

Introducing Organic Farming System in Olive Production and Linking Small Farmers to Markets

“A Success Story”

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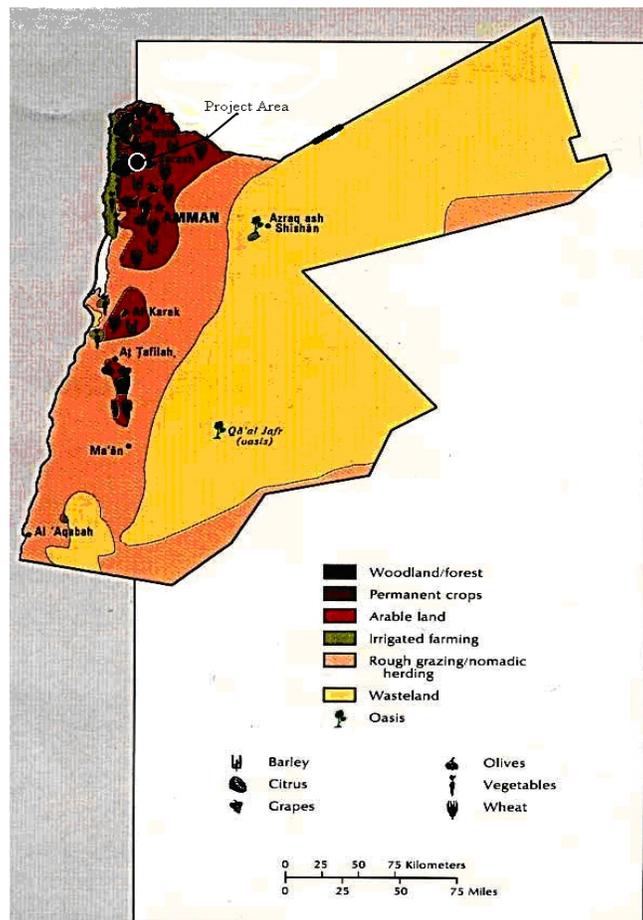
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1- Introduction

The Global Partnership Program (GPP): “Linking Farmers to Markets” is a global initiative aimed to help small farmers successfully link to markets by fostering mutual learning and sharing knowledge which build and adds value to successful experiences, market oriented research, innovations and investment initiatives. ¹

Harnessing the potential of small-holder farmers and entrepreneurs will be achieved by:

Contributing to achieve an enabling policy and institutional environment conducive to successful linkages of farmers and entrepreneurs to markets.

Offering appropriate and targeted information tools and methods for catalyzing farmers’ and entrepreneurs’ linkages to markets.

Strengthening the capacities of producers, farmer organizations, market chain actors and researchers, to respond to market opportunities.

Linking Farmers to Market (LFM) is a major aim of GPP. The growing number of small farms and declining average size of operational holdings indicate the weakness in their access to critical production resources. Therefore, they are operating at a lower equilibrium. Several studies indicate that small farmers encounter entirely different set of problems in both input and output markets due to their unique characteristics. The input markets include, land, labor, credit, information and technology and purchased inputs. They also face the consumption market in addition to the output market. To bring them to a high level of equilibrium, we need to understand the constraints in various markets.

Farmers through development pass by four stages:

- 1- **Subsistence Stage:** Individual small-scale farmers selling surplus into market
- 2- **Early stage:** small-scale farmers organized to sell the produce collectively

¹ AARINENA. Global Post-harvest Initiative, Linking Farmers to Markets: Meeting of the ad hoc Working Group for the development of a Global Partnership Programme. Al Ain, UAE. 22-23 February 2006.

- 3- **Developing stage:** small-scale farmers organized and adding value, diversifying products
- 4- **Mature Stage:** small-scale farmers organized and fully integrated into a supply chain

2- Purpose of the Success Store

1. Describe the success story of intervention that successfully linked small producers to markets. It will allow understanding what are the current tendencies, challenges and approaches used in the region to successfully link small producers to markets.
2. Identify and describe those best practices that lead to the successful linkage of small producers to markets.
3. Critically review the selected case to:
 - a. Identify those elements that enhance success.
 - b. Identify those elements that represent the greater opportunity for replication regionally and globally.
 - c. Identify the feasibility of scaling up and funding for those elements that enhance success.

This paper presents an outstanding experience of group farmers who implemented a production technique in their old olive for the purpose of producing high quality organic olive oil for exports. Moreover, the project was able to synchronize production with processing through a contract signed between the farmers and a certified oil mill who is responsible for transportation, processing and exporting. The paper focuses on the way this program was planned and implemented, how its objectives were achieved, what are the most important lessons and success stories drawn from this experience, and how these achievements and lessons learnt could be utilized for future improvements.

