



Arab Agronomist Association

Annual Report 2008

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The Association's Mission

The Arab Agronomist Association (AAA) is a nonprofits community organization, established in Jerusalem in 1992, and restructured in Ramallah in 2007. The Association's scope extends to include the provision of technical, administrative, and professional qualification and development necessary for workers in the Palestinian agricultural field, in addition to the development of this field through incorporating international experiences and techniques on a national level, and reinforcing the Palestinian contribution in the international and regional alliances interested in rural development. The association relies on its staff's professional and practical experience in the agricultural field, in implementing its projects and activities, as a base for the economic and social development, at the same time maintaining cooperation and networking relations with other operating nongovernmental organizations to ensure a democratic Palestine.



Introduction

As the AAA concludes its 16th year of contributing to the on going development process in Palestine, and as success can not be celebrated without sharing, we present this report that sheds light on some of the achievements of the last year, recalling all the ambitions, plans, efforts, challenges and successes.

During 2008, the Arab Agronomist Association implemented many fruitful activities serving its strategic goals. Regarding its pursuance to achieve sustainable rural development, the association continued its capacity building programs for agricultural professionals, farmers, youth volunteers and rural women CBOs. These programs aimed at increasing the targeted groups' awareness of organized and collective work besides enhancing their skills and knowledge in order to enable them of improving the management of their projects and the quality of their production.

The association seeks after better living standards for the Palestinian rural communities through increasing the share of agricultural production in their income. Therefore, it implements projects to improve the quality of this production by adopting modern and safe agricultural systems required by international markets and consumers namely, Organic farming and GLOBAL GAP. In fact, promoting such concepts in Palestine is aimed also to motivate environmental awareness. And because the AAA takes into consideration the safety of environment and natural resources it conducts different applied researches that assist in adopting modern safe agricultural techniques.

During the last year many difficulties and challenges enveloped the association's work because of the hard circumstances imposed by the Israeli occupation especially on Gaza Strip where the latest war had destroyed most of the achievements of the AAA projects. This fact will not affect our determination to bring sustainable development to Palestine, and because "in the middle of difficulty lies opportunity" and because "the greatest reward for doing is the opportunity to do more" our efforts will continue despite all obstacles.

The Arab Agronomist association would like herewith to seize the opportunity to express its gratitude and appreciation to its dedicated staff members upon whose hard work and commitment every single achievement depends and to its partners without whose great efforts and generous aids none of our plans would become true. As we receive the new year with great ambition and determination we leave you with some of the highlights of the last year.

Achievements according to the strategic objectives

I. Achieving agricultural and rural sustainable development

I.1 Capacity Building for agronomy graduates, rural women CBOs, farmers CBOs, and youth volunteers

Within the framework of the project “Towards Capacity Building and Sustainable Rural Development” funded by the Ministry of Foreign Affairs of Luxembourg the AAA had targeted three groups of beneficiaries in the agricultural sector: professionals, rural community based organizations and volunteers by capacity building programs, table (I.1) indicates the number of beneficiaries for the year 2008. The project has started in 2005 and lasted for three years; it aimed at building the capacity of individuals and CBOs in the targeted rural areas through training and improving living standards of rural livelihoods.

I.1.1 Training of fresh graduates

In its third year, the project targeted 40 fresh graduates, 14 of them females, by more than 2000 training hours on GLOBALGAP standards; the training included theoretical and practical sessions on GG certification, farming operations: cultivation, fertilization, irrigation, protection and treatment, exporting agriculture, risk assessment, internal inspection, vegetables cultivation (mushrooms, stone fruit, bell pepper and cherry tomatoes), irrigation networking systems and integrated pest management techniques (IPM). Moreover, some advanced topics were introduced to the agronomists according to their disciplines, for example, animal production agronomists received training on aquaculture production and performed apprenticeship in the veterinary department, while food industry agronomists received training on HACCP and ISO 22000. Training programs took place in PARC's training centers Raja` Abu Amashe center (Jericho), Na`im Khader center (Zababdeh),

Gaza Training Center for Newly Graduated Agronomists & Ramallah training center for newly graduated agronomists. During the training a number of field tours were organized to enhance their knowledge and experience, one of them was to the Jordan Valley which included visits to aquaculture farms, nurseries, palm, banana, grapes farms and agricultural products exhibitions.

