has performed two Field surveys in Logar and Maidan provinces.

I. Logar Survey details: 8 orchard owners in 7 different villages of center parts and Mohammad Agha district interviewed, the main finding of interviews are as following:

1. *Orchard establishment general information:*
   a. Land area in Jirib: Land area of 8 orchards is from 0.5 to 3 Jirib.
   b. Distance between tree to tree are from 3 to 5 m.
   c. Distance between row to row are from 4 to 6 m.
   d. All 8 visited orchards were bad because have been planted deep.
   e. Total number of trees per Jirib are from 80 to 167 trees
   f. Age of trees are from 8 years old to 23 years old.
   g. Number of planted fruit varieties are 2 to 5 varieties
   h. Irrigation source of all 8 visited orchards are Canal and Deep well.
2. *Consideration of Main points during planning and Establishment of Orchards:*

All interviewed farmers considered essential main points (Selected site, Adaptability of trees , Orchard trees chilling requirement , Orchard trees pollination requirement , Orchard planted trees distance situation , Orchard planted trees

varieties) during planning and establishment of their orchards

3. Established orchards general management situation:

In generally orchards managements (irrigation , fertilizer application amount, types, time and methods, trees pruning, intercrops management, pests and diseases control/IPM, weeds control , fruits thinning ,and fruit harvesting , sorting , grading , packing and storage methods) of around 70% visited orchards need for improvement.

4. Access to market, marketing information and reliable sources of fertilizers. agrochemicals and other orchard tools:

All visited orchards owners do not have access to market, marketing information and also to reliable source for purchasing of fertilizers, agrochemicals and other orchard tools

5. Visited orchards one growing season per Jirib average expenses. gross income & net income in Afghani :

a. Average expenses of 8 orchards per Jirib = 26500 Afghani
b. Average gross income of 8 orchards per Jirib = 76875 Afghani
c. Average net income of 8 orchards per Jirib = 50375 Afghani

II. Maidan-Wardak Survey details: Interview of 7 apple orchard owners in various parts of Nahri Polad village of Maidan Shar in Maidan-Wardak has been done. The detailed information & results of interviews are as bellow:

A) List of Interviewed Farmers :

SN	Name	Father Name	Village	Contact Mobile #	Remark
1	Masum Khan	Alem Khan	*Nahri Polad*	0789974626	
2	Amanullah	Omera Khan	Nahri Polad	0781982623	
3	Omera Khan	Haji Khawani	Nahri Polad	0799454311	
4	H. Adem Khan	Haji Khawani	Nahri Polad	0781140650	
5	Zalmi	Haji Zadran	Nahri Polad	0797179015	
6	Babrak	Amir Zada	Nahri Polad	0788875910	
7	H.Sardar Khan	Haji Khawani	Nahri Polad	0790088248	

1. *Orchard establishment general information:*

a. Land area in Jirib: Land area of 7 orchards are from 1.5 to 3 Jiribs.
b. Distance between tree to tree are from 3 to 3.5 m.
c. Distance between row to row are from 3.5to 4 m.
d. All 7 visited orchards were bad because have been planted deep.
e. Total number of trees per Jirib are from 163 to 167 trees
f. Age of trees are from 15 years old to 20 years old.
g. Number of planted fruit varieties are 2 to 3 varieties
h. Irrigation source of all 7 visited orchards are Canal and Deep well.

2. *Consideration of Main points during planning and Establishment of Orchards*.

All interviewed farmers considered essential main points (Selected site , Adaptability of trees , Orchard trees chilling requirement , Orchard trees pollination requirement , Orchard planted trees distance situation , Orchard planted trees varieties) during planning and establishment of their orchards

3. *Established orchards general management situation:*

In generally orchards managements (irrigation , fertilizer application amount, types, time and methods, trees pruning, intercrops management, pests and diseases control/IPM, weeds control , fruits thinning ,and fruit harvesting , sorting , grading , packing and storage methods) of all visited orchards need for improvement.