3. Olives and Olive Oil sector in Jordan

3.1 Background

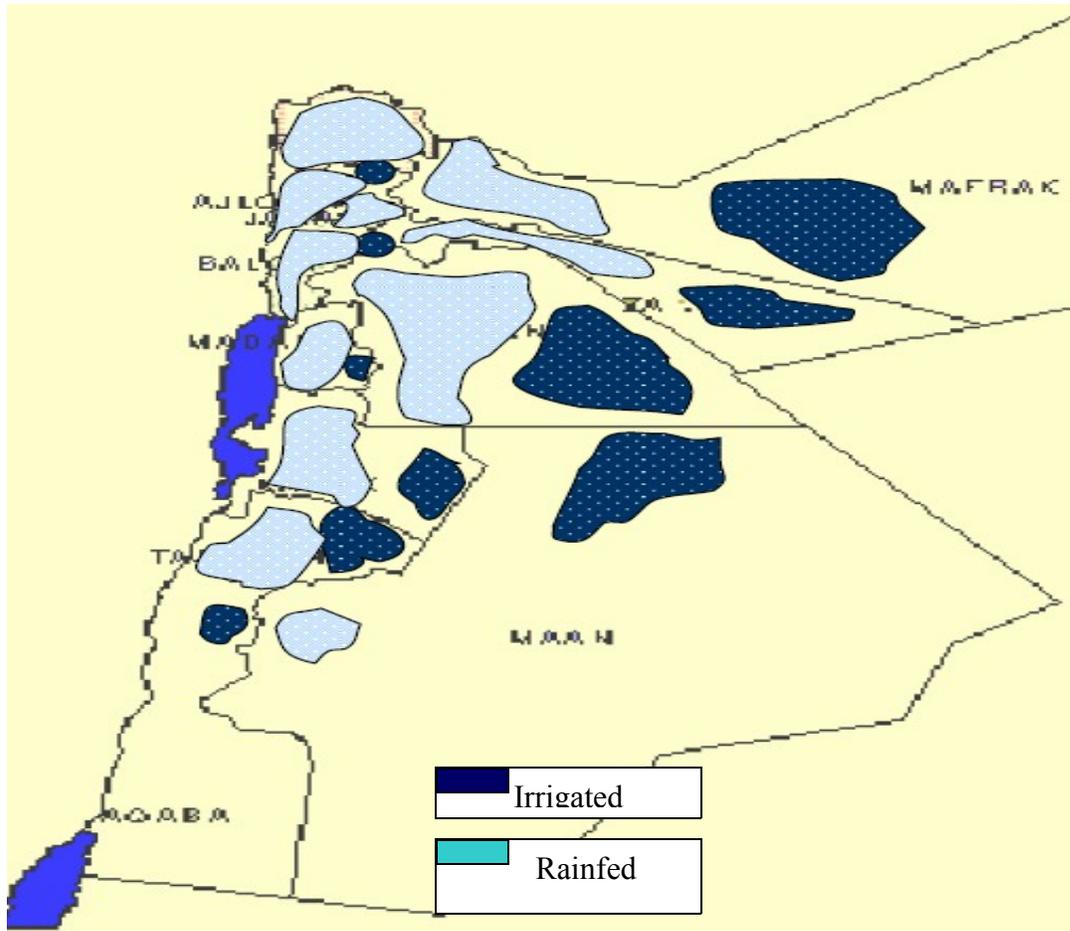
Olive tree is the most important fruit tree grown in Jordan. It covers about 72% of the total area planted with fruit trees and 36% of the total cultivated area. More attention and care had been given for this blessed tree. This was reflected on an increase in cultivated area by about 200% in the year 2006 comparing to 1991. It covers now around 126,000 ha ².

Jordan was considered the tenth producing country in the world in 2001, while Syria ranked as the fourth producing country, Tunisia comes next to Syria.

There are two main olive producing regions in Jordan; the western mountain ranges that cross the country from north to south, and the north eastern desert region. The former is rain-fed, while the latter is irrigated.

The western mountains that cross the country from north to south (rainfed) which represent about 76% of the total area planted with olive and the north eastern region (irrigated) which represents about 24%. Large numbers of olive farms belong to small and medium-size holders which are considered as a source of income for thousands of Jordanian families, and provide many seasonal job opportunities for agricultural workers. Jerash governorate is one of the rainfed areas that have had olive cultivations since hundreds of years. It accounts of about 9% of the olive cultivation (about 12000 ha), 12% of olive production and 12% of olive oil production in Jordan. It has 13 olive oil mills, eleven of which are automatic (Ministry of Agriculture, 2006).