Agronomists also received advanced specialized training course in Jordan to introduce them to the Jordanian experience in GLOBAL GAP system, fruit packing, and poultry farms. In addition they attended an advanced training program in Zababdeh on the poultry farm and bee farm.

1.1.2 Training of credit and saving and rural women CBOs

The second targeted group is Credit and saving CBOs, for this year CBOs from 40 locations in the West Bank participated in the training courses which were held in seven branches (Salfit, Ramallah, Jerusalem, Hebron, Tubas, Jenin, and Bethlehem). These courses included topics such as nutrition production, advocacy and lobbying, cooperation management, proposal writing, and communication skills. Therefore, the CBOs board members became skilled in writing proposals, launching campaigns, dealing with mass media, producing food such as mushrooms, and leading cooperative work and communities. In order to enlarge benefit and share knowledge and experience many cross-visits were coordinated among credit and saving CBOs from different locations.

Rural women CBOs (women clubs) were targeted this year also by capacity building programs where board members of women clubs from locations in seven districts in Gaza and the West Bank received training on various topics such as group organization, report writing, communication skills, and holding meetings. In addition, many cross-visits were coordinated to reinforce shared knowledge. Consequently, clubs' board members became able of planning, administrating, and evaluating their projects, reporting to donors, communicating effectively with communities, and enhancing their cooperative work.

1.1.3 Training of farmers CBOs

Regarding farmers' CBOs, for the third year of the project the training program focused on institutional work notions and management fundamentals. This program targeted farmers CBOs from 7 locations in the West Bank and Gaza Strip. Training topics were aimed to introduce farmers to writing meeting minutes and financial receipts, and to manage and prepare meetings beside fundamental information in archiving systems. In order to reinforce cooperation among farmers many cross-visits were exchanged as primary action for eventual shared activities.

1.1.4 Training of youth groups

Capacity building activities involved also 113 youth volunteers in the West Bank and Gaza Strip. The training included groups organizing and SLA (Sustainable Livelihood Approach) which discusses poverty definition, measure mechanisms, poverty causes and levels, and treatments. The trainees were very interested in this training as the SLA is considered new in Palestine. Thus they obtained knowledge regarding methods of improving financial situation, besides handling poverty issues in Palestine.

Table (1.1): beneficiaries of training programs for the year 2008

Beneficiary group	Number of Beneficiaries				Total
	West Bank		Gaza Strip		
	Female	Male	Female	Male	
Fresh graduated agronomists	7	13	7	13	40
Credit and saving CBOs	149	-	-	-	149
Rural women CBOs	91	-	50	-	141
Farmers CBOs	-	109	-	23	132
Youth CBOs	-	88	-	25	113

1.1.5 Overall review of the project's impacts

Since the year 2008 was the concluding phase of the project it is worth mentioning that the project in its three years made great successes and impacts on all of the targeted groups. Agronomists enhanced their knowledge and experience in administrative skills, specialized and technical skills, and modern agriculture techniques such as IPM, organic farming, agribusiness, and GLOBAL GAP certification. Furthermore, the project benefited the agronomists in increasing job opportunities because of the quality of the training they got; most of them are now working for different agricultural and developmental institutions whether governmental, private, or non governmental. Thus those agronomists constitute now an important part in the developmental efforts for a better agricultural future in Palestine. Regarding farmers, rural women and credit and saving CBOs members, they are now applying the technical and administrative knowledge they obtained in their projects and activities, and they implement the management principles on their associations. Youth groups gained experience regarding volunteerism concepts and organized work, they got acquainted to poverty issues in Palestine, so they are considered also an important part of the development process. Furthermore, within the framework of this project various international summer camps were coordinated to introduce the Palestinian suffering and struggle to the international community because of the separation wall and occupation practices on earth, and to increase the world's solidarity with the Palestinians. Thirteen employees from PARC benefited from this project by finishing their master degrees. Most of them had already presented their thesis and graduated. Table (1.2) shows the achieved activities of the whole project throughout the three years.