		4. *Access to market, marketing information and reliable sources of fertilizers. agrochemicals and other orchard tools:* All visited orchards owners do not have access to market, marketing information and also to reliable source for purchasing of fertilizers, agrochemicals and other orchard tools. 5. *Visited orchards one growing season per Jirib average expenses. gross income & net income in Afghani* : a. Average expenses of 7 orchards per Jirib = 24286 Afghani b. Average gross income of 7 orchards per Jirib = 56429 Afghani c. Average net income of 7 orchards per Jirib = 32143 Afghani 6. *Provision of extension services / Technical assistances to farmers:* During visit of 7 orchards of Nahri Polad village in Maidan Shar of Maidan-Wardak province the following <u>technical assistances provided to orchards owners and some other farmers.</u> a. Fertilizer application types, amount, time and methods. b. FYM application time and methods. c. Apple trees pruning time and methods. d. Fruits thinning importance, time, and methods. e. Orchard irrigation methods. f. Sapling planting method. g. Apple trees spray program. h. Trees trunks white washing importance and method. 7. *Main Constraints for the performance of Horticulture in the Area:* From the interview have done with orchards owners and other farmers we found the following constraints for the performance of horticulture in the area. 1. Lack of sources to provide technical assistance and extension services to farmers. 2. Lack of training sources to rise farmer's capacity especially in horticulture. 3. Lack of credit source to overcome farmer's problems when they need money to provide agricultural inputs on time. 4. Lack of reliable source for purchasing fertilizers, agrochemicals and other agricultural tools. 5. Lack of cold storage facilities for fruits storage. 6. Lack of reliable sources for standard packing materials. 7. Did not have access to market and marketing information. ***Recommendations:*** Farmers need for various theoretical and practical training and also for training tools especially on the orchard management. *Meeting with Maidan Wardak DAIL:* On April 14, ANHDO technical staff had a mission to Wardak province to meet with the Wardak Ag department director and horticulture department manager and other stuff. According to the Wardak Ag Director the main products of the province are potato, apricot and apples. 25% of land is dedicated to apple orchards. The whole estimated apple production per 150,000 MT. There are two cold storages, one in the capital Maidan Shar which has the capacity of 500 MT and the other is Sayed Abad district which has the capacity of 1000 MT. Including these two cold storages there are about 65 traditional cool storages. The main problem of the two cold storages is lack of electricity. Other problems the Wardak province had are lack of improved apple variety, transportation, marketing national and international, packing, grading, and storing. The other big problem of the traders is not awareness of international transportation and export rules and regulations.

- **Produce manuals, catalogues and guides**
- Pistachio nursery, orchards guide (hand out) printed 500 copies and distributed for farmers and relevant partners.

- Poster on safe use of pesticides is printed 2000 copies (1000 Dari & 1000 Pashto) with technical support of MAIL-PHDCs, ANNGO and PHDPII. The posters distributed to relevant partners.

- Manual for Fruit thinning importance and methods printed in 500 copies and distributed in local language. ANHDO technical staff finalized printed and distributed Fruit thinning manual for farmers.

- ANHDO published Horticulture magazine, this magazine will be printing four times in a year. A acknowledgment interview was launched with the ANHDO members. On the following day meeting regarding official opening of magazine work was held with some of members and directors of ANHDO that regulation and conditions for articles provided by responsible people and many other important issues were described in it. As the magazine consists three distinct parts, technical informative articles, ANHDO activities and introducing of some people who have worked in the horticulture sector by writing about their biographies and efforts they made (Dr. Wakil for the first edition), the staff started to collect raw material or the contents of magazine.

- **Initiate and coordinate programs for training in orchard management**

Training of Trainers: ANHDO conducted the third round of TOT (Training of trainers) in Herat on 22 & 23 of April in the Agriculture Faculty Conference Room of Herat. 33 trainees participated (8 female and 25 male) from 6 districts of Herat (Enjil, Guzara,Rabati Sangi, Karukh , Zendah Jan and Kohsan) 22 from DAIL staff, 10 from agriculture faculty and 1 trainee from ANHDO staff were participated. The following Topics discussed: Harvesting techniques, time of harvesting and storage, Economic value, Processing and sorting, Grading, Packages, Retail & whole sale markets.