² Ministry of Agriculture. Annual Agricultural Statistics-2006. Amman, Jordan



Each producing region pursues a very different olive cultivation pattern. In the rainfed mountainous area, farms tend to be small. Olive growing is carried out in a very traditional way with minimal use of chemical fertilizers and pesticides. As a result, production costs as well as productivity are relatively low, and pests, especially the olive fly, are rather common. In the irrigated eastern area, farms are larger. Production costs and productivity are higher since fertilizers are widely used and other agricultural practices like plowing, weeding and trimming are more common.

The olive trees planted in Jordan belong to the dual-purpose type, this means that their fruits are used to make oil as well as table olives. The predominant olive varieties are Nabali and Rasie, both indigenous, which seem to have been cultivated in the area for centuries. Another local variety called Souri, cultivated in the provinces of Ajloun and Jerash, has very good and differentiated organoleptic

characteristics according to local experts. Many other varieties, most of them of Italian origin, are also grown in Jordan.

Olive farming in Jordan has important environmental and social implications. Olive trees reduce soil erosion during the rainy season by providing cover to parched soils, thereby lessening the impact of rain on fragile soils. Hence, olive trees are one of the leading agents against desertification; helping to maintain the inherited, traditional landscape. Furthermore, olive groves are highly valued recreational areas in a country where forests are almost non-existent. Additionally, olive farming makes a significant contribution to employment, particularly the employment of the rural population. Many of the poorest farmers in the mountainous regions produce olives, since in this rocky, sandy soil, no other crops grow or rather; no other agricultural activities can be pursued.

3.2 Historical Background:

1. The Integrated Olive Products Processing Company was established in the "Blas" to serve olive producers in the Aglun Governorate.
2. Jordan Accessed the International Olive Oil Council in January in 2002.
3. Upgrading the olive oil Jordanian cooperatives mills through a project financed by the "European Partnership" for about 25 press plants to improve the financing and storage services within mills. In addition, filtering and mobilize units to suit market requirements of foreign trade were introduced.
4. A national strategy for the olive sector emanating from the National Strategy for the olive sector.
5. Amendment of the specification Jordanian olive oil to suit the requirements of the International Olive Oil Council and the European market.
6. The training of a national team of two persons for in tasting olive oil, and being certified nationally and internationally.

7. The establishment of specialized testing laboratory for olive and olive oil in the Specifications and Standards Association.
8. Establishment a tasting hall of olive oil according to the specifications of Specifications and Standards Association.
9. Establish an Association for the export of Jordanian olive products (in JOBIA) managed by the private sector.
10. Establishment of the Office of olives in the Jordanian Ministry of Agriculture since 2002.
11. The creation of olive Research program at the National Center for Agricultural Research/Department of Agriculture since 2004, and the transformation of this program to the Directorate of Olive Research in 2007.
12. Participate in the foundation of the International Network of Olives in the "Union Councils of scientific Research in the Near East and North Africa (ARININA)" which cooperates with the European Network (ESCORENA) to achieve a positive impact in increasing cooperation among research institutions and scientific.
13. Establishment (Consortium) for the export of olive in the private sector for the year 2007.
14. Grant a logo named "Crown Royal" for exported virgin olive oil according to established basis and procedures for the issuance of certificates for the awarded logo for organizations and individuals who adhere to these basis and procedures granted by the Committee for the Crown Royal logo which is located the Specifications and Standards Association in cooperation with the Jordanian Royal Quarters.
15. Promotion of olive oil Jordanian support of the International Olive Council through the Ministry of Agriculture and the National Center for Research and agricultural Extension (NCARE).
16. Held annual festivals for olives, which is organized by the Ministry of Agriculture and the private sector.

3.3 Olive Oil Production in Jordan

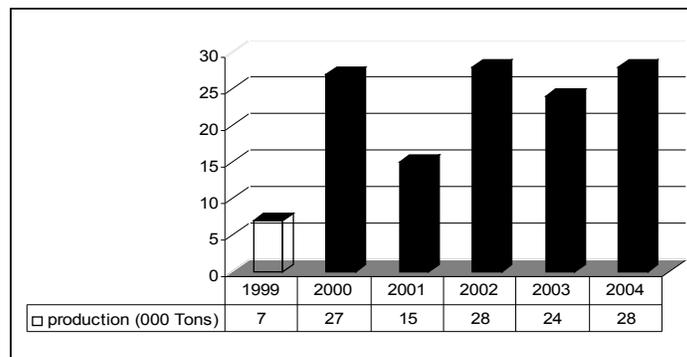
There are round thirty different types of Olive trees present in Jordan and all of which are capable of producing excellent quality Extra Virgin Olive Oil. The three pre-dominant types of Olive trees present are:

- a) Nabali Olives: very high oil content between 28 to 33%. Oils have organoleptic qualities of nice light to medium fruitiness.
- b) Rasie' Olives: The oil content present ranges from 15 to 28% and have a taste of medium fruitiness with hints of green apple.
- c) Souri Olives: Oils of these olives have an intense fruity aroma and very differentiated organoleptic characteristics.