Table (1.2): planned and achieved activities throughout the project's period

Activity	Status	Percentage %
I. Trainings:		
(6) Training courses for 120 newly graduated agronomists.	Completed /120	100%
(21) training courses for Saving & Credit CBOs in WB and Gaza	Completed/ 21	100%

(21) Training courses for Women CBOs in WB and Gaza.	Completed/ 21	100%
(21) Training courses for Farmers> CBOs in WB and Gaza.	Completed/ 21	100%
training courses for (150) youth	Completed/ 360	+ 100%
2.Summer Camps:		
International Summer Camp 1: Discrimination wall impact on Palestinian every day life	Completed	100%
International Summer Camp 2: Documentation and study of four Palestinian locations	Completed	100%
International Summer Camp 3: Let's support the Jordan Valley, the source of our food basket	Completed	100%
3. Specialized Trainings		
Specialized Training 1 in Jordan: issues in plant production	Completed	100%
Specialized Training 2 in Jordan and Syria: agribusiness	Completed	100%
Specialized Training 3 in Jordan: the Jordanian Global GAP experience	Completed	100%
4.Training Farms Upgrading:		
Running of Poultry farm in Zabadeh	Completed	100%
Running of Bees farm in Zabadeh	Completed	100%
5.Centre establishment:		
Training Centre establishment in Ramallah	Completed	100%
6. Books Publication:		
Publishing a book about rural development	Completed	100%
7. Post graduate Studies Supporting		
Supporting PARC>s staffs in higher education (30)	Completed/ 24	80%

2. Adopting environmentally safe and profitable agricultural systems

2.1 Increasing Marketing Competitive Abilities for Palestinian Olive Oil

Olive production in Palestine has a very significant contribution to the national economy; many vulnerable Palestinian families depend in their income mainly on olive oil production. However, the majority of them lack marketing skills, adding that some farmers used to apply certain practices in olive tree cultivation that would negatively affect the quality of the Palestinian olive oil which is a naturally high quality. This fact raised the idea of the project “Increasing Marketing Competitive Abilities for the Palestinian Olive Oil” funded by the EU. The project which has been started in 2008 and will extend to 2010 aims at improving the income and living standards for the vulnerable rural population through applying profitable environmental friendly and sustainable agricultural technique namely Organic farming which will create new opportunities for development and quality improvement. This project benefits 1300 farmers through capacity building activities; 500 low income rural families, besides benefiting 7 existing cooperatives for olive oil production, and 7 mills of olive oil.

2.1.1 Training and capacity building programs for farmers

27 technical training courses, comprising of 91 training days were conducted. In addition to field demonstrations, where the total number of implemented demonstrations and field days is 75 demonstrations. The demonstrations were about pruning and tillage applications (13 field days) in addition to olive harvesting (26 field days). Moreover, the demonstrations discussed compost preparation (8 demonstrations) and pest management applications (28 bordeaux mixture and grafting demonstrations). All themes covered by demonstrations that took place in the first year play an important role in improving the quality of olive oil produced.

Not only did the project’s agronomists train farmers, but they also conducted continuous follow up and field extension visits to ensure the application of the acquired knowledge about organic farming by the beneficiaries; they shared with farmers all production phases in order to ensure high level of quality. Follow up activities during Harvest Season took place daily; there were collective harvesting demonstrations in each location for all farmers.

2.1.2 Physical support for farmers

Regarding farmers themselves, a need assessment survey was conducted to determine the requirements they needed to achieve the project's goals. Consequently, farmers were provided with the inputs and equipments of organic production such as bordure mixture, insect traps, picking tools (harvesting combs), plastic boxes, pruning tools (secures and sows), compost, and silver pockets to maintain the olive oil quality.

2.1.3 Cooperatives' rehabilitation and training

For this year, the farmers proved high motivation towards team work; they gathered each day to harvest the crops of one of them to move in the next day to the others farms. Also, they applied the method of collective pressing. This method enabled them of pressing their production in the same harvest day, through contracting the mills' owners, thus there was no storing before pressing which preserved the quality of their production of oil. Samples of the farmers' oil production were tested in Al-Reef Company's laboratories.

Collective work and sharing values were the highlight of this year's activities. Beside the 7 existing cooperatives which were targeted by the project at first 217 individual farmers were motivated to organize themselves within 6 new cooperatives. At this point there are two cooperatives registered and the rest of them are in the process of registration. Need assessment survey was conducted for cooperatives and they were supported and provided with all necessary inputs such as offices equipments, computers, printers, 2 fixed (5 tons) and one mobile (1 ton) stainless steel tanks for olive oil storage, mobile labs, and compost preparation equipments. There were also specific training courses for cooperatives on processes of producing high quality olive oil and maintaining its quality, as well as oil packing and labeling (20 training days). The training included practical sessions on oil testing for free fatty acid (pH) and peroxide using the mobile labs provided to the cooperatives.