Training of Farmers: ANHDO conducted second round of Farmers training in Herat. 200 farmers in eight groups each group 25 farmers, trained by 16 trainers in 6 districts (Enjil , Guzara, Rabati Sangi,Kohsan and Zendah Jan).

Topic covered in the training:

Irrigation systems, Pistachio budding systems, Fertilizer and fertilization, Pistachio training and pruning system, Pistachio pollination methods, Pistachio diseases and insects, Pistachio IPM, Site visit and practical training.

ANHDO conducted third round of farmers training in Herat. 200 farmers in eight groups each group 25 farmers, trained by 16 trainers in 6 districts (Enjil , Guzara,

Rabati Sangi,Kohsan and Zendah Jan).
Topic covered in the training:
Harvesting technics, Processing, Grading, Storage, Package, Retail, whole sale market.
Second phase of Training of Farmers: In a meeting with farmer trainers, decided to repeat the trainings with new farmers, the farmers shows interest identified and selected for next phase of training sessions. (Annex II)

- **Report on new methods and systems**

ANHDO developed and distributed the following informative booklets, posters for farmers, producers and other stakeholders.

- Pistachio nursery, orchards guide
- Poster on safe use of pesticides
- Manual for Fruit thinning importance and methods.

TV Program:
For awareness and information of Herat farmers, ANHDO organized TV information program, based of quotation procedure, selected ASER TV, during the month of June recorded two events, organized and broadcasted by mentioned TV. First event rune by Mr. Abdul Wasi Amiri agriculture faculty lecturer and Mr. Edres Zalal head of horticulture deportment, the event broadcasted on 8:30 Pm date 08.06.2015.
The Second event rune by Mr. Moh.Nazim Sakandary agriculture faculty lecturer and Mr. Atiqullah Romal DAIL extension specialist.
Topic of first event was TOT first round training material, and the second event was the second round TOT training material (Pistachio pruning, irrigation, and fertilization, budding and general information regarding pistachio promotion. The event broadcasted at 8:30 Pm date 26.06.2015.
During the month of July ANHDO had one TV live program in ASER TV, the program run by Mr. Edress Zalal Head of Horticulture and Mr. Moh.Nazim Sakandary agriculture faculty lecturer, the topics was (Pistachio pruning, irrigation, fertilization, budding and general information regarding pistachio promotion.
Radio Program:
For more information and awareness of Herat farmers regarding pistachio promotion, ANHDO conducted radio programs.
ANHDO prepared informative horticulture massages for radio program and give to radio Jawan and radio made the clip for broadcasting.
-The massages broadcasted twice a week every Saturday and Thursday at 5: 05 pm for 10 minute, until 16 of July.

- **Organizing test marketing of improved varieties**

Cherries' Market Survey for Four Verities(Black Star, Stella, Skeena, and Blaze Star):
A market survey was conducted among 10 fresh fruit marketers at Kabul fresh fruit market located in Tahai Maskan. The purpose of the survey was to determine the price demand curve for the different cherry varieties.
The survey was conducted by means of a questionnaire where we took four (Black Star, Stella, Skeena, and Blaze Star) cherry verities in, 0.5kg clam shells boxes and show it the marketers, in order to fill out the form.
At the market, after the marketers looked, tested and then give their ideas about the cherry quality, and prices. From the table of data, the most wanted variety is Black Star, the average price per Kg markers were willing to pay is 140Afs, other verities are as follows Blaze Star average price per kg is 133Afs, Skeena and Stella both had

the same average price 123Afs per kg. The total average indicates that 10 marketers can sell 2000kg cherries per day.

70% of the traders don't prefer the 0.5kg clam shell, because of its small size and miss interpretation of the product with imported verities. According to a marketer named Fazal Haq, "when the customers see cherries in these well packed clean and labelled boxes, they will not believe these are local product. The customer will think these cherries are exported from the neighbouring countries." He continues, customer prefers local products way better than imported.

