Integrated Report for The Palestinian Agro-production Calendar and Marketing Potentials for the Local, Israeli and Abroad Markets

(Case Study of the Tubas Governorate)

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Table of Contents

List of Abbreviations **3**

1. Executive Summary **4**

2. Introduction **7**

Part One: A review of the Palestinian Agricultural Sector **9**

Part Two: The Agricultural Commodities Demand-supply Chain in the Palestinian Territory and Israel **12**

Part Three: Tubas Agro-marketing System and Potential for Improvement **16**

1. Physical features, natural resources, socioeconomic conditions and land use/land cover of the Tubas governorate: 16
2. Agro-production calendar of the Tubas governorate: 21
3. Movement of Palestinian agro-production to Israeli markets & for exportation: 23

Part Four: Possible Networking between Palestinian and Israeli Markets **27**

Part five: Proposed interventions for improving the Palestinian Agro-marketing system **31**

1. Improving access and management procedures for available Palestinian natural resources: 31
2. Improving Palestinian production and marketing system in a sustainable manner under varying political conditions 32
   - *Scenario 1: the continuation of the current political status:* 32
   - *Scenario 2: a breakthrough towards final status (two neighboring states)* 32
3. Suitable production calendar with alternative crops based on the seasonal needs of Israeli and other markets 33
   - *Demand and Supply of Fresh Produce in Israel* 33
   - *Agro-commodities Demand/Supply Balance for potential Palestinian agro-commodities:* 34
4. Addresses of key marketing directions in the Palestinian Territory as well as in Israel 39
5. Possibilities of carrying out similar studies of export potential in other parts of the West Bank. 41
6. Benefit from existing agro-marketing agreements 41

Part Six: Recommendations for improving the Palestinian Agro-marketing system **44**

References **46**

List of Abbreviations

ACCD – Catalan Agency for Development Cooperation
ACF-E – Action Against Hunger – Spain / Action Contre la Faim – Espagne
ARIJ – Applied Research Institute- Jerusalem
EUREPGAP **Protocol** – Defines the elements of Good Agricultural Practices
GDP – Gross Domestic Product
GI – A geographical indication
GIS & RS – Geographic Information System & Remote Sensing
MCM – Million Cubic Meters
MoA – Palestinian Ministry of Agriculture
NIS – New Israeli Shekel
OCHA – UN Office of the Coordination of Humanitarian Affairs
PCBS – Palestinian Central Bureau of Statistics
PCP – The Peres Center for Peace
Paltrade – Palestine Trade Center
PT – Palestinian Territory
WFP – World Food Programme

Executive Summary

The agricultural sector is vital in the Palestinian economy, as it has shown itself to be one of the key sources of growth in the economic recovery that has taken place since 2003 (World Bank, 2006). The agricultural sector is also the third largest employer in Palestine, making up 15.2% of the formal workforce, and up to 39% of the informal workforce. Additionally, it contributes 930 million USD to the national GDP annually, making up 8.1% of the national GDP.

Agriculture covers 30.3% of the total area of the Palestinian Territory, comprising 46.8% of the total area of the Gaza Strip and 31.5% of the West Bank. Based on geopolitical classification up to 62.9% of agricultural land in the West Bank is designated "Area C", 18.8% Area B, and only 18.3% "Area A". It should be noted that the Palestinians are allowed to use only 18% of the water resources in the West Bank, and the rest are taken by Israel. Irrigated agriculture in the West Bank consumes 84.3 MCM/year, while in the Gaza Strip the agricultural water demand is 82 MCM/year.

Palestinian agriculture enjoys diversity in climatic and geographic ecosystems and in the number of planted crop types, with about 100 different crops planted in the Palestinian Territory. Rain-fed agriculture is dominant in terms of land area, comprising 86.8% of all plant producing lands and contributing only 23.2% to total plant production. Therefore, there is great potential for increasing the irrigated areas if Palestinian accessibility to water rights is increased.

Currently, Palestinian agricultural activities are more devoted to subsistence agriculture in order to improve familial income and produce food, as agribusiness cultivation is concentrated in the areas where water for irrigation is available and cheaper than domestic water (the most important irrigated areas are in the Jordan Valley, where wells and springs are accessible). In general, agricultural production in the PT is aimed at domestic consumption, with only about 20% being produced for direct retail. Israel is the main importer of Palestinian produce and the main supplier of agricultural production, with 53.5% of exported agricultural commodities being directly absorbed by the Israeli market, and 76.6% of agricultural commodities imported by the Palestinian Territory coming directly from Israel.

On the other hand, agriculture comprises only about 2% of Israeli GDP and the area of cultivated land is about 4.2 million dunums. About 23% of the total value of agricultural production in Israel is derived from export. The main exported agricultural products are flowers, potatoes, vegetables, strawberries and citrus. Agricultural products account for 25% of export trade from the Palestinian Territory. Fruits (including strawberries and dates), olives and olive oil, vegetables, and cut flowers are the primary export products from the PT to Israel as well as abroad *(WFP, 2006)*. Much of the fresh agricultural products consumed in Israel, along with olive oil and other produce, are imported from Palestinian areas, and these products are not officially defined as "imported goods".

Demand in Israel for crops cultivated for domestic consumption is always high, and the Israeli market is currently able to absorb all of the West Bank's production. During Sabbatical years, called "Shmita", the country mostly imports a variety of nuts for both the general market and

industry, as well as potato seeds and a small quantity of dried fruit. This boosts the demand in Israel for products from the West Bank as well as from Gaza and Jordan. However, the scope of Israel's imports of fruit and vegetables is minor *(Peres-ACF 2007)*.

Market requirements and standards are continuously improving, and consumer demand for diversified agricultural commodities, of better quality and appearance, is pronounced. Thus, Palestinian farmers face the challenge of diversifying production, improving product quality, and creating strong marketing relationships to increase income and sustain current production. However, the Palestinians lack market orientation and good marketing systems globally. Almost all products are exported through Israeli companies, a situation which does not allow Palestinian independency and leads to a reduction in revenue for the farmer. Another major obstacle is the capital needed for establishing new greenhouses and wastewater treatment units. It is doubtful that many Palestinian farmers have such capital, and access to credit sources is poor.

Under the current unstable political and socioeconomic conditions, the present constraints on human and commodity movement, and limited access to land and water, Palestinian farmers face many challenges. They must optimize available natural resources, improve agricultural practices, develop and diversify their production calendar in order to meet market demands, abide by existing marketing agreements, and create new marketing relationships to increase marketing opportunities locally, to Israel, and abroad. In addition, Palestinian farmers are in need of capacity building in order to improve their knowledge of the supply-demand chain, production calendar, standards for marketable production, and special post-harvest treatments. These capabilities will improve profit for their product in both regional and export markets.

All of the above will provide an opportunity to increase the cultivated land area, and improve production quality and safety measurements to help achieve higher profit and reduce marketing risks. An example of this is the joint agribusiness activity that was recently established between Palestinian farmers in the Jordan Valley, Palestinian private companies, and Israeli marketing companies with the help of USAID funds, to produce cherry tomatoes and sweet peppers under the EUREPGAP standards. This was done by improving post-harvest treatment services. This example shows the importance of cooperation in improving the Palestinian agro-marketing system.

It is worth noting that there is a strong interrelation between the Israeli and Palestinian economic sectors, particularly as regards agricultural marketing systems. Each side has the ability to fill a gap in agricultural commodities when there is a shortage on the opposite side. The Palestinian Territory has the ability to export surplus amounts of tomato, cucumber, squash, eggplant, beans, cabbage, cauliflower olive, grapes, plums, citrus and eggs, all without affecting the needs of Palestinians since the Palestinian agricultural production system is mainly based on producing during certain periods of the year, thereby creating peaks of production during those periods and shortages in others. Palestinian farmers have the potential to increase production of beans, figs, okra, onion, olives, and some dried fruit to meet the needs of the Israeli market.

Limited cooperation exists between Israelis and Palestinians in the agricultural sector. Israel and Palestinian Authority areas are considered a single trade region; however, Palestinian products pass into Israel only after strict inspection and only through checkpoints between the PT and

Israel. This system creates a serious problem stemming from frequent closures at the crossings. The existing crossing points' opening hours and dates aren't the only problem; the unjustified delay while Palestinian products are inspected at the crossing gate, which takes from one to several hours, with farmers being forced to hold their produce in the trucks until the next day, increases marketing costs and affects product quality. In addition, in order to export agricultural products to Israel, the growers must meet standards and regulations set by the Ministry of Health, as well as pass microbiological and pesticide residue tests. Only those growers who receive receipt of the required permits confirming that the crops are unpolluted have the right to export to Israel.

The Palestinian economy is highly susceptible to external shocks, political events, and the Israeli business cycle, as well as fluctuations in Israeli agricultural productivity. Thus, coordination between Palestinians and Israelis in the agro-marketing system is a crucial issue that should be empowered and institutionalized in order to allow Palestinians to achieve better access to both Israeli and international markets in a way that complementary meets local needs, and, as much as possible, improves national food security and reduces marketing costs.

Several actions should be considered for improving Palestinian-Israeli marketing systems. One possible scheme is establishing agricultural facilities. These facilities would improve production systems and post-harvesting services, and facilitate agribusiness activities on both sides. Another option is the development of a support program for improving intensive cultivations in the PT. Additionally, the creation of a joint Israeli-Palestinian marketing and exportation system could possibly create new marketing channels for Palestinian agricultural products worldwide.

In addition to the above options, other ideas are as follows:

1. Improve access and management procedures for the natural resources which are currently available to Palestinians
2. Improve post-harvest and marketing systems on the Palestinian side in a manner sustainable under different political conditions
3. A suitable production calendar which includes alternative crops based on the seasonal needs of Israeli and other markets
4. Address key marketing directions in the Palestinian Territory as well as in Israel
5. Possibilities of observing the same practices regarding export in other parts of the West Bank
6. Benefit from existing agro-marketing agreements

* * *

Introduction

The Palestinian agricultural sector enjoys diversity in climate, seasonality, and number of planted crops. It also has the potential for increased irrigated land, labor force, specialized human resources, and the suitability to adopt modern production and post-harvest treatment technologies, all of which would help in the development of marketing to the agribusiness sector. Therefore, there is potential to increase food security and generate more revenue from export. Export would benefit even further from mitigation of physical and political constraints, increased access to natural resources, and freer movement of people and commodities.

At present, agricultural production in many areas is restricted to only a few months a year. It would be helpful to modify the production calendar to provide year-round production for most agricultural commodities. This would reduce the temporality of seasonal employment and increase the contribution of the agricultural sector to the national economy. Improving agricultural production could be achieved by crop diversification, implementing improved agricultural techniques and irrigation regimes, enhancing farmer networking, opening new marketing channels, and taking full advantage of the "natural greenhouse" of the Jordan Valley. Additionally, improvement of agricultural infrastructure, mechanization, and agricultural industries, including post-harvest treatments and food processing, would all help improve the Palestinian agricultural sector.