Reciprocal Visits: Two reciprocal visits among the existing cooperatives (7 cooperatives) and the new ones (6 cooperatives) were conducted for exchanging knowledge and sharing experiences in the field of olive production and system development.

2.1.4 Mills' rehabilitation

Regarding the mills benefiting from this project, 7 mills were targeted; they will be subject to follow up and rehabilitation by the project and they were awarded the organic certification. In fact these mills weren't enough to serve all the project's locations, therefore, another 10 mills were targeted to work under the supervision of COAP and to they were awarded the organic certificate because one of the requirements of organic production of olive oil is to be pressed in organic certified mills.

2.1.5 Preparation for certification

In order to obtain a high quality-certified olive oil the project worked on preparing all farmers/ cooperatives/ mills for organic certification. In cooperation with the Center of Organic Agriculture in Palestine (COAP) processes of documentary preparation, registration, farmers' files, internal audits, nonconformity follow up, and external inspection were carried out. Farmers'/ cooperatives'/ and mills' files were sent to the Center of Organic Agriculture in Egypt (COAE) in order to finalize the certification process.

2.1.6 Marketing activities

The project aims basically at increasing the marketing chances for the beneficiaries' oil production, thus an important part of its activities was the marketing phase. Therefore, many successful activities were achieved such as participation in several local and international campaigns and exhibitions, local campaigns including special supermarket shelves and tasting corners. These promotional activities assisted not only in increasing farmers' profitability but also in increasing public awareness about organic concepts.

2.2 Enhancing Palestinian Farmers' Preparedness for Exports

GLOBALGAP standards are basically designed to maintain the consumer's confidence in food quality and safety, to minimize the harmful environmental impacts of farming operations and optimize the use of inputs and finally to guarantee the health and safety of workers. Because of the obstacles encountering the Palestinian farmers in marketing their crops, they need

to follow such international standards that would improve marketing opportunities to increase their income taking environment safety into consideration. “Enhancing Palestinian Farmers Preparedness for Exports” project funded by Representative Office of the Kingdom of Netherlands (NRO) is a two-year action which has started in May 2007. It is implemented by PARC/AAA and aims at enhancing the skills of farmers in preparing for exporting their products, in order to revive the deteriorated economical situation in Palestine due to the difficult conditions. In its first year the project showed great success through achieving the GLOBAGAP certification for the project beneficiaries, in the second year the project targeted 60 growers in West Bank and 90 growers in Gaza strip, and they are in the process of applying the GLOBALGAP standards in order to achieve the GLOBAGAP certification. The farmers (direct beneficiaries) are distributed on 5 main districts in West Bank and 4 districts in Gaza Strip. Though, two types of beneficiaries were targeted this year: farmers and agronomists (AAA/PARC staff) as well. Agronomists benefit through building their capacities in training skills, good agricultural practices, extension, auditing and inspection. They had been given training in the first phase on number of topics such as Global GAP training, HACCAP, IPM, and traceability. For the second phase, they were given 28 training hours on two topics, risk assessment and internal inspection. The training was held in 4 locations in order to enhance there technical skills in Global GAP standards.

2.2.1 Physical and technical support for farmers

The farmers benefit from the project through gaining experience in good agricultural practices for producing new and different export crops, some physical support and the most important is introducing their products to the international market. Farmers are of two types: individual farmers and farmers within cooperatives. At this point the two groups of beneficiaries in both West Bank and Gaza Strip achieved about (80-95) % of the project activities. Many announcing activities were implemented such as workshops and meetings with farmers to introduce the project to them and to select the final beneficiaries. After conducting risk assessments the selected farmers were targeted by capacity building programs including 16 training hours for each of the following topics: GLOBALGAP, Integrated Pest Management (IPM), traceability, and fertilization. These training courses aimed at equipping

the beneficiaries with the needed skills of good and safe agricultural practices. In order to achieve the project's objectives in a cost effective way need assessment studies were conducted. The project provided field extension and follow up visits to all farmers to ensure the correct implementation of GLOBAL GAP standards on their farms, and to verify the correct documentation of all activities. Farmers also were supported with all required agricultural production inputs and packing houses that meet the GLOBAL GAP standards to facilitate the application of this system on their farms.