Majority of the marketers recommended 1-2kg boxes for the cherries packing. Almost all the marketers like the quality of the all four varieties. 90% categorized it the best cherry in the market. 100% of the traders liked the colour and test of the all four cherries

If any conclusions may be drawn from the data, they are, perhaps, as follows. Most Kabul fresh fruit marketers like to sell their products in a traditional way. They like to pick fruit in the orchard and put it in the wood or paper boxes without any grading and sorting and set it as it is. However, there were some traders who appreciate my efforts for developing the quality of the products and become more interested when state them the benefits of the modern marketing compare to traditional marketing and how the boxes, labelling, sorting and grading add value their product and increase their revenue. They also provide recommendation about the box sizes. They recommended bigger size boxes 1-2 kg.

The significant point about clamshell boxes, grading and sorting is miss interpretation of customers.. The marketers explained when customers see fruit in this kind of boxes they assume these products are imported from other countries. Most of the imported products in the markets are packed in label boxes, packages, or something. On the other hand utmost the local products are sold in the market without any proper label. Traders presumably have little understanding of the modern marketing benefits and customer services. Moreover, they don't have any regular tracking of sell data, which will help them in their future sell.

After the collecting feedback on the first survey then we design another survey for cherry evaluation in order to fill some of the defections and obtain more accurate market data.

- **Developing marketing surveys**

Cherry Marketing Evaluation Survey:

On June 15, 2015 a Cherry Varieties Marketing Evaluation was conducted at the ANHDO Taimani office. In this event including marketers, officials from HDTP, Relief International, ANNGO, and Landelmale also participated in the cherry testing.10 cherry varieties were picked from Badam Bagh research farm yesterday. The varieties include (Bing, Black, Skeena, Lapins, Compact Stella, Kelleris, Ferrovia, Sweet Heart, Balze Stare, Stella). The purpose of this evaluation was to evaluate the cherry varieties from two different angels (traders and customer perspective) and obtain accurate data from both the traders and other participants in order to find market demand percentage and price for each variety.

Field Survey Report

Apple production and its current marketing situation in Afghanistan:

This field survey conducted on 11 apple traders (whole seller) and 11 marketers (retailers) were surveyed in Kabul and Wardak provinces. The purpose of this study was to discover the key problems apple traders are facing today in Afghanistan

		markets. The survey was conducted by means of a questionnaire printed on paper, where ANHDO technical staff personally travelled to different markets both in Kabul and also in Wardak. The had face to face interviews with the apple whole seller and retailers and asked them question in order to fill out the form. In the traders survey the first part of the questioner dealt with harvest and post-harvest procedure. The second part of the section concentrates more on the packing and sorting. The third portion is allocated to the storage facilities and the last part is market survey. From the data table most significant items are as follows. In the first section of the traders' survey 80% of the traders know their product final customers. 40% sell their apples in Kabul 60% export them to Pakistan. Only 20% of them import apples from other countries and 80% of the traders depend on the national products. Interestingly, 100% of the traders grade and sort apples but when I asked "do you know any grading measures?" their answer was negative. 95% don't clean or wash apple and 0% use tag label. 90% don't even know quality parameter or quality control. According to data table percentage all the traders are welling to participate in training and want learn about their product marketing. On the other hand almost every one answer is negative to the question "Are there any marketing services availed?" moreover, only 20% of the traders' are members of an association. In the second part of the trader survey 90% answer "yes" to the question (Do you use warehouse?) but the following question (What type of site you use for packaging) reveal that 80% of the trader pack their apples under simple shade or open area. About 80% of the traders are satisfied with the materials for packaging, in boxes selection mostly used are wooden boxes because they are cheap and easily available in the local market. About 30% use paper box, 20% use plastic bags and some use hard plastic trays. 100% of the traders store apples in the traditional cool storages. Means use for transport from orchard to storage is donkey, wheelbarrow, and vehicles. Profitable verities specially for storage are 90% double read delicious (red Beroti) and Welspur (red Malling). 30% percent store golden delicious (yellow). In the marketing section of the survey, not surprisingly, the answer to the question (Is there quality control in the market) reply100% (No). Following to the question of (Are there any market services) is also 100% (No) neither NGOS nor government provided or offered any service to them. The fact is that there is not reliable and credible source to get accurate statics of apple trade range. Traders who were questioned in this survey provide information about their yearly sale range; their sale very from each other. In this survey small trader participated who sell 10MT per year also there are traders who sell 150 MT per year. According to Wardak DAIL Director, annually from 120,000 to 150,000 MT apples are produced in Wardak province. There is not accurate date about the apple trees sell in the country. However, according to ANNGO organization there are 176 registered nurseries in 20 provinces. These 176 nurseries sold 344,440 apple saplings in the past four years. To estimate 20% loss in this data approximately 300,000 apple tree are in the ground now. By 2020 on average each of these trees will produce 10 (mana) 70kg apple. Approximately ANGGO provide 30 percent of the apple saplings. According to USDA in 24 provinces of apple are grown commercially. However, apples are grown in all provinces. So there are also other provides nurseries which provide apple saplings and people also bring sapling individual from