In general, agricultural production in Palestine is aimed at domestic consumption, as only about 20% is produced for direct retail. Marketing Palestinian agro-products locally, to Israel, and to other countries, faces physical, structural, and technical obstacles, especially for small farmers. Therefore, special attention should be directed to small farmers in order to improve their capacity regarding proper agricultural practices, their access to updated production technologies, and their knowledge regarding marketing potential.

Israel is the main importer of Palestinian agricultural produce and the main provider for the agricultural production as 53.5% of exported agricultural commodities are directly absorbed by the Israeli market and 76.6% of imported agricultural commodities by the Palestinian Territory are directly imported from Israel. It is worth noting that Israel is the party that controls the borders and thus the access to external markets. Therefore, a more equitable basis should be developed by both parties to empower the export-import relationship and to create better balance, especially regarding the exchange and movement of commodities. Additionally, a monitoring system for movement between the Palestinian Territory and Israel should be developed especially in the West Bank to improve the efficiency of marketing system and its channels.

A project entitled: "Improvement in the Relationship between Palestinians and Israelis Based on Trust and Equality" was funded by the Catalan Agency for Development Cooperation (ACCD) and Action Against Hunger – Spain / Action Contre la Faim – Espagne (ACF-E). This project is aimed at improving relationships between Palestinians and Israelis through trade. One result of this project has been the production of two analytical studies. The first study was conducted

by the Applied Research Institute – Jerusalem (ARIJ)[1], and focused on Palestinian agricultural production and marketing systems, with special attention given to the plant production calendar and the marketing system for the Tubas governorate. The second study was conducted by The Peres Center for Peace (PCP)[2] and focused on Palestinian agricultural exports to Israel (the demand and scope of interest of Israeli markets for products from the Tubas governorate).

This report will integrate the information gathered about the agro-marketing systems in the Palestinian Territory (by ARIJ), and in Israel (by PCP). The report will recommend ways to improve and diversify the current production calendar in the Tubas area, possible future investments, marketing potentials for both Israeli and foreign markets under different political scenarios, possible methods of Palestinian-Israeli cooperation to improve the marketing process and mitigate marketing problems, and opportunities for trade agreements.

* * *

[1] Since its creation in 1990, ARIJ has been promoting applied research, technology transfer, and sustainable development in the Palestinian Territory. It provides crucial data on issues such as land and water resources for the formulation of policy strategies and position papers (www.arij.org).

[2] Peres Center for Peace founded in 1996 with main mission to build an infrastructure of peace and reconciliation by and for the people of the Middle East that promotes socio-economic development, while advancing cooperation and mutual understanding.

Part One: A review of the Palestinian Agricultural Sector

The total agricultural area in the Palestinian Territory (PT) is 1.83 million dunums, of which 90.2% are in the West Bank, and 8.8% in the Gaza Strip. The total area of agricultural land currently used by Palestinians covers 30.5% (1,833,350 dunums) of the Palestinian land area and 54.4% of the total land suitable for cultivation. *(PCBS, 2006a)*

Rain-fed agriculture is dominant in terms of land area, forming 87% of plant producing lands yet comprising only 28.5% of total plant production. 51.3% of the irrigated areas are located in the West Bank, and 48.7% in the Gaza Strip.

Currently about 100 crop types are cultivated, including 38 types of fruit trees (olives, almonds and other nuts, plums, apricots, peaches, pears, cherries, etc.) and 37 types of vegetable (snake cucumbers, cucumbers, tomatoes, onions, etc.), in addition to cut flowers and 30 types of field crops and grains (particularly wheat, barley, chickpeas, lentils, sorghum and vetch). These crops are cultivated by rain-fed and/or irrigation techniques. The most dominant plant group is fruit trees, with 62.2% of the total cultivated area in the PT. Olive cultivation accounts for 81.1% of the area and produces between 5,000 and 180,000 tons, annually in a two-year production cycle (due to the alternative bearing habit of the olive trees). The field crop and vegetable areas cover 27.6% and 9.8% of the total cultivated areas in the PT, respectively. *(See Figure 1)*

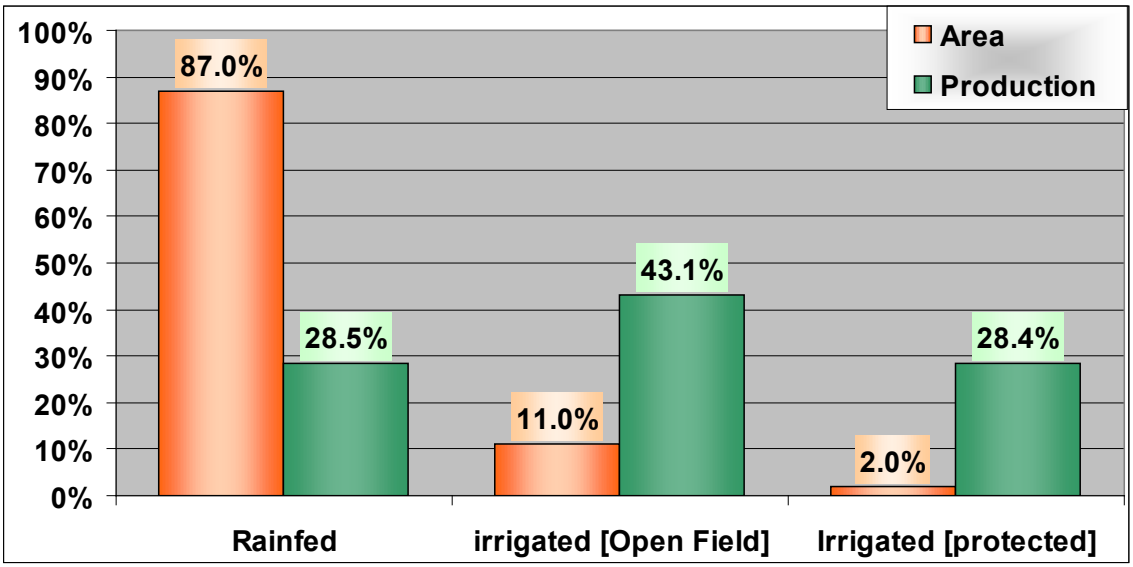


Figure 1: Distribution of plant production by planting system

According to the geopolitical classification of the Palestinian lands in the West Bank, 62.9% of the agricultural lands (arable lands, mixed holdings, permanent crops and greenhouses) are located in Area "C" (under full Israeli control), 18.8% in Area "B" (Palestinians have civil control over the area) and 18.3% in Area "A" (Palestinians have civil and full control over the area). *(ARIJ, 2006; PCBS, 2006)*

Agricultural lands in the PT are usually small (average size is 18.6 dunums (0.0186 km^2)) household holdings. The majority of agricultural holdings (88%) are owned by individual households, but some are fully or partially rented (the owned land is supplemented by renting

an extra area). There are 101,172 holdings in the PT, nearly 70% of which are plant production-only holdings, 7.6% are livestock-only holdings, and the remaining holdings are for practicing mixed production. *(PCBS, 2005)*

The PT has access to 18% of the water from West Bank aquifers. Irrigated agriculture in the West Bank is predominant in the Nablus and Jericho governorates, consuming 84.3 MCM/yr, although the actual water needs are estimated to be 81 MCM/yr. The extra water consumed is wasted as a result of poor irrigation practices and poorly maintained infrastructure. Therefore, up to 3,200 dunums of irrigated agriculture could be added to the existing irrigated areas if the available water resources were efficiently managed. *(Al-Dadah and Mustapha, 2006)*

The gross value of plant production in 2005 was US $494.9 million, which comprised 53.1% of the agricultural sector production value, while livestock and fishing comprised 46.9%.

The productivity of agricultural lands increased significantly from rain-fed to open-irrigated and protected growing systems. Thus, potential exists for improving production both qualitatively and quantitatively if new technologies are implemented, water management is improved, and access to local Palestinian water is increased *(See Table 1)*. Additionally, the PT is rich in local varieties (landraces) of plant crops, which should be noted for their production potential because they are acclimatized to local conditions.

The agricultural sector is a vital sector in the Palestinian economy, as it has been shown to be one of the key sources of growth in the economic recovery that has taken place since 2003 *(World Bank, 2006)*. Changes in agricultural activities are usually linked not only with climatic conditions, but also with socio-political changes and conflicts. The Palestinian economy is highly susceptible to external shocks, political events, and the Israeli business cycle, including fluctuations in Israeli agricultural productivity.

The contribution of the agricultural sector to the economy varies from one year to the next based on the activity of other economic sectors and the accessibility of the Israeli job market to Palestinian workers. During the last decade, the average contribution of the agricultural sector to Palestinian GDP was 10.5% (varies from 13.6% in 1996 to 8.1% in 2001) *(PCBS, 2005a)*. This reduction is due to a significant increase in agricultural input prices, especially feed prices, as 56% of the gross value of agricultural production was devoted to the cost of production inputs.

On the other hand, agriculture comprises less than 2% of the Israeli GDP and Israeli cultivated land is only about 4.2 million dunums. About 23% of the total value of agricultural production in Israel is derived from export. The main exported agricultural products are flowers, potatoes, vegetables, strawberries and citrus. *(Peres-ACF 2007)*

Agricultural products account for 25% of the export trade from the Palestinian Territory. Fruits (including strawberries and dates), olives and olive oil, vegetables, and cut flowers are the primary export products from the PT to both Israel and abroad. The shift to export-oriented agriculture increased the exploitation of cash crops and the dependency on imports of agricultural inputs used for intensive farming. Dependency on Israel also increased as Israel is a primary transit point of all available marketing channels. *(WFP, 2006)*

Israel is the main importer of Palestinian agricultural products (around two-thirds of the total), followed by Arab countries and the European Union (World Bank, 2006). Due to political conflicts, the value of agricultural commodities exported to Israel and other countries fell from US $97.3 million in the year 2000 to US $21.1 million in 2003, with a negative balance of US $76.2 million. During this period, exports to Israel fell by 84.7%. This is an indicator of the significant impact of export reduction on Palestinian economic strength and viability. The value of imported Israeli agricultural commodities was significantly lower in 2003 compared with 2000 – US $159.1 million and US $ 386.7 million respectively -- representing a reduction of 58.9% (PCBS 2005a). Thus, the Palestinian Authority should activate agro-exportation and agribusiness activities to improve Palestinian trade balance. (See Figure 2)