2.2.2 Internal inspection

This application was verified through laboratory testing of samples from the farmers' crops for pesticides residues. Moreover, all farmers were subject to internal inspection by AAA qualified agronomists in the West Bank and Gaza Strip by using the official GLOBALGAP checklists in order to manage all nonconformities and apply corrective actions before external inspection, which will be conducted by subcontracting an international certification body (SKAL), in order to complete the GLOBAL GAP certification procedures. Table (2.1) indicates the field activities carried out by the project's staff.

Table (2.1): field activities carried out by the agronomists

activity	Field activities by the project,s staff	
	West Bank	Gaza Strip
Risk assessment	360 field visits	540 field visits
Need assessment	62 field visits	124 field visits
Extension and follow up	600 field visits	810 field visits
Sample collection	60 samples	90 samples
Internal audits and inspection	60 field visits	90 field visits

2.2.3 Developing quality management system (QMS) for cooperatives

Cooperatives targeted by the project need to develop and implement an effective quality management system in order to obtain the GLOBAL GAP certification. Therefore, the Arab European Foundation for Training Research and Higher education was subcontracted to develop a comprehensive QMS on which members from all cooperatives took training by the staff of PARC/ AAA. Now, 9 cooperatives (5 in the West Bank and 4 in Gaza Strip) have already implemented the QMS which was subject to internal audits activities.

2.2.4 Sustainability and challenges

This project has a great impact on all those involved. It contributed in building agronomists' and farmers' capacities regarding the GLOBAL GAP farming system, establishing quality management systems for cooperatives, in addition to GLOBAL GAP certification for Palestinian farmers and increasing their income, creating job opportunities, and in founding a highly qualified national inspection and certification team. Unfortunately, the project's efforts in Gaza locations were wasted because of the latest war on Gaza which destroyed many agricultural lands and stopped many of the project's activities.

2.3 Intervention in Jenin district to improve rural families' life conditions

The continuous construction of the separation wall is causing humanity crises in Palestine; vulnerable rural families in villages who depend mostly on their agricultural land are the most affected and disadvantaged category. Therefore, the AAA in cooperation with the ACS, an Italian NGO, took an emergency action entitled "Support to Jenin's Farmers" aiming at contributing to the improvement of the life conditions and incomes of rural Palestinian families there. The target locations are four villages to the north-west of Jenin (Al-Tyaba, Anin, Rummana, and Silit Al-Harhiya) where the building of the wall has caused an increase of local people's poverty and unemployment (average of unemployment in these villages is 36%). The total population of these villages is 20,000 inhabitants and they depend mostly on the harvest of fruit trees, especially olives and almonds. In these villages the wall has brought about the isolation of 5,400 donum and the seizure of 6,600 donum.

The project which lasted from 2005 through 2008 performed interventions of a practical utility for the vulnerable farmers through rehabilitation activities for land to produce almond, olive and wheat. Thus there was building of water tanks and land preparation activities such as land ploughing, manual preparation, building terrace walls, fertilizing and compost preparation, and delivery of almond plants (planting almonds on a total area of 450 donums) and different legumes seeds, in addition to land preparation for planting wheat including land ploughing, fertilizing (compost preparation and distribution), delivery of wheat seeds and planting wheat on a total area of 280 donums.

This project benefited different groups of beneficiaries. 80 farmers in the four villages benefited from land rehabilitation for their farms and gained knowledge and experience about the organic farming system, their families (estimated by more than 750 members) benefited by having a chance to increase their income generated by agricultural activities, other local sheep and poultry farmers benefited also because the project bought manure (for compost preparation) from their farms, and finally the intervention supported also local women clubs in the targeted villages where women purchased wheat production to prepare Maftoul (a local dish) in order to be marketed abroad.

2.4 Quality Plus: Production of Extra Virgin Organic Olive Oil in Qalqilia villages

Despite its important role in development, the olive production sector suffered from ignorance in several stages of development. Therefore, the project “Quality Plus”, funded by the Switzerland Campaign for marketing the Palestinian Olive Oil, aimed at building the capacity of the farmers in adopting modern agricultural techniques for producing high quality olive oil in 4 villages (Jayyus, Azzun, Kafr thulth, and Seer) in Qalqilia district.

This was possible through the registration of farmers in the Center of Organic Agriculture in Egypt (COAE) in order to obtain organic certification. Accordingly; farmers were trained to follow the standards of organic agriculture, they were able to produce extra virgin organic olive oil after receiving physical and technical support by the project. They were supported with various physical inputs such as picking tools (combs), pruning tools (motors, scissors and saws), sackcloth bags, and plastic boxes, in addition to

contributing by 70% of the plowing costs, purchasing tractors and automatic plows for cooperatives, and providing 200 cubes of organic fertilizer for farmers, besides laboratory preparations for oil testing.