Around 17 million olive trees are farmed in Jordan in about 107,000 hectares of land and the plantation in the last 20 years have grown by 220%.

The Jordanian olive oil is usually sold as virgin olive oil for the local market and extra virgin olive oil for the international market.

Figure 1 Olive oil production in Jordan during 1999-2004



In Addition to olive oil and olive pickles, Jordan is producing the following by-products from the olive fruits:

1. Pruning sticks and olive pulps are grounded, processed into cubes and used in

- livestock feed or in heating in the houses
2. Extract oil from the olive pulps by using organic dissonant and high acid olive oil (2-4% Acidity) is used in soap production
 3. Producing active Carbon from the olive pulps.
 4. producing olive paste and salad
 5. Extracting anti-oxidization substances from the olive juice after extracting the oil.
 6. Using olive leaves extraction in medicinal purposes. These products are produced in different countries in the world in the form of 500 milligrams capsules in bottles containing 60 capsules each. The effective material id " Oleuropein"

By-products that may result from oil extraction are:³

- **Stones or pits** — Accumulates in plants where pitted or stuffed table olives are produced, they can be used for heating, building materials or for activated charcoal.
- **Crude Olive Cake** — The residue which remains after the first pressing of olives through traditional and continuous machines. There is still a small amount of oil in this cake. If not going on for further processing, this cake is often used for heating, for animal feed supplement or returned to the olive grove as a mulch.
- **Exhausted Olive Cake** — The residue that is left after the above crude olive cake has any remaining oil extracted from it by using solvents such as hexane. This cake is also often used for heating, for animal feed supplement or returned to the olive grove as a **mulch**.
- **Partly Destoned Olive Cake** — Produced if some of the crushed olive seeds are removed from the paste after processing. This cake is also often used for heating, for animal feed supplement or returned to the olive grove as a mulch.
- **Olive Pulp** — The residual paste which is produced if whole olive seeds are

³ An Introduction to Olive Oil Processing. www.oliveoilsource.com

removed from the paste prior to processing. This residual paste has a very high water content and is difficult to store or dispose of.

- **Vegetable Water** — The brown watery liquid which has been separated from the oil by centrifugation or sedimentation after pressing. The invention of two phase oil extraction has reduced the pollution problems of this waste product by up to 90 per cent.

3.4 Olive Oil Trade in Jordan

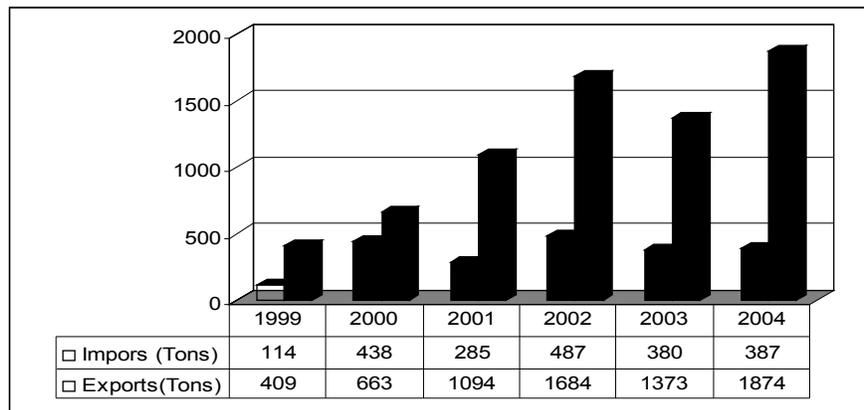
Olive oil is a growing sector with vast opportunity to develop and create international cooperation. Jordan has access to the global market through preferential trade agreements such as Jordan-US Free Trade Agreement, Qualifying Industrial Zones (QIZ) for US market, Jordan-EU partnerships, Great Arab Free Trade Agreement (GAFTA) in addition to many bilateral trade agreements.

With the assistance of the Jordan US Business Partnership (JUSBP), a project funded by the US Agency for International Development (USAID), several Jordanian olive oil and olive product companies have come together to form the Jordanian Olive Products Exporters Association (JOPEA). The seven JOPEA founding members represent oil mills, bottlers and table olive producers.