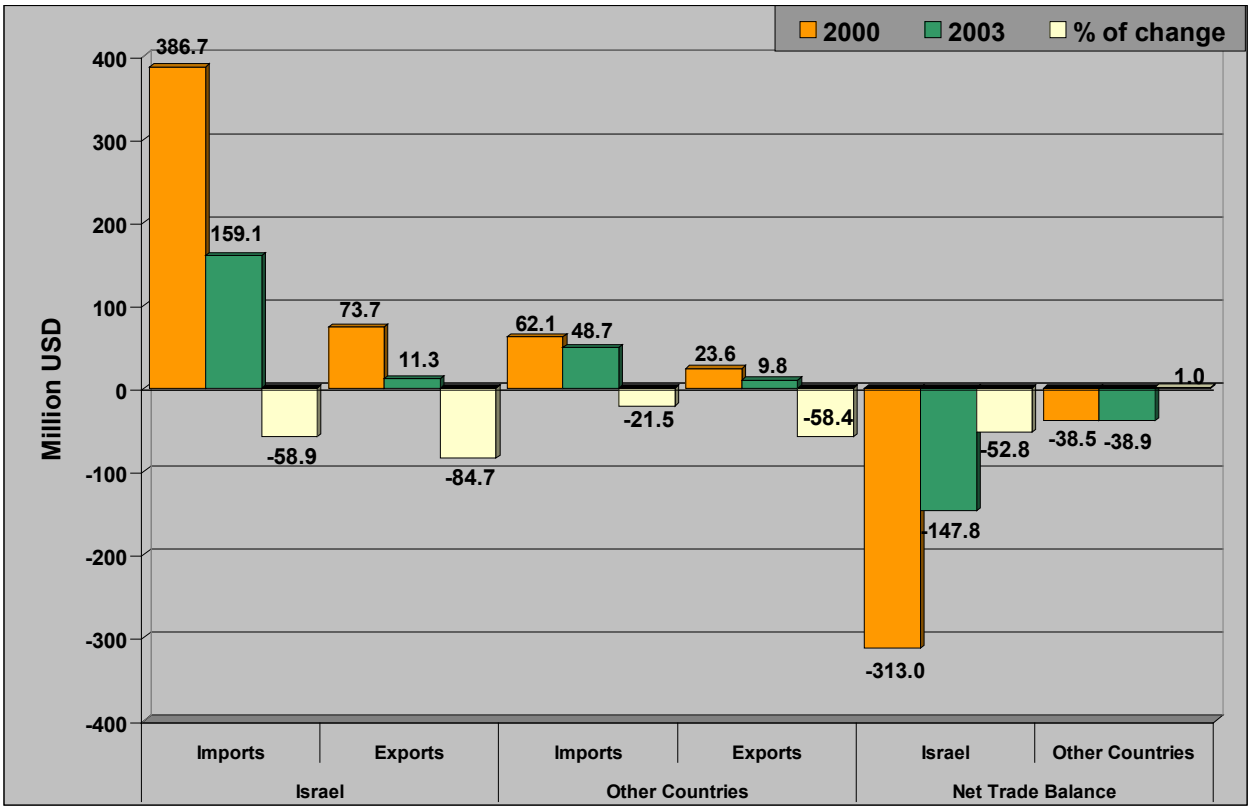


Figure 2: Agricultural commodities export-import balance by region
(Source: PCBS 2005d)

The agricultural sector is the third largest employer in Palestine, making up 15.2% (117,300 people in 2005) of the formal workforce, and up to 39% of the informal workforce. The agricultural sector constitutes the strongest foundation for empowering the status and role of Palestinian women, as statistics indicate that almost 90% of the women in the informal economy are employed in this sector *(ARIJ, 2007)*. Moreover, it provided an alternative source of income to more than 17% of Palestinian families which cultivated their lands and raised livestock for their survival (2004).

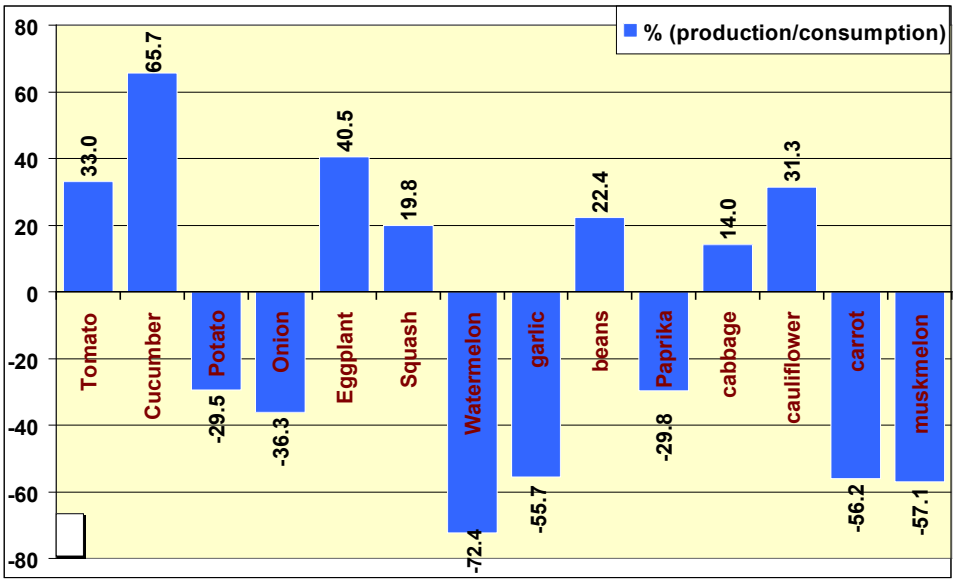
Daily wages for formal agricultural workers usually vary based on territory: the highest wages are paid to those who work in Israel (75.6 NIS (US $16.8)/day) followed by the West Bank (53.5 NIS (US $11.3)/day) and finally the Gaza Strip (33.4 NIS (US $7.4)/day). The workers in this sector usually work 18-21 days per month depending on working territory, accessibility, and availability of the work.

Part Two: The Agricultural Commodities Demand-supply Chain in the Palestinian Territory and Israel

The production calendar in the Palestinian Territory is diverse, based on cropping patterns (rain-fed or irrigated), planting systems (open or protected), location, season, availability of water resources, availability of agricultural lands, type of community (rural, urban, including refugee camps, or Bedouins), and other existing economic activities.

The Palestinian Territory has the ability to export surpluses of tomato, cucumber, squash, eggplant, beans, cabbage, cauliflower olive, grapes, plums, citrus and eggs, all without affecting the needs of the Palestinian market. However, the local production of potatoes, onions, watermelons, and garlic does not currently meet Palestinian consumption, which creates imbalance in the agro-commodities demand-supply chain in the PT. Regarding fruit production, there is a general inability to meet the local consumers' demand, yet local production of olives, grapes and citrus has achieved self-sufficiency and even produced surpluses, which are usually marketed to Israel and/or other countries *(See Figure 3 (a&b)*. It is worth noting that the Palestinian agricultural production system is mainly based on production in certain periods of the year, which creates peaks of production in those periods and shortages in others *(ARIJ-ACF 2007)*

3-A: Vegetables



3-B: Fruits

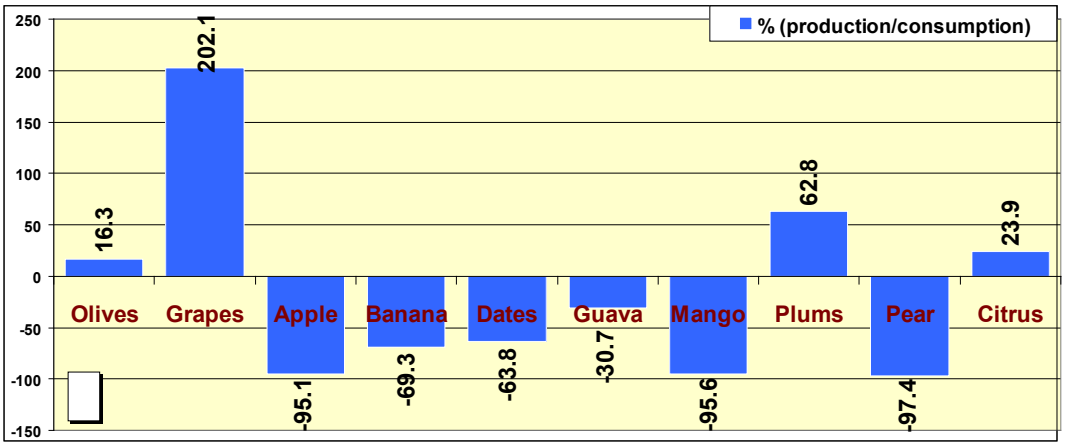


Figure: 3 a,b,: Production/consumption balance for the major agricultural commodities produced and consumed in the PT. *(Jebreen and Mouhammed, 2004)*

There is a strong interrelation between the Israeli and Palestinian economic sectors, especially the agricultural marketing system. Each side is able to fill the gap (in the agricultural commodities) when there is a shortage on the other side. Therefore, coordination based on equity and free movement of human resources and commodities between the PT and Israel would empower their marketing activities and assist in improving economic activity. Additionally, the marketing relationship should exist in a sustainable manner rather than being based on seasonality and meeting a lack on the other side.

It is worth noting that the main crops cultivated in Israel for domestic consumption are potatoes, tomatoes, watermelons, bananas, cucumbers, apples, onions, peppers, carrots, and grapes. Demand for these products is always high. The main products produced in Israel for industrial purposes are grapefruit, wheat, grapes for the wine industry, maize, potatoes, olives - primarily for the production of olive oil -- citrus fruit, cucumbers, carrots and peas. Regarding local Israeli production value, the leading products, from top to bottom, are potatoes, apples, tomatoes, bananas, grapes, peppers, cucumbers, peaches, and avocados. *(Peres-ACF 2007)*
According to Jewish law and tradition, no crops may be cultivated on Jewish land during

sabbatical years, called "shmita". This happens every seven years, when the land should "rest". The most recent Shmita began in September 2007. This boosts the demand in Israel for products from the West Bank, as well as from Gaza and Jordan. Therefore, Israel signed temporary agreements with Jordan and other countries, including the PT, for agricultural importation. *(Peres-ACF 2007)*

Israel mostly imports a variety of nuts (69.9% of imported agricultural commodities) for the general market and industry, as well as potato seeds and a small quantity of dried fruits, while the scope of Israel's imports of fruits and vegetables is minor. The principal sources of origin for these products are the U.S.A., Turkey, and Holland. *(See Figure 4)*

Palestinian farmers have the ability to increase their production of beans, figs, okra, onion, olives, and some dried fruits to meet the needs of the Israeli market.