other countries and borrow from each other. Approximately if we count 300,000 more apple tree in the country so that number will get double. It means there are 600,000 apple trees in the country. So, on average an apple produce 70 kg apples. At apple session the lowest price for apple is 100Afs. To multiply 100x600,000 = 60,000,000 Afs per year.

If any conclusions may be drawn from the data, they are, perhaps, as follows. Afghan traders' presumably have very little understanding of marketing and product quality because key factors that effecting the quality of the product are lack of standard packaging, washing/cleaning, grading, and warehouses. Without knowing them, most of their loss is from the poor quality packing, and professional marketing as well as lack of inappropriate storage. Additionally, outside of their control the government complicated paperwork transportation and their poor knowledge from modern marketing and not awareness of international transportation and marketing laws and procedures are other factors affecting their income. Apart from the mentioned problems the free market paves the way for other countries products to be imported and sold in the Afghan markets. The imported apples have better quality because they are stored in proper cold storages and all other supply chain requirements are taken into consideration.

- **Market research**

Survey of Export Promotion Agency of Afghanistan (EPAA):

Quality Certificate

ANHDO technical staff visited Export Promotion Agency of Afghanistan (EPAA). EPAA was funded by USAID in the past but for the last two year they have no fund and the organization becomes a part of the Afghanistan Chamber of Commerce Industry (ACCI).

Main findings:

1- EPAA do not have any accurate and update data from Afghanistan export.
2- EPAA do not have internet facility.

Attached picture shows the certificate issued by the ministry of commerce where many of the essential elements of a product are not test in that. That is why it is not accepted in many countries.

EPAA will have Afghanistan agricultural product show in Italy for six months

Apples' Production and Marketing in Afghanistan (secondary research):

The purpose of this study is to form an understanding of how the processes are related in apple supply chain management to the current marketing situation, what are the problems and services demanded for each stage of the product network, and finally to propose a method for supply chain coordination. This research uses a literature review and (in-depth interviews). The interviewed are Afghan fruit companies that operate both on national and international basis in apple and other fresh fruit trades. Empirical data have been collected mainly with key traders (whole seller) and marketers (trailers) representing senior and middle management in the selected companies.

The first part of the research is literature review the second part is containing

information gather from marketing survey.
As the study was requested by the ANHDO leadership, because there was a need for information about apple production and marketing, so in the month of April and May 2015, both a disk and market surveys were conducted. Information retrieved form literature review was collected from different sources. However, the information was not enough to fulfill the all the requirement that is why there was a need for market survey as well.