The characteristics of the Jordanian Olive oil sector, which can attract international cooperation are:

- ☒ Jordanian Extra Virgin Olive oils have some characteristics that distinguish it; an aroma of ripen olives with hints of apple and other mature fruits with almost total absence of bitterness.
- ☒ The olive oil mills and finishing facilities include the latest state of the art equipment.
- ☒ Hand picking olives ensuring high quality
- ☒ Minimal usage of chemicals in the cultivation of olives.

Figure 2 External Trade for Olive Oil in Jordan during 1999-2004



There are several olive oil companies in Jordan. Following is a brief description of some of them:⁴

1- Jordan Modern Industrial Co.

Is a Jordanian Company producing extra virgin high quality olive oil targeting mainly the Global Market. They have a wide range of products all under the brand name "Terra Rossa". Their fancy bottles come in glass of various sizes ranging from 40ml to 3 liters. This company is a member of the North American olive Oil Association.



2- Ajloun Food Processing Co.

Ajloun Food Processing Company Llc was established in 1996 with the primary purpose of providing state of the art Olive Oil Extraction Trains serving the local community in the Northern region of Jordan, where superior quality Olive Trees grow in abundance. Unfiltered Organic Extra Virgin Oil is



⁴Jordanian Olive Oil Producers. <http://www.vipj.com/index.html>.

available in containers of various sizes and types (glass bottles, plastic, steel) ranging from small glass bottles to large drums.

3- Al Jazzazi Brothers Company

Al Jazzazi extra virgin olive oil is genuine and healthy full of all the natural nutritional characteristics of olives. Its uniqueness derives from several factors among which is the land of origin, Al Salt, Jila'ad, with its unique climate and rich and fertile soil. The company's olive oil has long been, and remains to this day, a symbol of excellence, purity and simplicity. The harvesting and processing practice facilitating the journey from tree to table has become modernized, but its elegant simplicity has never been complicated



4- Alia Specialized Industries " Zaitt "

Alia Specialized Industries(Zaitt) was established in 2001, specializing in producing and promoting the olive oil of Jordan. Zaitt's main product is 100% Natural, Cold Pressed and Hand Picked Extra Virgin Olive Oil.



5. Golden Olive Oil"EVO".

The best olive oils hold a certificate by an independent organization (not regulated or financed by the industry) that authenticates the stone ground and cold pressed extraction process. In this process, olives are first harvested by hand at the proper stage of ripeness and maturity. Experts feel that hand harvesting, as opposed to mechanical harvesting, enables olives of the same size and ripeness to be picked and eliminates bruising of the fruit which causes tartness and oil acidity.



6- TOOR For Olive Products Co.

Olive oil is best used raw to bring to the forefront certain characteristics of a dish. Think of raw olive oil as you would salt. Raw olive oil adds body and depth to food, and can serve to balance high acidity (from fruit juices such as lemon, vinegar, wine, tomatoes, etc.) in any dish. It can also be used to harmonize the spice mix in food. Add a little raw olive oil to a spicy dish and you will notice the improvement. Olive oil also helps a dish to taste more luscious, provides lubrication to the palate, helps to carry the flavors of the dish and creates a rich, viscous texture

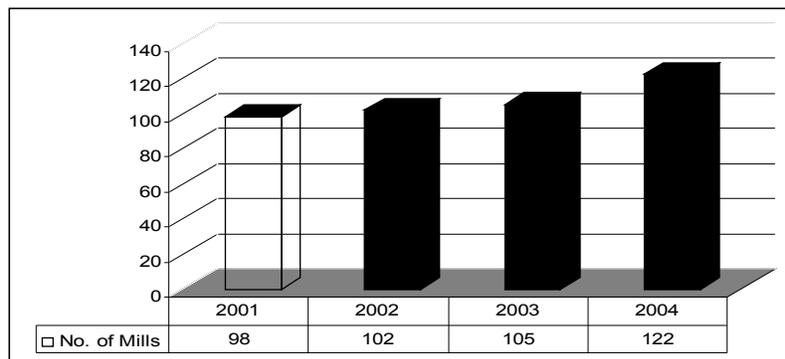


3.5 Olive Oil Infrastructure in Jordan

Figure 3 shows that the number of olive mills is increasing (more than one line in each mill) from 98 mills in 2001 to 122 in 2004. Most of the new mills advanced ones.

There is now a modern laboratory dedicated to olive oil analysis, with a tasting room attached located in the Standards and Measures Association. A tasting team was trained through a training course conducted by Italian Expert for two weeks and they are accredited by the Ministry of Agriculture in Jordan and the International Oil Council.