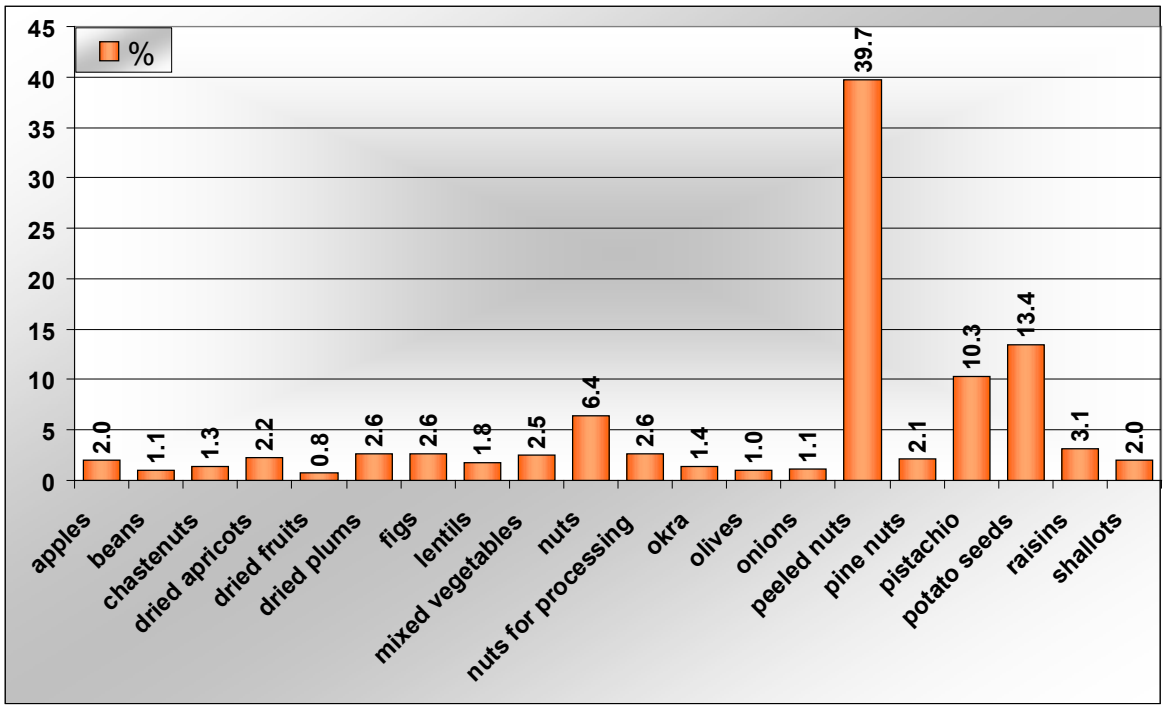


Figure (4): Imports of Israel of main fruit and vegetable commodities in % in the year 2006 *(Peres-ACF 2007)*

The total value of fruits and vegetables imported to Israel in 2006 was 170 million US dollars, of which 69.4% were fruits and 30.6% were vegetables, comprising only 0.36% of the total Israel imports. But, the main imported agricultural products in 2006 were grains and cereals. It is worth noting that with increased political stability the value of Palestinian exports of sowing services to Israeli producers has the potential to reach 300-500 million dollars annually.

Much of the fresh agricultural products consumed in Israel, with other produce, are products which have been imported from the Palestinian Territory. These products aren't officially defined as imported goods (Israeli marketers primarily work on the basis of long-term personal acquaintance with Palestinian merchants). On the other hand, livestock and animal products are prohibited from being imported into Israel from the Palestinian Authority areas; Israel only allows transit permits to Gaza, east Jerusalem, and markets abroad for livestock and animal products such as meat, eggs, lather, fish, and honey.

Based on the Paris Agreement, Israel and the Palestinian Authority are to be considered the same market. Free movement of agricultural produce between the two sides is expected, but Israel currently controls the borders and internal passages, and strict movement strictures are imposed on Palestinian products (See Box 1). Currently, the movement of Palestinian agricultural commodities to Israel is subjected to several physical obstacles, as well as strict measurements and inspections, despite the facilitation of movement by the Israeli government with the opening of the Bissan checkpoint and increasing the amount of commodities allowed to enter Israel. Thus, there is a need to have a sustainable, viable, and functional marketing system between both sides, guaranteeing commodity movement under various political conditions. Accordingly, relevant agreements should be reactivated on an equal basis and efforts should focus on organizing, monitoring, and improving the agro-marketing system between Israel and the PT.

Box 1: Closure System in the West Bank

Movement within, in, and out of the West Bank is controlled by numerous checkpoints, roadblocks and gates. These well protected barriers, combined with the separation barrier and complex permit system, restrict access to basic services, jobs, places of worship, and even to their families in the West Bank.

Source: OCHA oPt, 2007

The number of physical obstacles fluctuates from month to month, as some are removed by Palestinians, others are avoided by rough roads around them, and new ones are created by the Israeli forces.

In October 2007, OCHA reported that a total of 561 closures (checkpoints) existed in the West Bank, compared with the September figure of 563. The number of flying (moving) checkpoints is 141 on average in a week *(OCHA, 2007)*.

Part Three: Tubas Agro-marketing System and Potential for Improvement

1. Physical features, natural resources, socioeconomic conditions and land use/land cover of the Tubas governorate:

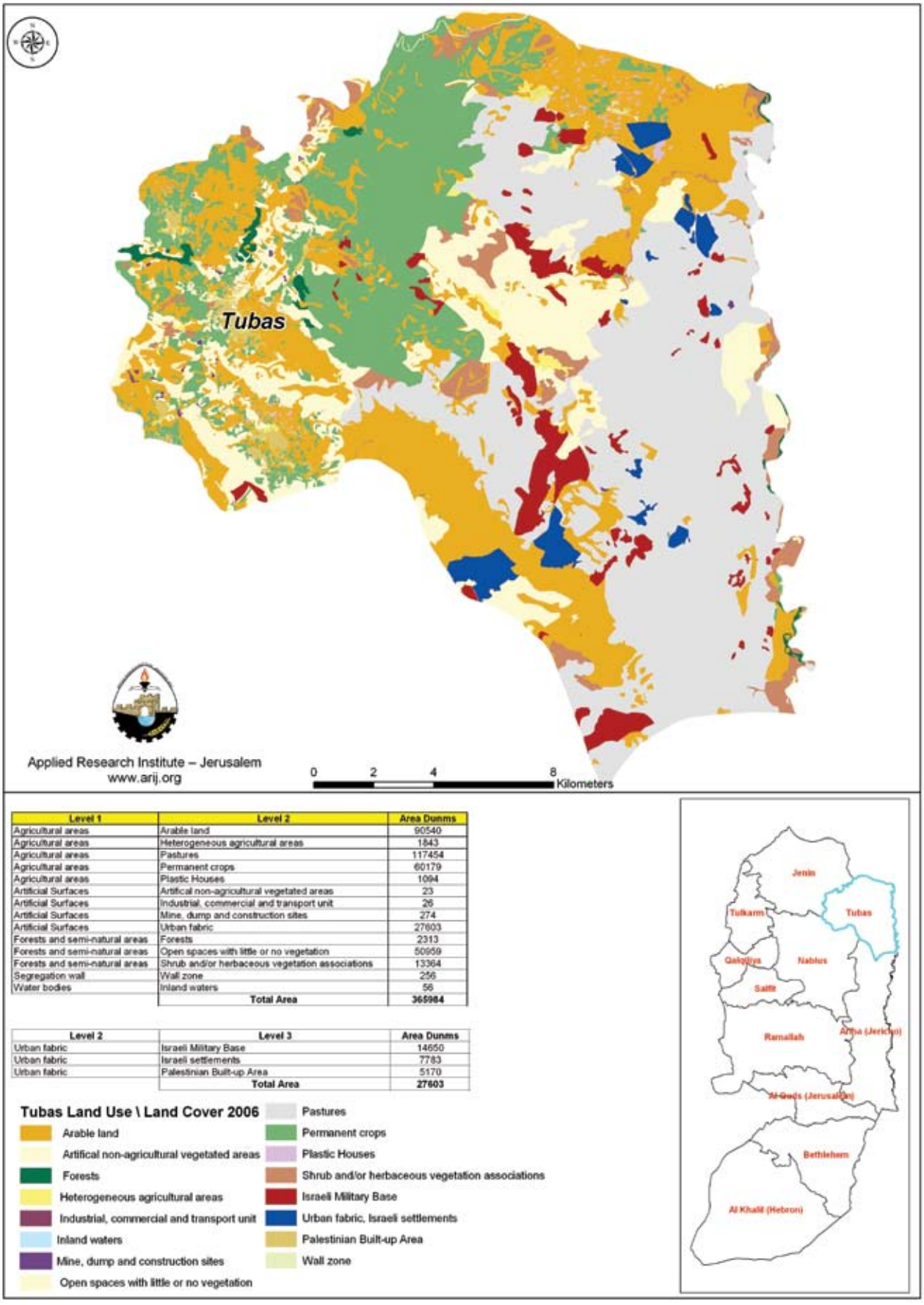
The Tubas governorate is located in the northeastern part of the West Bank. It is well known for its diverse climate and its abundance of water and natural resources. It is bordered by the Jenin governorate and the Armistice Line (green line) to the north, the Nablus and Jericho governorates to the west and south, and the Jordan Valley to the east. The total area of the governorate spreads over 402 km^2 and is comprised of 23 localities. Tubas is one of the main agricultural areas in the West Bank and a significant site for animal grazing due to soil fertility, water availability, and relatively warm weather.

The land use/ land cover analysis of satellite images of Tubas that were captured in 2006 showed that 50.3% of the governorate's lands are forests, pastures and natural lands. The agricultural lands, on the other hand, form 41.98% of the total governorate's area, of which 58.92% are arable lands (suitable for cultivation but uncultivated or partially cultivated by seasonal crops) and 39.16% are permanent crops. This is an indication that the Tubas governorate has potential for an increase in its existing cultivated areas by two-folds *(see Table 1 and Map1)*.

Table (1): land use/land cover classifications of Tubas governorate 2006.

Type	**Area in Dunum**	**% of total area**
Forests, Pastures, Shrubs, Open Spaces	184090	50.30
Artificial Surface, Industrial, Commercial & Dump sites	323	0.09
Palestinian Built-up Area	5170	1.41
Israeli Military bases, Settlement, Separation wall	22689	6.20
Water Bodies	56	0.02
Agricultural areas	153656	41.98
Total area	**365984**	**100.00**
Classification of Agricultural lands		
Arable land	90540	58.92
Heterogeneous agricultural areas	1843	1.20
Permanent crops	60179	39.16
Plastic Houses	1094	0.71
Total agricultural areas	**153656**	**100.00**

Source: ARIJ, 2006, GIS & RS database



Level 1	Level 2	Area Dunms
Agricultural areas	Arable land	90540
Agricultural areas	Heterogeneous agricultural areas	1843
Agricultural areas	Pastures	117454
Agricultural areas	Permanent crops	60179
Agricultural areas	Plastic Houses	1094
Artificial Surfaces	Artifical non-agricultural vegetated areas	23
Artificial Surfaces	Industrial, commercial and transport unit	26
Artificial Surfaces	Mine, dump and construction sites	274
Artificial Surfaces	Urban fabric	27603
Forests and semi-natural areas	Forests	2313
Forests and semi-natural areas	Open spaces with little or no vegetation	50959
Forests and semi-natural areas	Shrub and/or herbaceous vegetation associations	13364
Segregation wall	Wall zone	256
Water bodies	Inland waters	56
	Total Area	**365984**

Level 2	Level 3	Area Dunms
Urban fabric	Israeli Military Base	14650
Urban fabric	Israeli settlements	7783
Urban fabric	Palestinian Built-up Area	5170
	Total Area	**27603**

Map (1): Tubas governorate land use/land cover analysis
(Source: ARIJ, 2006, GIS & RS database).