Literature Review
After raisins, apples are the second biggest product in Afghanistan horticulture sector. Apples are an important fruit in Afghanistan, and apple trees are well-suited climatically.
Production of apples is concentrated in seven provinces: Wardak, Kabul, Kandahar, Parwan, Logar, Ghazni and Balkh, but apples are grown in 23 other provinces too. Current apple production is almost exclusively from exotic varieties imported around 20 years ago. Out of almost 20 exotic varieties of apples, only three varieties are grown commercially: (USDA Foreign Agriculture Service)
Fruit species (excluding grape) with more than 1 000 jeribs (200 ha) in the monitored villages (spring 2003)

Harvest:
Like other agricultural products, apples also has its own time which needs to be schedule before the harvest. According to UCDAVIS 2008 publication:
For time scheduling, growers must estimate optimum harvest dates well before picking fruit. In addition, optimum maturity levels differ within the same cultivars, depending on intended use and storage life desired. Harvesting too early can result in fruit that is off-flavour or lacking flavour, poorly colour, small and subject to bitter pit and storage scald. Harvesting too late can result in softer fruit, the potential development of water core, and a shorter storage life. The best test for maturity is to sample one and taste it. Another method is to take the apple in the palm of your hand and give it a slight twist - if it drops off, it is probably ready to eat. When harvesting apples, take care not to bruise them - this will cause them to rot much more quickly, and if in storage, the rot will spread to other apples. The stem should not be separated from the fruit, because fruits without stems cannot be stored long without losing quality.

Export and Import:

Afghanistan's apples not only consume on the national level but it also has a good international market in the region. According to Central Statistics and Chamber of commerce of Afghanistan, Afghan apples are exported to Pakistan, India, Turkmenistan, Tajikistan, Iraq, Canada, Turkey, United States, and UAE.

Table 1: Afghan Apples Export Statistics MY 2007/08 to 2012/13

Afghan Export Statistics: 080810, Apples, Fresh					
Quantity: Metric Tons					
Afghan Marketing Year: April/March					
Country	2009/10	2010/11	2011/12	2012/13	Apr-Sep2013 (6 months)
Pakistan	9,331	955	3,693	23,532	600
India	11	17	2,750	811	1,093
Turkmenistan		353	180		
Tajikistan		56		66	28
Iraq		59			
Canada	24				
Turkey		24			
United States				9	
UAE	0.77				
TOTAL	**9,367**	**1,464**	**6,623**	**24,418**	**1,721**

Source: Central Statistics Organization and the Afghanistan Chamber of Commerce.
Note: large increase in exports to Pakistan in 2012/13 reflects easing of border constraints.

Apples produce in Afghanistan have higher quality they produce in Iran or Pakistan. Roots of Peace conducted a study about 14 varieties grove commercially in Afghanistan. (July Red, Red Chief, Double Red Delicious, Wel Spure, Red Crimson, Jawrasi, gala, Golden Delicious, Turk Kulu, Masta, Spure Golden, Jawrasi Golden, Kado Seb, and Nazak Badan including all these varieties there are also other wild verities). Apples are the most consumed fruit of the agriculture product in Afghanistan.

Compare to 1990s, Afghanistan's horticulture sector have developed in the past decay. Both national and international interested parties have invested in this sector. However, there are still lots problems and challenges ahead. The significant problem about the apples' production start after the post-harvest. Major problems in the apples' production are: harvesting, packing, storing, disease control, transporting, cooperative and marketing. The UCDAVIS study shows:

"Priority Problems in markets include lack of transportation and infrastructure (roads), barriers in the value chain (such as lack of value-added facilities), packing products are expensive and inaccessible in rural areas, no market standards, poor **postharvest practices** and infrastructure, poor export opportunities, **export standards** are not generally known, undervaluing of local varieties for international marketing (ie landrace pear varieties).

All these problems affected the quality of apples both at the domestic and international markets. Each year quantitatively the production of apple raise but the country market still remain dependent on the neighbours' production. According to USDA study, "Although reliable data are not available, Afghanistan also imports a large amount of fresh apples every year from China, Pakistan and Iran. The imports reflect the fact that Afghanistan does not have adequate facilities equipped with cold storage to keep apples long after the harvest."