Figure 3 Number of Olive mills in Jordan during 2001-2004



3.6 Policies and Institutions Related to Olive and Olive Oil Sector

Jordan's economy is free market oriented. The ownership of enterprises is largely private, the exception being public sector involvement in the mining industry; prices (except for a few subsidized goods), interest rates, and wages are generally determined by market forces. During the last decade, Jordan's economy has made steady progress through the implementation of comprehensive economic reforms and restructuring programs supervised by the IMF and the World Bank. The Government's decision to grant work permits to foreign workers allows investors to jumpstart their operations using skilled foreign labor. The main goal of restoring non-inflationary sustainable growth has been accomplished.

A QIZ or a 'Qualifying Industrial Zone' represent an unprecedented opportunity to gain duty-free access to the US market, rendering eligible products more prices competitive. In Jordan, investors also enjoy an added incentive: there are no quotas on Jordanian products exported to the US. Moreover, on October 24th 2000, Jordan and the USA signed the Jordan US Free Trade Agreement that provides Jordanian products unimpeded access to the world's largest market. The pact includes precedent-setting provisions aimed at protecting worker's rights and the environment.

The Agricultural Sector Strategy included three programs for the olive subsector:

1. Development of olive production, which includes the establishment a government institution or a cooperative for the development of olive production in Jordan, and the Developing production management programs (planting, management, fertilization, and pest control).
2. Development of olive oil marketing which includes intensify extension service in the areas of picking of fruits, processing, packing and storage of oil.

To facilitate access to foreign markets, Investment Promotion Unit (IPU) Jordan and UNIDO headquarters conducts the export consortia program initiated in 2005.

Several export consortia seminars on Marketing Strategies and Policies have been organized by a specialist from UNIDO headquarters and IPU in collaboration with the Jordan Enterprise Development Cooperation (JEDCO). Assistance in creating strategic plans to benefit from financial support by JEDCO has enabled export consortia for olive oil, Dead Sea cosmetics and garment to become operational. In early 2007 a consortium for ICT has been established successfully and a consortium for women entrepreneurs is currently under negotiation

Seven Jordanian companies in the olive oil sector decided to establish a non-profit company to help themselves in promoting their olive oil production locally, regionally, and internationally. Jordan Consortium for the Promotion for the Oil Products ' was established at the Jordanian Ministry of Industry and Trade, under number 141 on June 2006.

The Mission of the consortium is to combine the capabilities of the founding members for the benefit of the olive oil sector and the local economy. Its **Vision** is to upgrade olive oil production capacity in Jordan and to capture a larger share of the international extra virgin olive oil Market

It is worth mentioning that the EU has a custom free quota of 4.5 thousands in 2006, which is set to rise to 12 thousand tons in 2010.

4. Olive Oil Farmers Association in Burma (The Success story)

4.1 General Information

Burma district (Burma, Jazazeh, Hamta, Al-lymoun, Fouwara and Khsheibeh villages) in Jerash governorate (about 45 km to the north of Amman) is the target areas for the permaculture project that was implemented in cooperation between JICA (Japan International Cooperation Agency), NICCOD (Nippon International

Cooperation for Community Development) and Ministry of Agriculture in Jordan for 3 years that was started in 2004.

Burma district has about 350 thousand olive trees, about 4000 of which are old ones of hundreds of years as the group of farmers said. Permaculture (Box 1) offer positive solutions to the environmental and agricultural problems. This agricultural methods use ecology as the basis of designing integrated systems of food production. There are about 32.1 hectares in Burma district under organic farming system producing about 22 ton of organic olive oil.⁵. The main constraints facing the farmers in this district are:

- Variation and uneven distribution of rainfall from year to year,
- Lack of experience in soil managements and unstable prices from year to year.

In spite of that, Burma oil is considered one of the best organic olive oil produced in Jordan, which is very competitive that was reaching the international markets, especially to Japan.

Box 1

Permaculture is about designing ecological human habitats and food production systems. It is a land use and community building movement which strives for the harmonious integration of human dwellings, microclimate, annual and perennial plants, animals, soils, and water into stable, productive communities. The focus is not on these elements themselves, but rather on the relationships created among them by the way we place them in the landscape.

⁵ Unpublished data according to the Farmers Group,2007

4.2 Objectives of the project

The main objectives of the project are:

1. Improving the economic, social, and environmental impacts of olive cultivation.
2. Upgrading the economical situation of rural farmers (by Fair-Trade System)(Box2)
3. Introduction of organic farming (Box 3) techniques.
4. Introduction of JAS (Japanese Agricultural Standards) organic certification.
5. Introduction of Jordanian organic olive oil in to international market.
6. Establishment of a pilot farm for olive organic farming for future training.