The northern West Bank, including the governorate of Tubas, has the largest percentage of agricultural holdings, the most common of these being plant holdings. Out of 90,052 holdings in the West Bank, there are 46,480 agricultural holdings; 32,406 are plant holdings, 11,207 mixed holdings, and the remaining 2,867 are animal holdings *(PCBS Survey, 2005)*. Most of the agricultural holdings in the northern West Bank are concentrated in rural areas, where 35,755 holdings are in rural areas, 10,469 holdings are in urban areas and 76 holdings are in camps. In addition, the percentage of agricultural holdings distributed by their legal status in the northern West Bank is 67.9% to individuals, 21.2% to families, 10.7% to partnerships, and 0.2% to society cooperatives or companies.

Data on the labor force indicates that 16.1% of the labor force in the Palestinian Territory was employed in the agricultural sector in 2006; the Tubas governorate has the highest percentage of employment in the agricultural sector among the Palestinian governorates *(see Figure 5)*. The agricultural sector comprises 38.3% of the employed population in the Tubas governorate (33.8% of the employees are males and 54.8% are females).

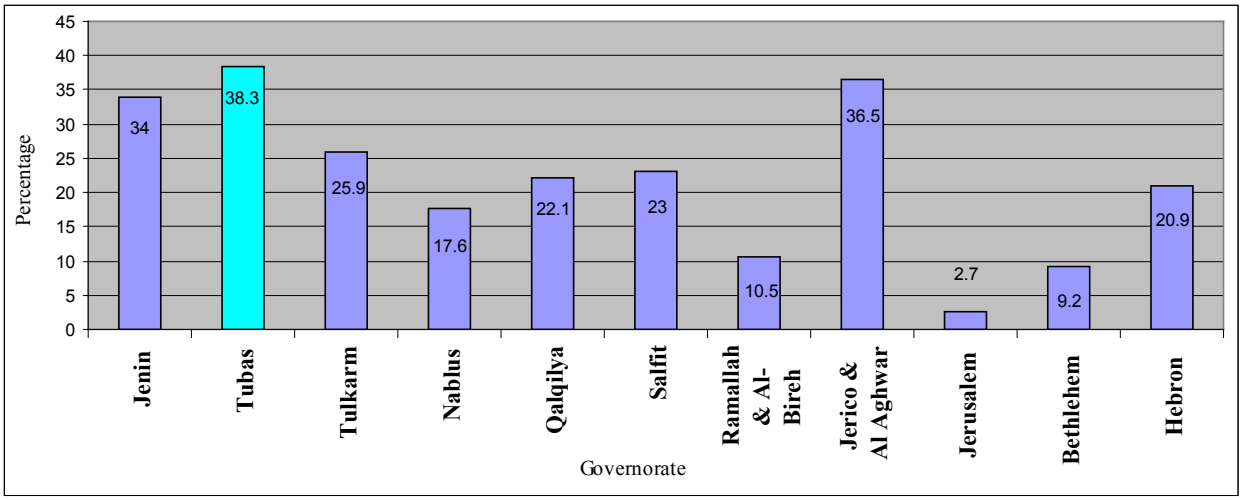


Figure (5): Percentage of employed persons in agriculture sector by governorate, 2006 *(PCBS, 2007)*

The governorate of Tubas is the most agriculturally abundant area in the Palestinian Territory. Despite the fact that the total cultivated area in Tubas forms only 5.0% of the total cultivated area in the West Bank, it contributes 11.1% of total plant production. It is considered the Palestinian vegetable basket, as 27.1% of the protected vegetable areas and 14.2% of open-field irrigated vegetable areas are located in the Tubas governorate and contribute up to 30% of total vegetable production in the West Bank.

The total cultivated area in the governorate is 83,232 dunums, including an area of 20,316 dunums (24.4% of the governorate cultivated area) used for vegetable cultivation. Of these 20,316 dunums 10,045 (50%) are open-irrigated, 6,153 (30%) are rain-fed, and 4,118 (20%) are protected. As for the total vegetable production, 51,866 tons were produced in the agricultural year 2004/2005.

Based on the PCBS statistics for the production year 2004/05, there are 19 planted vegetable crops producing 51,855 tons. The main produced crops are tomato with 32.23% of vegetable production, cucumber with 20.76%, eggplant with 13.73%, squash with 11.89%, and

green chickpeas with 4.99%, while the remaining crops contribute 16.40% of vegetable production. *(see Table 2)*

Table (2): Distribution of vegetable crops production in Tubas governorate, 2005		
Crop	**production**	**% contribution to the total production**
Vegetables production		
Tomato	16,715	32.23
Cucumber	10,768	20.76
Eggplant	7,120	13.73
Squash	6,169	11.89
Chickpeas (Green)	2,590	4.99
Maize	2,070	3.99
Cabbage	1,230	2.37
Muskmelon	1,200	2.31
Faba bean (Green)	1,165	2.25
Peas	770	1.48
Water melon	720	1.39
Hot pepper	435	0.84
Green Beans	255	0.49
Paprika	240	0.46
Snake cucumber	230	0.44
Cauliflower	100	0.19
Okra	66	0.13
Yellow Beans	20	0.04
Anchusa leave	3	0.01
Total	***51,866***	***100.00***
Fruit trees production		
Citrus	1558	67.50
Olives	542	23.48
Grapes	73	3.16
Figs	63	2.73
Almond (hard)	35	1.52
Almond (soft)	37	1.60
Total	2308	100.00
Field crops production		
Potato	7560	35.78
Wheat	5355	25.34
Dry Onion	4300	20.35
Clover	1960	9.28
Common vetch	865	4.09
Onion bulb-let for cultivation	638	3.02
Other crops	291	1.38
Barley	162	0.77
Total	***21131***	***100.00***

(Source: PCBS, 2006a)

In addition, the total production of fruit trees reached 2,308 tons in the Tubas governorate in 2005. The main fruit production consists of seven different types of citrus trees, forming 67.5% of total fruit production, followed by olives with 23.48%, grapes with 3.16%, figs with 2.73% and almonds (hard and soft) with 3.12% of total fruit production.

Regarding field crop production, up to 21,131 tons were produced in 2005 by 18 different crops. Potato was ranked first among field crops with 35.78%, followed by wheat with 25.34%, and dry onion with 20.35%.

The average area of cultivated lands by farmers is usually based on the size of ownership and type of cultivation. The baseline survey[3] showed that the area of cultivated land of olives and fruit trees per farmer is larger under rain-fed conditions compared with irrigated lands. The average cultivated area per farmer decreases from open-irrigated fields to low tunnels, greenhouses, and high tunnels, with an average of 49.4 dunums, 31.5 dunums, 4.7 dunums, and 3.1 dunums per farmer, respectively. *(See Table 3)*

There is potential for improving existing irrigated agriculture through intensive agribusiness cultivations, rather than focusing only on traditional open-irrigated cultivations. Such potential would ensure improvement of water management and increase plant production. In parallel the farmers should be supported by an organized, well-managed, monitored marketing system to guarantee the marketing of their products under different socio-economic and political conditions.

Table (3): Distribution of land ownership according to the cultivation patterns in Tubas area.

Cultivation patterns	Range of cultivated area (dunum)/ farmer	Average (dunum)
Rainfed olive trees	1-30	17.1
Irrigated olive trees	0.5-80	9.5
Irrigated other fruit trees	1-24	11.2
Rainfed other fruit trees	1-117	39.3
Irrigated vegetable (open fields)	1-400	49.4
Irrigated vegetables (low tunnels)	2-100	31.5
Irrigated vegetables (high tunnels)	1-15	3.1
Plastic houses	1-36	4.7

Sources: the conducted baseline survey for the Tubas marketing system, 2007 (ARIJ-ACF, 2007).

[3] A marketing survey was conducted by ARIJ during 2007. The six main agro-productive localities of Tubas were examined for their production calendars, production systems, and marketing processes covering the Tubas area. 230 farmers were interviewed in addition to many trade unions and stake-holds.

2. Agro-production calendar of the Tubas governorate:

The conducted survey showed that 86.8% of vegetable commodities are produced intensively over eight months of the year: January, February, March, April, May, October, November and December. On the other hand, 13.2% of vegetable commodities are produced in the remaining four months. The month of highest vegetable production is April (14.6%), compared with June, July, August, and September, which are the lowest productive months. During these low productive months new crops and techniques should be adopted. *(See Figure 6)*

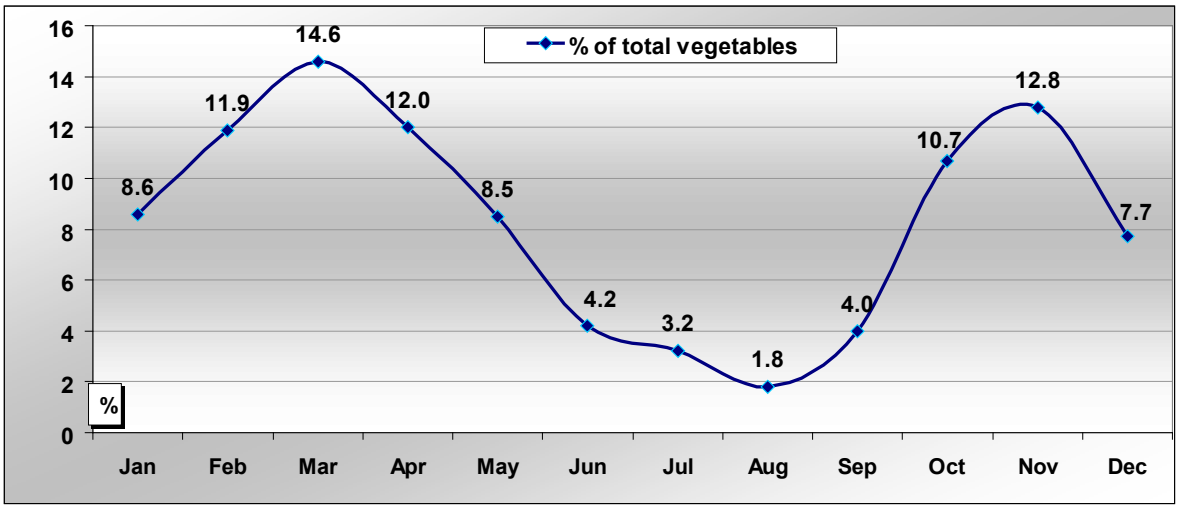


Figure 6: Distribution of main vegetable crops production by month in the Tubas area.