Storages:

Lack of storage especially cold storages in the country is one the main factor that affect the profit of both farmers and traders. They sale their product for very low cost during the harvest session or right after the harvest. A pilot project was conducted by CHAMP in result they found: "Two months after the apple harvest the local prices climb 30-40%. After three months apple prices double from their harvest season pricing. Apples stored in a cool room or cold storage can survive three months with less than 10% loss." According to CHAMP website, if a former keep his apples in storages for five months after the harvest his profit will increase in hundred percent. "He increased the price he received for his apples by 50%. If he had kept them in storage for another month, he would have received a 100% increase in his sale price"

Grower Associations and Marketing:

According to Ministry of Agriculture and Livestock, there are total 1467 grower association in the country and there 35 more newly registered that complete date is not available about it. I not sure, what percentage of these associations are effective to formers. Do these formers know, what are their rights and responsibilities? Are they created base fairness and equality? How much they are effective to the local community? Do they have vision for development? Did the any party have train them about market opportunities? All these questions needs to be answered. According to FAO 2003 survey,

It is more common for farmers from peri-urban districts to market their products themselves, because they have access to transport and are in a better position to negotiate with different traders and wholesalers. However, these negotiations always take place on an individual basis between the farmer and traders; hence, an individual farmer always has limited bargaining power against a group of traders.

Like other products, apples also transported to market in traditional boxes and bags. The marketing approach is still mostly traditional farmers sell their products to traders on individual there is no minimum standard price or regulation. It is about the famer and welfare. What over price they agreed on it, that is ok.

Conclusion:

This literature is combination of several study about the apples production in Afghanistan. Taking in to consideration the above studies, it can be concluded that there are more problems about apples production in the post-harvest period. However, it is hard to solely depend on these studies. Because Afghanistan political, social, and economic situation has affected overall the production and marketing in the country that is why agriculture is also not free of these matters. So there was a need for field survey, and evidence based research in order to help ANHDO and particularly those employees who works on the HDTP for better decision making that what could be done to improve the horticulture sector specially apples production. The next section contains information of survey conducted in field.

- **Organizing and participating shows, exhibitions on own initiative or with partners**

During the reporting period no show or exhibition conducted.

- **Coordinating with donors and investors on horticultural investment opportunities**

ANHDO presented an interest letter for CARD-F for **Development of Commercially Viable Grapes Value Chain, Afghanistan** which is accepted and ANHDO shortlisted for presenting proposal, ANHDO prepared a detailed proposal and submitted to CARD-F.

Result 3:

The technical standards of the horticulture industry are set at a level consistent with developing export markets and import substitution.

- **Survey of packing materials, coordination with suppliers, investigations of costs,**

ANHDO technical staff along with farmers visited Morwarid Factory in Herat.
The purpose of the visit to show the trainees (farmers and producers) the packing, sorting, grading and cleaning new and modern methods in Morwarid Factory.
Mr. Ahmad Yousufi the company Production Manager welcomed us. Morvarid products cover the major cities in Afghanistan such as Herat, Kabul, Mazar and Kandahar. They buy products from local farmers and import it from other countries as well.
Morwarid factory add value to their products they clean, wash, sort, grade, pack , repack, store and sell to whole sellers in the market. We found out that such factories will have positive impact in our country economy. However, the manger was complaining form imported products and unstable market demand and supply was another issue affected his business.

- **Additional training of fruit laboratory technicians on characterization of fruit in conjunction with interested parties, looking at application of proven techniques from abroad,**

Adoptive research program ad National collections coordination issues with MAIL transferred to HPS project.

- **Coordination with relevant industry groups and organizations, publication and dissemination of results, development of standards and improvements where practicable, testing marketability of improved products**

Total 11 demo orchards established in Herat province for the purpose of extension and training of farmers in production of pistachio (Annex IV)