Box 2

Fair-Trade Principles are:

- *Direct purchasing from farmers;*
- *Transparent and long-term trading partnership;*
- *Agreed minimum prices, and*
- *Focus on development and technical assistance through the payment of an agreed social premium*
- *Qualifying for organic certification,*

Box 3

Organic production essentially excludes the use of many inputs associated with modern farming, most notably synthetic pesticides and fertilizers. To the maximum extent possible, organic farming systems rely upon crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, mechanical cultivation,

mineral-bearing rock powders, and biological pest control. These components maintain soil productivity and tilt, supply plant nutrients, and help to control insects, weeds, and other pests.

4.3 Implementation Methodology

1. The project staff started with the awareness program throughout lectures, workshops and training of the interested ones.
2. They contacted about 200 farmers in the district during the awareness program. After one year, they succeeded in convincing a group of farmers in the target area (9 farmers) to follow up the organic farming rules to produce organic olive oil.
3. Training sessions for farmers were held on organic farming rules and aspects that leading them to get the organic farming certificate according to the Japanese Agricultural Standards (JAS).
4. A contract was signed with the Integrated Company for Olive Products mill in Ajlun as the main contractor to get the organic farming certificate and to help the farmers getting the same certificate as a lateral contractor through a Japanese certificate body. Inspectors from the Japanese certificate body did their inspection for the chosen farmers' farms and for the mill that they contracted with to press organic olive to keep and control the right procedure of organic product.
5. The first inspection was done for the farmers and the accredited mill in the year 2005 for the first time. After which, olive fruits transferred to the mill with a certain controlled procedure to get a 100% organic product of olive oil. They get about 20 ton of organic olive oil.
6. In the second season 2006, they followed up the same procedures of inspection and they got about 22 tons of organic olive oil.
7. Another turn of inspection was done in September, 2007 for the sustainability of organic olive production.
8. According to the agreement between the farmers(the lateral contractors of JAS) and the accredited mill (the main contractor of JAS) for 2006 season:

The accredited mill was responsible to contact the

certificate body for the yearly inspection.

Inspection cost (5000 JD) was paid by the accredited mill.

Farmers Organic Farming Certificates was paid by farmers of 55 JD / certificate/farmer.

The mill provide farmers with the sufficient plastic boxes for collecting harvested olive fruits, in addition to the transporting cost to the mill.

The mill reserve a pressing line for pressing organic olive fruits with no waiting time for pressing.

The accredited mill was responsible for processing, marketing and storage of organic olive oil.

9. The other main practices used included the following :

Spreading environmentally friendly organic farming methods as follows:

- i. Water management techniques, include rock basins, small dams for water harvesting and gray-water system for recycling water
- ii. Soil management techniques, including compost making and mulching leading to soil conservation and fertility improvement.
- iii. Mix planting, including green (living) mulch to prevent evaporation and soil erosion, leguminous plants to improve soil fertility and N-fixation, repellent plants as Neem tree (*Nema indica*), pest control using traps, and parasite system and poly-culture plantation for biodiversity (as grapes + apples).

Creating awareness among farmers in the target area.

- i. Establishing a model farm (Demonstration)

to implement all the permaculture (organic farming) methods and a training center to hold meeting and training courses in Burma station of the Ministry of Agriculture (part of the station).

- ii. Conducting workshops and training courses for farmers in the target area.
- iii. Choosing pioneer farmers cooperative and encouraging them to convert part of their farms into permaculture farms as community based demonstration.

Improving the economic productivity of low income farmers through:

- i. Reducing the cost of production inputs by using the natural resources.
- ii. Training farmers to use organic techniques.
- iii. Introducing animal keeping activity such as bee and chicken keeping.
- iv. Encouraging farmers in the target area to establish cooperative group(s) to work to reduce the cost of organic farming and upgrade the quality of organic olive oil.

Introducing the local organic olive oil in to the domestic and foreign markets.

- i. Raising awareness and promotion of the historical (Roman) olive trees.
- ii. Establishing the fair-trade system between the farmers group, olive mill and the final market under project monitoring.
- iii. Conducting the case study for the procedures of certification and marketing of

the organic product.

4.4 Financial Evaluation of the Organic Olive Oil production in Jordan

Table 1 shows oil production, oil extraction rate price and cost of olive oil production in the Olive Oil Cooperative in Burma/Jordan.