The monthly distribution of main cultivated vegetable crops in the Tubas area is described in Table (4), as follows:

Table (4): Monthly distribution of main cultivated vegetable crops in the Tubas area.

Type of crop	Production peak by month
Cucumber and tomato	October to November, March to May
Squash	February to April, October to December
Eggplants	March to May, November to December
Potatoes	January to May
Onions	July and August
Corn	February to April
Cauliflower and cabbage	February
Broad bean	February to April
Pepper	March, April and November
Beans	February to April, November and December

The main destination for agro-production in the Tubas Area is domestic consumption, except for the open-field cultivated cucumber which is mainly marketed to pickling factories in the Palestinian Territory (mainly the Zadouna factory) and to Israeli food-processing factories.

Regarding the Israeli production calendar, table three presents the production trends over 2005 and 2006. Although it is difficult to observe an accurate change of demand over two years, it can provide a broad picture of the most highly demanded crops, whether for local, industry, and/or export purposes. There is a significant increase in the production of tomato, cucumber,

carrot, pepper, eggplant, cabbage, table grape, dry garlic, and almond for local consumption. Agro-production for processing purposes has increased for cucumber, carrot, eggplant, cabbage, small radish, grapefruit, olive oil and wine grapes, while for exportation purposes the production trend of carrot, pepper, cherry tomato, celery, strawberry, sweet potato, small radish, melons and table grapes has increased, reflecting the demand of the exportation market on such commodities. *(See Table 5) (Peres-ACF 2007)*

A project dealing with export demand and application was funded by USAID (PAPA), where Palestinian farmers in Kardalah, through contracts with the Sonnokrot and Al-Reif companies, were trained to produce tomato, cherry tomato, and colored sweet peppers under EuropGap standards so they could be exported to Europe through an Israeli company. This project has only recently started and is still in its preparation phase, thus no results were recorded.

Table (5): The Trend of the Agricultural Production in Israel (2005-2006) (Quantities in tons) *(Source: Peres-ACF 2007)*

Group	Local	trend	industry	trend	export	trend
Spices, medicinal and fragrance herbs	1,928	↑	550	↓	13,300	↑
Tomatoes for the market	165,829	↓			4,207	↑
Cherry tomatoes	17,502	↑			24,752	↑
Tomatoes for processing			175,154	↑		
Cucumbers	115,921	↑	17,400	↑	151	↓
Carrots	72,790	↑	17,000	↑	37,566	↑
Peppers	73,484	↑	1,028	↓	76,165	↑
Eggplants	42,593	↑	5,000	↑	17	↓
Cabbage	52,406	↓	2,400	↑	754	↑
Beet	11,200	↓	500	-	41	↑
Lettuce	34,269	↓	1,200	-	165	↑
Celery	9,026	↓	176	↓	2,305	↑
Strawberry	15,270	↓			2,513	↑
Radish	5,420	↑			1,529	↑
Sweet potatoes	16,702	↑	400	-	8,059	↑
Spring onions	4,097	↓			24	↑
Beans	2,924	↑	3,117	↓		
Cow peas	768	↑				
Small radishes	3,398	↓	8,619	↑	3,650	↑
Artichoke	5,376	↑	100	-		
Dry garlic	6,594	↑	700	-		
Asparagus	123	↑				
Spinach	1,058	↑	1,000	-		
Chinese cabbage	1,169	↑			225	↑
Hot peppers	11,926	↑	341	↓	340	↑
Melons	35,279	↓	180	↑	10,202	↑
Naval oranges	23,000	↑	7,000	↑	1,000	↑
Grapefruit	26,003	↑	165,000	↑	75,000	↓
Table grapes	65,394	↓	2,300	-	11,199	↑
Wine grapes	700		53,500	↑		
Olive for oil			38,000	↑		
Almonds	11,242	↑				

"trend" means the change from 2005 data: ↑=higher than last year; ↓=lower than last year.

Herbs, spices, medicinal, and aromatic plants are the main potential crops for Palestinian production and exportation, as the demand for these crops is growing locally, in Israel, and abroad. Further studies are needed, especially concerning the potential markets and the competition of other producing countries (where the labor force is cheaper and access to production technology is better). A pilot project in Al-Far'aa involving herbs and aromatic plant production has started and covers an area of 65 dunums for spice production. Production started recently and the project's economic feasibility is still unclear.

According to the Palestinian production/consumption balance for vegetable production (figure 2), there are surpluses in tomato, cucumber, eggplant, squash, beans, cabbage, and cauliflower, which allows for the possibility of marketing or exporting these surpluses.

In Tubas, tomato and cucumber comprises 53% of total vegetable production (which reached up to 51,866 tons in 2005), followed by eggplant and squash with 13.7% and 11.9% respectively. The remaining 21.4% is distributed over 15 different crops, creating a high risk in the vegetable production system of Tubas, especially during closures of the Palestinian Territory's borders and internal passages when marketing to Israel is stopped. Thus, there is a need to diversify the production calendar, as well as the production of less perishable crops to meet local market needs, and provide a better opportunity to market to both Israel and abroad.

3. Movement of Palestinian agro-production to Israeli markets & for exportation:

Total production in the Tubas Governorate is distributed among three markets: the Tubas Governorate, the West Bank, and Israel. Of the total production 15,535.9 tons are marketed in the Tubas Governorate (22%), 17,956.0 tons are marketed in the West Bank (25%), and 37,631.6 tons are marketed in Israel (53%). This highlights the importance of the Israeli market for Palestinian produce, especially when access and export to external markets is limited and controlled. It is worth noting that the farmers in the Tubas Governorate spend about 13 millions NIS marketing their products to these three markets, an average of more than 1.08 million NIS per month.

Despite the signed agreements between the Israeli and the Palestinian sides regarding the free movement of agricultural commodities for both sides, the agreements are only implemented as concerns the movement of Israeli agro-commodities to the Palestinian Territory. The movement of Palestinian commodities to or through Israel to markets abroad is often limited. This year has witnessed an improvement in Israeli procedures regarding the movement of Palestinian agro-commodities to Israeli markets or for export. The main change has been the re-opening of the Bissan agricultural crossing gate. This has allowed larger amounts of Palestinian agro-products to be sold in Israeli markets. We should note here that the studies conducted during the last three years for the Tubas production system showed that before the year 2000 about 62.7% of vegetable production in the Tubas governorate was sold to Israel, and in 2006 the percentage dropped to 39%. This year up to 53% of Tubas vegetable production has been marketed to Israel. This reveals the need to empower the agro-marketing relationship by providing better movement facilities for commodities from the PT to Israel, by revitalizing existing marketing agreements, developing new agreements based on both markets' needs, and developing joint strategies and plans for strengthening the existing export system.

Most Tubas produce is marketed to Israel through the Gilboa and Bissan crossings. Delineated in the table below is the route taken by the products that have passed through the Gilboa (Al-Jalameh) and Bissan crossings during the first eight months of 2007, according to crops and quantities. *See Table 6*

Table (6): Movement of fresh Palestinian produce through Gilboa and Bisan Crossings between 1/1/2007-5/9/2007

Bissan Crossing		**Gilboa (Al-Jalameh) Crossing**	
Tons	Produce	Produce	Tons
1,689.547	Cucumber	Cucumbers for processing	12,807
1,536.928	Zucchini	Cucumbers	4,643
824.724	Eggplant	Tomatoes	2,223
762.060	Tomato	Zucchini	2,116
353.100	Corn	Eggplants	2,104
320.410	Ful	Onions	1,531
299.302	Bean	Cauliflowers	972
230.148	Potato	Cabbages	957
228.810	Onion	Potatoes	870
172.700	hot pepper	Gourds	432
136.343	Cauliflower	Hot peppers	385
114.300	sweet pepper	Beans	377
110.000	cucumber for processing	Corns	316
109.704	Cabbage	Fakous	265
69.200	Cherry	Eggplants for processing	252
38.050	vine leaves	Okras	220
35.408	pea	Sweet peppers	210
34.201	okra	Shipke peppers	198
30.700	gourd	Mloukhieh	188
28.900	garlic	Broad beans	162
12.380	mloukhieh	Cow peas	140
9.720	fakous	Olive oil	100
9.720	hyssop	Almonds	83
9.400	melon	Vine leaves	69
9.350	orange	Watermelons	64
8.490	radish	Lettuces	40
8.100	almond	Cherries	37
7.900	spinach	Turnips	35
7.380	turnip	Bananas	30
6.600	lubia	Parsley	27
6.200	grape	Peas	26
5.000	watermelon	Hyssop (zaatar)	22
4.100	lettuce	Melons	22

Table (6): Movement of fresh Palestinian produce through Gilboa and Bisan Crossings between 1/1/2007-5/9/2007			
Bissan Crossing		**Gilboa (Al-Jalameh) Crossing**	
Tons	Produce	Produce	Tons
3.250	lesina	Garlic	20
2.200	chickpea	Grapes	20
1.200	lemon	Radishes	18
1.000	fennel	Apples	17
0.700	mint	Fennel	16
0.650	mandarine	Oranges	14
0.650	parsley	Spinach	12
0.450	Clementine	Carrots	10
0.400	Beet	Avocadoes	10
0.400	strawberry	Sour cherries	8
0.200	pomelo	Lemons	7
0.180	herbs	Plums	6
0.158	banana	Chickpeas	6
0.100	loquat	Strawberries	5
0.100	small radish	Mint	4
0.100	spring onion	Pears	3
		Mangoes	3
		Nectarines	2
		Beets	2
		Peaches	1
		Coriander	1
		Dill	1
		Artichokes	1
		Small radishes, spring onions, chamomile, pomelo, apricots, thistles	less than a ton
7,240.613	Total from Jan-Sept.2007 (closed 14/6-15/9)	Total 1Jan.-5.Sept. .2007	32,122

** The data was processed from the Inspection Unit for Plants and Livestock, Israel, Peres-ACF 2007.*

Table five presents the movement of agricultural commodity transports via the Galboa and Bissan crossings and clarifies that there are crops transported not only from Tubas but from other parts of the West Bank as well. It should be noted that 48.6% of total transported agricultural commodities through both crossings was cucumber. Efforts should be made to reduce the length of inspection procedures at these crossing points to accelerate the marketing process.