Moreover, farmers were trained and qualified on correct practices regarding land plowing, fertilization, pruning, pest management, harvesting and pressing methods, and oil storage. And many field demonstrations were held on preparation of organic fermented manure and compost and olive trees pruning, besides organizing several workshops and lectures about methods of producing high quality olive oil, olive fruit maturity index and ripening evidence, procedures of collective pressing and its advantages, procedures and instructions that must be applied inside the mill, methods of olive oil storage and factors that affect on its classifications, and organic oil production. And many field visits and internal inspection activities were carried out for the organic farms.

Also, the farmers were organized in cooperatives for organic agricultural production, which motivated collective work concepts among them. Thus the project resulted in enabling 139 farmers (the project beneficiaries) of producing extra virgin olive oil, 57 farmers had already obtained the organic certification which will make them capable of marketing their high quality production abroad. Concerning the impact of the project, the farmers greatly benefited from the training and the organic certificates that enabled them to produce high-quality organic olive oil. Accordingly, incomes and living conditions of the farmers were remarkably improved. This is clearly reflected in the farmers' wish to continue following the project's instructions even after it is finished.

3. Conducting agricultural applied researches and field surveys to improve agricultural work in Palestine

3.1 Controlling Olive fly

Olive fly is a dangerous pest that reduces both olive oil quantity and quality which affects its marketing ability. In order to prevent such risk farmers often apply chemicals that have harmful effects on environment and on olive oil quality (residues). Therefore, there is a necessity to explore new effective pest management techniques that are environmentally safe. In light of this necessity several activities were carried out during this year within the frame work of the project “A regional strategy for control of bactrocera oleae-the olive fly” funded by the Middle East Regional Cooperation program. The project which has been started in June, 2007, is a 3 years project that aims at developing techniques for controlling the olive fly effects in Palestine. In particular the project studies the efficiency of insect traps in controlling the olive fruit fly, and the opportunity of reducing the economic damage resulting from this fly through the use of two different types of insect traps, Pheromone tarps and local traps. Experiments were conducted in three locations in the West Bank: Beit Rima/ Ramallah where the experiment included an area of 50 dunums planted with 800 olive trees, Senyria/ Qalqilya on an area of 50 dunums planted with 750 olive trees, and Kufer-Rai’/ Jenin where an area of 50 dunums planted with 750 olive trees was included. During the experiments readings were recorded once every ten days, besides, daily follow up was carried out by the project team who informed farmers and showed them the right methods for using different types of traps according to last year’s results. This project assists in introducing researchers and extension officers as well as farmers to the use of different types of traps as an IPM compatible plant protection measures. It is expected that the results of these researches which will continue throughout the project’s period will reveal the most effective type/combination of insect traps; the results of 2008 are considered as a good beginning towards achieving this goal.

3.2 Utilization of Reclaimed Wastewater for Olive Irrigation

It is well known that the gap between water demand and water supply in the Palestinian territories is increasing, and agriculture is the main consumer of groundwater. The project “Utilization of reclaimed wastewater for olive irrigation” funded by the Middle East Regional Cooperation Program has been started in 2007 and will be extended to 2012. It aims at studying the utilization of reclaimed wastewater in olive irrigation compared to traditional rain-fed olive; the comparison includes mainly differences in many physical and chemical properties. This year a great progress was achieved through conducting a field study in Sir—about 11 Km east to Qalqilya. Basically it is an experiment that utilizes reclaimed wastewater from Sir Wastewater Treatment Plant which has been working since 2006 in irrigating some olive trees in a neighbouring olive orchard, other trees in the same orchard were kept rain-fed. The elevation difference between plant and orchard is about 43m; therefore a pump has been installed near the treatment plant in order to raise water to the orchard. The irrigation network was installed in May 2008, it was designed by “Netafim” Company in Israel, and the irrigation started directly after its installation. Operating this network was computerized to irrigate 96-100 liters per tree for 4 hours three times a week where the quantity of water depended on the metrological station which is located in Hableh Village about 10 Km west of Sir, and by using Penman-Monteith equation.