It is noticed from the table that olive fruits production had decreased from 103.2 to 91 tons per dunum⁶ in the first year of the project implementation due to the sever pruning of the old trees to increase the new branches in the next year and due to alternate habit of the olive tree. The average production per dunum has increased in the next year to 100 ton then to ???? in the third year, and the extraction rate also increased by 2%.

On the other hand, the cooperative exported 300 tons of certified oil to Japan annually starting from the first year of the project, and it is expected to increase this quantity un the future. Local price of the organic oil produced by the society was JD⁷ 4.25/kg. in 2007 while the price oil sod by the other farmers was JD3.44/kg. Moreover, the price of exported oil filled in two types of containers, 400 Grams and 900 Grams were US\$ 33.75/Kg and 30/Kg respectively (About JD22/Kg.)

The cost of production in the first year was high (about JD 38.dunum) compared to the year for implementing of the project (JD 30/dunum) due to establishment of the spiral terraces, using compost fertilizers, sever pruning and planting legume trees, but it returned back to the original costs after that, this means that the initial production cost of implementing the project was about JD 53. Additional costs of JD6.35/Dunum. annually were paid for the Certificate, the farmers pay only 6.5% of this value and the Mill pays the rest.

⁶ One Dunum=0.1 Hectare

⁷ One Jordanian Dinar (JD)=1.4 US\$

5. Results Achieved

1. The establishment of a model farm and training center in Burma Agricultural Station.
2. Establishing the fair-trade system between farmers group, olive mill and the final market under project monitoring to obtain appropriate price according to quality.
 3. Encouragement of "farmers group work" in cooperatives and establishment of organic olive farmers association in the local community.
4. Capacity building for each stakeholder about olive organic farming methods (rules) through training of olive farmers and agricultural engineers of MOA.
5. Improved soil fertility and yield.
6. Reduced environmental impact of agriculture.
 7. Introduction of Jordanian organic olive oil to international market.
 8. Improved rural livelihoods through the added value and decrease of costs and Assurance of enough profit for the farmers by getting about 24% increase in the selling price of organic olive oil as compared to the local market price of traditional production.

**Table 1 Olive Oil Production in the Organic Olive Oil Cooperative
in Burma/Jordan**

Item	Unit	Date			
		2003-04	2004-05	2005-07	2006-7**
Number of Farmers	Farmer	9	9	9	9
Area	Dunum	740	740	740	740
Oil Production	Ton/Dunum	22.24	20	22	NA
Oil extraction Rate	%	21.55	22	22	NA
Exports	Tons	0	3	3	
Oil Wholesale Price	JD/Tin Can*		50	55	68
Export Price	US\$/ (400 gms container)	--	13.5	13.5	NA
	US\$/ (900 gms container)	--	27	27	NA
Quantity of Oil Sold Locally	Tons	22.24	17	19	NA
Production Cost	JD/dunum	30	30	30	
Quality Certification cost***	JD/dunum/Year	0.41	0.41	0.41	0.41
Costs Components		1- Spiral terraces 2- Compost fertilizer 3- Red fine soil 4- Sever pruning 5- Planting legume trees 6- Labor for Harvesting	1- Red fine soil 2- Mild pruning 3- Labor for Harvesting	1- Red fine soil 2- Mild pruning 3- Labor for Harvesting	1- Red fine soil 2- Mild pruning 3- Labor for Harvesting

* The Tin Can volume is 16Kgs

** Preliminary figures

*** The Exporting company pays the rest of the certification Cost (6.35/dunum)

NA The farmers did not finish harvesting and processing the crop

6. Important Conclusions and Lessons Learnt

Although the project is still at the first stages, but there were some success indications of fulfilling its objectives. As a result, some important conclusions and lessons were drawn as follows:

- The establishment of farmers' organization (Group Work) for successful agriculture development.
- Encouragement of farmer-based extension;
- Strengthen partnership between farmers, private commercial sector, and government institutions (Ministry of Agriculture) and benefited from foreign technical experts and financial support.
- The olive oil sector, the small producers, by grouping together, are getting access to much bigger markets.
- Capacity building for the stakeholders.
- The project, run in partnership with the Ministry of Agriculture and the Japan International Corporation Agency (JICA) has helped nine poor farmers, a local oil press and an exporter to receive full certification meeting Japanese organic standards.
- The Establishment of the "Fair-Trade System" between farmers' group, olive mill and the market.
- Protection the environment, The Permaculture Approach use ecology as the basis of designing integrated systems of food production
- In the future, the farmers hope to expand Their business and export to Europe
- Implementing simple practices that could be copied in other areas of Jordan and in Syria and Palestine.

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