In the past, most agricultural production of the PT was consumed locally, and market-related activities were stalled due to an insufficient number of transit points for the produce. Later, this situation was rectified, and Palestinian products crossed into Israel after inspection. Later still, in the aftermath of security issues, transit was changed to a back-to-back system, meaning

transfer of produce from Palestinian trucks to Israeli trucks, and vice-versa. This system renewed an existing problem that stemmed from the restricted opening hours at the crossings.

Israeli marketers primarily work on the basis of long-term personal acquaintance with Palestinian merchants (Peres-ACF 2007). In most cases, transactions are largely made with a local merchant, who supplies wholesalers with produce he has consolidated from several farmers, or through farmers' unions. The merchants keep constant contact with one another by phone, and in most cases, no special problems arise concerning unpaid debts or a break-down in mutual trust, and as long as the relevant border crossings operate smoothly, the produce flows freely. Yet such a system is unsustainable, and it would be better to institutionalize the marketing relationship by signing contracts on both sides to guarantee rights and reduce risks. These contracts could be similar to the contracts signed between Israeli merchants and the Tammun Agricultural Cooperative for greenhouse production. There are other examples, such as the agreements between Sonnokrot and Arava Marketing to market Palestinian agro-produce to Europe.

Tubas produce is marketed to Israel through the Gilboa and Bissan crossings, with a slight majority going through the Bissan crossing since the beginning of 2007. Produce from this region used to be marketed via Israel to the Gaza Strip, mainly chickens, eggs, olive oil, onions and thyme. It is worth noting that the shmita year began in Israel in September 2007, and will last until October 2008. This increases demand in Israel for products from the West Bank, as well as from Gaza and Jordan. In view of the current restrictions on the export of agricultural products from Gaza, it can be assumed that demand for products from the Tubas region during the shmita year will increase. Israeli demand on the Palestinian agro-commodities shouldn't be based on seasonality or special occasions, but this relationship should have priority from both sides since their economies are inter-connected and thus joint agro-economic activities are more feasible.

* * *

Part Four: Possible Networking between Palestinian and Israeli Markets

There is an integrated relationship between Palestinian and Israeli agricultural sectors. Israelis have agricultural technologies, experience in agricultural practices and post-harvest treatments, manufacture agricultural inputs, and have access to international markets. The Palestinians, on the other hand, have an excess of available labor force, fertile agricultural lands, and potential for year-round production due to climate conditions. Such conditions have increased the potential to shift dryland agriculture towards irrigated agriculture. This could be achieved by improving irrigation systems, using treated wastewater for irrigation, and increasing Palestinian access to water (See Box 2). Building such interrelated agricultural activities between both sides would assist in improving their relationships, their economies, and encouraging mutual confidence.

Box 2: The Water Issue

Water is scarce in the region (Middle East) as the region is typically very dry. Palestinians in particular do not own their water and do not have access to land in order to dig wells for agricultural purposes. Thus, water is usually purchased. Water prices differ from one area to another in the PT. Farmers in the Tubas governorate pay different prices for their irrigation water, starting from NIS 0.5 in the northern Jordan Valley, and going up to NIS 13 in Aqaba in the highlands. Protected agriculture farmers in Tamoun used to pay about NIS 8 as they transfered irrigation water by tanks. After the "Tamoun Cooperative for Improving Protected Plantations" was formed they contracted a well about 7 km away to supply them with water at a cost of NIS 3.5. They connected to the well with a pipeline that was constructed at their own expense. The cooperative was issued a license to dig a well for domestic use only.

Another example concerning the issue of water prices is the Jordan Valley case, where farmers used to get their water from their local wells (in the early 70's). When the Israeli company Mokorot started digging wells in the region the local wells began to run dry. Palestinians then agreed with Mokorot to purchase water at cost, (about 17 agoras/1CM). When the Palestinian Authority began to take over in 1997, Mokorot decided to change the price of water to 50 agoras/1CM. Farmers refused this change in price, since they need about 1000 cubic meters of water to irrigate one dunum, and thus would have to pay between NIS 500 and 13000 to irrigate their crops. The price of water is a determining factor in the product .being profitable

Currently, cooperation between Palestinians and Israelis in the agricultural production system mainly involves the purchasing of agricultural inputs (such as irrigation systems, cover materials, fertilizers and pesticides) from Israel or through Israel to the PT, marketing of Palestinian produce to Israel, and through Israeli firms exporting to Europe and other countries.

Israel is the primary market for Palestinian vegetables. For certain crops, Palestinian production is vital to the Israeli market. Vegetable processing industries in Israel (especially pickling factories) purchase cucumbers grown in the Palestinian Territory. Israeli farmers cannot supply this produce in large amounts because the cost of labor in Israel is too high in relation to their market price and the cost of Palestinian labor (cucumber is usually planted in open irrigated fields and requires intensive labor; See Table 7,8).

Table (7): Export of Vegetables from the PT to Israel, 2004			
	Total vegetables	Of which: Cucumbers	Tomatoes
Vegetables transferred to Israel from the PT (ton)	75,528	27,868	10,187
Total Palestinian vegetables production (ton)	589,909	137,934	205,809
% of vegetables transferred to Israel of total Palestinian production	13%	20%	5%
Total Israeli vegetables production (ton)	2,302,600	145,300	512,000
% of vegetables transferred to Israel of total Israeli production	3%	19%	2%

Source: Israeli Ministry of Agriculture, 2005; PCBS, 2003-2004; ICBS, 2004; Diplomacy-Peres, 2007.

Table six presents agro-commodity movement between Israeli and Palestinian markets and reflects the need for continuous cooperation and improvement of this dynamic economic activity. The Israeli side markets more fruit to the Palestinian Territory and the Palestinian side markets more vegetables to Israel. This shows that there is a need to develop integrated production calendars with more integrity and optimum utilization of available resources on equity basis, rather than competition to maximize profit.

Table (8): Balance of Transfer of Fruits and Vegetables between the PT and Israel, 2004								
	Unit	**From Israel to the PT**			**From the PT to Israel**			**Balance**
Crop		Total	To Gaza	To the West Bank	Total	From the West Bank	From Gaza	Positive – to Israel*
Vegetables	Tons	24,196	13,639	10,557	75,528	57,145	18,383	(-51,331)
Citrus	Tons	1,659	1,659	0	621	2	619	+1,038
Other fruits	Tons	49,382	49,219	163	1,821	1,705	116	+47,561
* (-) means balance to PT advantage, (+) to Israeli advantage.								

Source: Israeli Ministry of Agriculture, 2005; Diplomacy-Peres, 2007.

The marketing system in the Tubas area depends on the destination of the products. Products sold in Palestinian wholesale markets must go through a middleman, who often takes 10% of the total product price as a commission, of which 2% goes to the municipalities. Often a small proportion of products are directly sold to wholesalers, retailers, or consumers. Goods going to Israel are sold to merchants, who are free to sell to Israeli markets at any price, but the farmers have to pay for the control tests (including biological tests, residues tests, etc.) of their products, which cost about 250 NIS each. It is important to note that Palestinian farmers often do not have enough time to sell their products directly to consumers and thus a middleman is the only available and convenient method to sell their products.

Export of vegetables produced by Palestinian farmers (mostly in greenhouses) is carried out mainly by Israeli export firms such as Agrexco, Arava…etc. Because of the limitations and restrictions at Israeli checkpoints and borders Israeli merchants have requested a reduction

in the pressure at checkpoints (through the Israel Fruit and Vegetable Marketers Union). The Inspection Unit for Plants and Livestock arranged for one of the crossings -*Bissan (Bardala)*- to operate on Saturday in addition to regular weekly operations. This extra opening enabled much of the produce - some 35% of the total amount of products transferred weekly to the wholesalers is carried out on Sunday mornings - to reach the markets in good condition. Limited hours of operation at checkpoints aren't the only problem. The unjustified delays, during which Palestinian products are inspected, often take from one to several hours, with farmers sometimes forced to keep their goods at the checkpoint overnight, increasing cost and reducing product quality. Additionally, there is the risk of failing the chemical residue and biological tests. The Palestinian Authority (especially, Ministry of Agriculture (MoA)) would benefit from cooperation on the Israeli side in performing such tests to help mitigate farmers' losses and guarantee the safety of marketed commodities for both sides.

Cooperation between Israelis and Palestinians would greatly benefit both sides. This can be done through intensifying and adopting modernized agricultural production systems in the PT, as well as marketing Israeli production inputs by Israeli firms and exporting Palestinian products. Consequently, securing transportation channels for the Palestinians is one of the cooperation challenges. The Israeli government should remove the existing obstacles to human and commodity movement inside the Palestinian Territory and reduce the strictness of procedures at the crossing points to improve Palestinian marketing channels. *(See Box 3)*

It is also clear that Palestinian farmers spend more money on land preparation, but less on fertilizers, pesticides, seedlings, and labor. The difference in the cost of labor may be attributed to the lower wages of Palestinian workers, whereas the difference in the cost of chemicals and fertilizers is probably due to less use. The cost of agricultural water and cover materials is more or less the same for Israeli and Palestinian farmers. It seems that the cost of production is lower for Palestinian farmers, but selling prices are lower for Palestinian products, since the Palestinians spend less on grading and packaging their products.

The economic influence of cooperation between Israelis and Palestinians in greenhouse development will lead to the expansion of the sector, the creation of jobs, and the reinforcement of food security in the PT. For Israel, cooperation will provide benefits through the selling of more agricultural inputs and more profit from exporting Palestinian products. *(Diplomacy-Peres, 2007)*

From a workshop conducted by ARIJ on the 1st of Nov. 07, Palestinian farmers do not mind dealing with Israeli exporters if they get fair prices to cover their expenses, receive revenue, product origin is noted, and the rights of merchants are guaranteed.

The investment capital required for establishing greenhouses is another constraint facing the sector's development. At the moment, one of the major challenges of developing greenhouses for exportation growth in the PT is the process of transferring the goods outside the PT. Since most of the export channels (harbors, airports) are through Israel and under their control Palestinian farmers face the difficulty of transferring their products first to Israel and then to export markets. This is particularly difficult in times of closure and road blockades.

The Palestinians lack market orientation and good marketing systems in world markets. Almost all products are exported through Israeli companies, a situation which does not allow Palestinian independency, and leads to a reduction in revenue for Palestinian farmers.

Box 3: The impact of networking arrangements on marketing the farmers production

The ACF-E and under fund from ACCD have arranged for a meeting in Nazareth, between the chiefs of the several Palestinian agricultural cooperatives chief with Israeli traders to discuss cooperation concerning marketing Palestinian fresh products.

The «Tamoun Cooperative for Improving Protected Plantations» used to export 40% of its agriculture products through middlemen, but after attending the workshop the cooperative sells almost 80% of its production through direct contact with Israeli traders. This has increased profit by at least 10%, which was the middlemen>s share.