Several measurements were done during the experiment. Soil samples were extracted and the tests included clay mineralogy, organic matter content, and hydraulic conductivity, in addition to other chemical and physical analyses. Wastewater samples were tested for EC, COD, TSS, pH, Ca, K, P, Na... and other chemical and physical properties where wastewater was sampled approximately every two-four weeks. Sampling and testing included also olive trees such as tests for estimation of bearing (flowering), fruit set percentage

(fruit per stem where the average olive fruit for the irrigated trees was 2.57 while for irrigated trees it was 2.15), vegetation growth measurement (shoot growth), and diagnostic leaves for minerals tests. Moreover, tests were done on the olive and olive oil production. For example, olives chemical and physical properties were tested in Gilat Research Center, Negev, Israel and olive oil samples were tested in Al-Reef Investment and Agricultural Marketing Company for physical and chemical properties.

Wastewater reuse could be an option to cover part of the water demand; it is one solution for reducing the current pressure on water resources. Therefore, assessing the possibility of utilizing wastewater in olive irrigation is a crucial step towards achieving that solution. Actually this is the aim of this project, where the experiment is based on periodical tests for soil, fruits, and olive, comparisons between the results, and studies on the effects of treated wastewater on the production quality.

Obstacles

In the midst of the pursuit of their objectives institutions encounter many obstacles. In Palestine this fact applies in a dramatic way because of the occupation and its oppressing practices especially on the agricultural level. Here follows some of the challenges that faced the AAA during 2008:

- The continuous occupation procedures and collective punishment policy in the Palestinian territories
 - In Gaza strip, the latest war has destroyed many of the AAA achievements regarding the infrastructures of its projects and the farms belonging to its beneficiaries. Not to mention the continuous siege on Gaza, this stopped many aspects of life there especially the agricultural marketing.
 - In the West Bank, the Israelis are continuing their humiliating practices through check points that create serious difficulty in communication and coordination between the AAA staff (extension officers) and the farmers. The continuous construction work in the separation wall and the expansion in the settlements increase the difficult situation of the agricultural sector in the West Bank because this means more confiscation of land and more restrictions in the farmers' movements.
- The economic deterioration and the increasing living cost which causes deterioration in the living conditions for the Palestinians in general and farmers in particular.
- The farmers' unfamiliarity with some systems of agriculture and their precise requirements.
- The instable interior political situation in the Palestinian territories, which prevented some international contributions in the association's activities.

Recommendations

- Focusing on implementing emergency projects in Gaza Strip in order to participate in the reconstruction of the agricultural infrastructures in Gaza
- Planning for more long- term developmental programs and expanding the projects' scopes to include more locations and beneficiary groups
- Continuing enhancing farmers' capacities to obtain various certifications and to connect them with the international certification bodies
- Launching the “remarkable farmer reward” contest, for production in compliance with hygiene, food and environmental safety requirements
- Keeping on motivating scientific research in agricultural and developmental issues
- Working on conserving good relations with national and international partners through the continuous proposing for developmental projects, and the continuous search for support to develop the association's activities
- Developing the training centers to live up to the technological progress.
- Developing the association's staff through the continuity of:
 - creating proper educational programs.
 - attending local and international activities such as, workshops and symposium
- Keep on the motivation and support for a union of organic farmers and establishing cooperatives for them.

Towards 2009

Despite all hard challenges and hard circumstances, the Arab Agronomist Association asserts that its contribution to the Palestinian development process will continue. In 2009, as in the past, the AAA will abide by its commitment and responsibility towards the Palestinians in terms of bringing economic refreshment and modern and safe agricultural systems to Palestine, and in terms of increasing awareness of environmental and nutrition issues, and in terms of supporting the agricultural sector and developing capacities of the human resources working in it.

The association's efforts would be devoted in 2009 for the following issues:

- Reinforcing national, regional, and international partnership in organic agriculture, GLOBAL GAP, preserving water resources and environment, and training programs.
- Supporting the Palestinian farmers in terms of technical aspects and organic production marketing as well.
- Increasing the association's attendance and contribution in the international and national workshops and symposium.
- Keeping on improving the association's training centers.
- Enhancing the association's staff capacities with different skills and experiences.
- Reinforcing partnership with rural development associations operating in the agricultural field.
- Keeping on supporting the graduates of PARC training program, and cooperating with them in delivering services for farmers.

Looking forward for more successes and achievements in 2009, we would like to seize the opportunity to express our thankfulness to all national and international partners, and to express our determination to achieve the mission of developing the Palestinian agricultural and rural sectors.

Acknowledgement

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