List of Pistachio Demo Orchard in Herat Province

SN	Name of farmer	village	district	size of land	No. of sapling	date of planting	Remark
1	Mir . Ghyas	Khoja Mulla Kohi	Enjil	4000 M2	180	23.05.2015	
2	Abdul Qayum	Agriculture faculty	University	1000 M2	35	21.05.2015	
3	Nasir Ahmad	Beland Shahi Bala	Enjil	2000 M2	64	25.05.2015	
4	Sayed Fatah	Nawin	Enjil	2000 M2	65	28.05.2015	
5	Khoja Masoud	Beland Shahi Pain	Enjil	2000 M2	55	30.05.2015	
6	Haji Enayatullah	Badaq	Enjil	1000 M2	45	31.05.2015	
7	Haji Abdul Raziq	Gawashan	Guzara	2000 M2	84	07.06.2015	
8	Ghulam Hazrat	Kabisa	Guzara	1800 M2	56	09.06.2015	
9	Farid Ahmad	Nawin Sufla	Enjil	2000 M2	62	17.06.2015	
10	Masehullah	Rabati Sahib Zadah	Guzara	2000 M2	72	25.06.2015	
11	Abdul Qayum	Farm Urdo Khan	Enjil	1800 M2	58	08.07.2015	

- The following technical assistances / extension services have been provided to orchards owners and other farmers in Herat.
  - Mulch application importance methods and time.
  - Orchards irrigation good methods.
  - Intercrop management.
  - Fruit thinning importance and methods.

- **Exposure visits and study tour**

Not done in this period.

- **ANHDO data base and website:**

Handover of database:

		The horticulture database has been successfully handed over to LML/PHDCs through official handover process. The Electronic Database of Fruits, containing the following (34) objects and data inside the mentioned objects (here displayed as Total Records) have been handed over to LML/PHDCs. (Annex III) *Publications Section:* This section of website is to link all the reports and publication which are available among the website with different navigations, but was difficult for the visitor to locate the exact documents which he/she needs. As well some of the publication were available which didn't belongs any specific portion but was necessary to upload within the website e.g. (IPM Reports), therefore the named section has been developed (Publications) to concentrate only on documentations and mostly those which are specifically not belongs to any existing portion. Inside the publications another portion has been designed to include the IPM reports and annexes, these reports are provided by IPM every month with Annexes as activities done within. You can browse the developed section with URL bellow: http://afghanistanhorticulture.org/Publications.aspx *Updating ANHDO Profile:* The profile of ANHDO on afghanistanhorticulture.org has been updated and re-designed. This new profile has been combined from different expandable accordion tabs which each of them are grouped to the specific portion. Containing Introduction, Vision, Mission, Goals and working background. *Continue Working on Database:* In our horticulture database we have two types of fruit varieties, local and imported. Every one of them have their own insitu or exsitu data, which is known as passport data, so before hand-overing the database we cross-checked all the data again. Some duplicates found on imported varieties which are removed successfully, as well some other were existed that their passport data was not entered, so those data are entered as well. *Coordination with ANNGO:* ANNGO got their own domain name ANNGO.ORG.AF, so they hosted their website on that, ANHDO Coordinated technically on bellow points with them: 1. Setting their hosting account into Windows Hosting 2. Deploying the website into the hosting account 3. Configuring the scripts 4. Setting up the mail server 5. Setting up the HORDE email client 6. Configuration manual for the Outlook 7. Forwarding all ANNGO related email addresses existed on afghanistanhorticulture.org to anngo.org.af *Benchmarking for MIS:* ANHDO management is interested to upgrade the administrative procedure by using some common software, for this purpose a Benchmarking Management Information System (MIS) survey has been done, this survey targeted some local and international NGOs working in Afghanistan. *Linking Passport Data for National Collection:* Passport data is the detailed descriptive information about varieties & clones which

are collected locally (In-Situ) and those which are imported.
So this data has been linked with the National Collection section of website, once the public coming to see a variety, so he/she can see this information as well by clicking on its accession number.

Figure 1.0 Passport Data for NC Varieties

ANHDO website publication section

Farmers training in Herat

TOT Training in Herat

Visited Orchard in Center of Logar Province

Mir Ghyas DO in Enji district

planting missed sapling in Urdo Khan

Do of Nasir Ahmad in Enji district

DO of Khoja Masoud in Enjil district

DO orchard of Khoja Masoud in Enjil

planting missed sapling in Guzara

DO of Ghulam Hazrat in Guzara

Do of Haji Abdul Raziq in Guzara district

- Interview of 7 apple orchard owners in various parts of Nahri Polad village of Maidan Shar in Maidan-Wardak province.