The North Aghwar Cooperative did not attend this training and thus is still selling through middlemen to Israeli traders. One drawback to this is the commission the middlemen take. The North Aghwar Cooperative sends its products in plastic containers that weight 15-17 kg, but they are paid only for 10 kg of the produce. The extra weight goes to the middlemen's commission and for transportation.

Products of Tamon Cooperative for Improving Protected Plantations, where the fruits are lower than the edges of the containers and thus prevent the damage of the top fruits, saving the good quality to the market.

Product of North Aghwar Cooperative where the cucumbers are over the edges of the containers, which damage the top cucumbers and decrease their price.

Part five: Proposed interventions for improving the Palestinian Agro-marketing system

There are several procedures and actions that should be taken into consideration and/or reactivated to empower the Palestinian agro-marketing system to become more functional and viable locally and abroad. The following parts discuss possible approaches for improving this vital sub-sector with different political, economic, and physical resources.

1. Improving access and management procedures for available Palestinian natural resources:

Potential exists for improving the Palestinian agricultural production system by adopting new technologies, increasing available water resources (both the treated water and inaccessible Palestinian water as currently the Palestinians are using only 185 MCM of their water), improving access to Palestinian agricultural lands, building human capacity in production techniques and procedures, and improving Palestinian agribusiness cultivations by encouraging the planting of high value and more marketable crops. Additionally, there is a need to increase the number of planted fruit trees' by diversifying the types of planted trees to meet market needs.

2. Improving Palestinian production and marketing system in a sustainable manner under varying political conditions

The political situation is the main constraint on agricultural development and improvement of the agro-commodities marketing system. This should cause serious concern about the future of Palestinian agriculture. However, the methods in which these problems must be addressed will change, depending on political developments. Accordingly, the Palestinians and Israelis are confronted with two political scenarios in the foreseeable future: either the continuation of the current status or possible political break through (a restart for negotiations on final status).

Scenario 1: the continuation of the current political status:

This scenario suggests continuation of the status quo (including closures and limitations on Palestinian movement and their commodities both locally and for exportation), and possible further deterioration. Donor aid is still limited to emergency needs. Unemployment is high and the public sector becomes weak and may be dysfunctional.

Agriculture will shift towards growing for subsistence and food security, including home gardens, urban agriculture, animal distribution, and water (rainwater) harvesting and delivery infrastructure. Agribusiness produce will be threatened and the agro-commodities marketing system will remain unorganized with limited coordination between Palestinians and Israelis. Exports are totally controlled by the Israeli side and under their measures and conditions, limiting the amount of Palestinian products which may be exported.

If development must take place under these conditions the following can be accomplished: diversification of crops and rural products targeting local markets and community needs; the fostering of marketing produce to internal markets; supporting existing agricultural activities

through inputs, small machinery, extension services, cooperatives, etc; improving post harvest treatment infrastructure, storage facilities and means of transportation for agricultural commodities at the local level; utilizing agricultural information systems and local coordination networks.

In such conditions it is possible to develop a free trade zone in which cleaning, grading and packaging of the Palestinian products would take place. The development of a Certified Palestinian Label for measuring the toxic residue in agricultural commodities is also recommended. This would help to guarantee the safety of marketed commodities and thus reduce the current marketing risks facing the farmers. This facility would be controlled by the Palestinian Authority in cooperation with Israelis. The issue of the smooth operation of border crossings and a more effective system of implementing the existing back-to-back system can be examined in accordance with the recommendations of the "Through Traffic: A border-crossing approach to secure and prosperous trade" and "The Untapped Potential" reports compiled by the Peres Center for Peace and PalTrade.

Scenario 2: a breakthrough towards final status (two neighboring states)

This scenario suggests a political breakthrough and the resumption of negotiations towards a final status. Donor aid grows and regional cooperation progresses. The Paris protocol is revitalized and Palestinians have better marketing options. Unemployment is reduced considerably, and the GoI allows more Palestinian laborers to work in Israel. Large infrastructural projects, mainly in construction, are initiated. The Palestinians will thus return their water and land rights and enjoy their own state. Two neighboring states exist and have strong relationships based on equity and trust.

It is expected that Palestinian agriculture will shift to irrigated agriculture, greenhouse cultivations, diversification of crops targeting high value cash crops and agribusiness support, better quality and quantity of agriculture production, and adjusting the production calendar towards increasing marketing at local and regional levels. In addition, there will be a better post harvest treatment infrastructure, more storage facilities and better means of transportation both internally and across borders, and access to credit for farmers and agro-industry. Livestock production is also expected to improve, especially towards collected commercial production. Networking and coordination are expected between the Palestinian and Israeli agriculture sectors, especially to facilitate the movement of commodities on borders, where joint agriculture marketing projects are implemented.

Palestine, with its unique environmental conditions, will enjoy a year-round production calendar. This will enhance exports to Europe in winter and to Arab Gulf areas in the summer. Such conditions will increase the value of agricultural production and will increase farmers' profits, especially if the PA controls its borders and has commercial and civil airports. Palestinian produce will have the opportunity to be improved qualitatively and quantitatively and thus will be more competitive worldwide. At this stage the Palestinians would have their own plans to develop agricultural production to meet local and other market demands based on actual needs and priorities.

3. Suitable production calendar with alternative crops based on the seasonal needs of Israeli and other markets.

Demand and Supply of Fresh Produce in Israel

The main crops cultivated in Israel for domestic consumption are potatoes, tomatoes, watermelons, bananas, cucumbers, apples, onions, peppers, carrots, and grapes. Demand for these products is always high, and the current Israeli market is able to absorb the West Bank's production. Due to the current political situation in the Gaza Strip, demand is actually rising. Furthermore, September 2007 to September 2008 is a *shmita* year, meaning that there will be a high demand for Palestinian produce.

The main products produced in Israel for industrial purposes are grapefruit, wheat, grapes for the wine industry, maize, potatoes, olives - primarily for the production of olive oil-, citrus fruit, cucumbers, carrots, and peas. Most of the Palestinian products sold for industrial purposes in Israel are cucumbers (70% of the total cucumber crop), peppers, and eggplants, and there is a large margin for development of a fruit industry for pulp. Pulp is currently imported by the Israeli industry from various countries.

Israel's main thrust for export are flowers, gypsophila, wax flowers, roses, gerberas, carnations and others, and ornamental plants, green and statice flowers, as well as potatoes, peppers, grapefruit, avocados, carrots, citrus fruit, varieties of mandarins and shamuti, cherry tomatoes, cotton, herbs for spice and perfume production as well as for medicinal purposes, persimmons, sunflowers, mangoes, grapes, melons, groundnuts, dates and sweet potatoes. The potential for developing Palestinian products for export is great; cultivation of flowers and cherry tomatoes for export is a very developed field in Gaza, but it is limited by political conditions and accessibility for export, whereas in the West Bank the obstacle is high water prices and limited access to water resources and agricultural lands on the Palestinian side. Two possible solutions, requiring international investments but that seem worthwhile in the long term, are treatment of wastewater– a twofold contribution, first to the quantity of water available for agricultural purposes and secondly to the environment – and a move toward improved irrigation and planting systems to intensify production and improve water management.

The highest export value is generated by seeds, in accordance with the quantities exported in this domain. Spices, in particular parsley and coriander, and herbs for medicinal and perfume production purposes, are high-value export products of Israel. Despite their relatively light weight their capital value is high. Developing this production line is recommended, especially since it already exists in an initial stage in the Tubas region, an extremely suitable location once appropriate investments in equipment have been made. Other high export value crops are peppers, potatoes, avocados and grapefruit, and among other crops to be underscored are those whose value is considerably high versus the quantity exported, in particular cherry tomatoes, cotton fibers, dates and carrots. Together with the cultivation of herbs, the export potential of the above-mentioned crops is of the highest export potential.

Additionally, improving the production calendar toward crop diversification and planting more fruit trees will assist in increasing Palestinian food security and reduce the gap between production and consumption, as well as assist in reducing seasonal marketing crises.

Agro-commodities Demand / Supply Balance for potential Palestinian agro-commodities:

Based on the collected statistical information form the United Nation's Food and Agriculture Organization (FAO) on Israel's import/export balances for the year 2005, the strength of Israel is in exporting potatoes, various citrus fruits, peppers, avocados, dates, carrots, tomatoes, mangoes, sweet potatoes, melons, grapes, groundnuts, and strawberries. On the other hand, Israel imports more than it exports. See table 8 *(Peres-ACF, 2007)*.

In view of the similarity of climatic conditions and know-how, there is the possibility of increasing production of exportable crops. Potential exists to export Palestinian products to European countries, particularly products from the West Bank, where agricultural export is not well developed. Additionally, there is room for improvement in the Palestinian agro-production system. Commodities currently imported by Israel could be exported from the West Bank. Currently these products are: asparagus, eggplant (aubergines), peas, cauliflowers and broccoli, cabbage and other brassicas, green beans, string beans, almonds, garlic, cucumbers and gherkins, sesame seeds, anise, fennel, coriander, and sorghum. See table 9.

Table (9): The Israeli Export/Import balance for non-processed agricultural commodities, 2005 (Quantities in tons).

Crop	Import	Export	Balance
Potatoes	22922	241175	-218253
Carrots and turnips	1	18704	-18703
Toatoes	58	17688	-17630
Grapes	1575	11386	-9811
Asparagus	2	0	2
Eggplants (aubergines)	79	26	53
Peas, green	70	5	66
Cauliflowers and broccoli	106	0	105
Cabbages and other brassicas	234	71	163
Beans (inc. string b.), green	660	21	639
Almonds	671	0	671
Garlic	2703	5	2698
Cucumbers and gherkins	3191	200	2990
Sesame seed	28518	146	28372
Anise, fennel, coriander.	776	27	749
Sorghum	57626	0	57626

There is also good reason to improve the exportation of processed vegetables and fruits intended for Palestinian and Israeli industry (at present mainly cucumber). In parallel, Palestinian agro-industries should be developed to absorb agro-products, especially in agro-marketing crises periods, and to assist in diversifying the agricultural production system.

In parallel, it is recommended to examine possibilities for organic production. In recent years demand for these commodities has increased significantly, due to their impact on consumer health. Currently, there are several Palestinian initiatives working in this direction (e.g. PARC, through the Italian fund). Such types of farming don't have quotas at the European level and thus could be an interesting door for exports. On the other hand, organic agriculture implies less use of inputs (pesticides, fertilizers, etc...), and higher value, but also higher manual labour. The health benefit is another issue that should be considered, in this case for both farmers (especially women, youngsters and children), and consumers. Therefore, such types of cultivation should be encouraged and their market in the Palestinian Territory should be improved to assist in improving the health of the Palestinian people.

On the other hand, the comparison between wholesale prices in the Palestinian and Israeli markets to major crops from Palestinian farmers in the Tubas area shows stability in market prices for onion, cauliflower, corn, and potatoes during the year, with limited change during the main production season and low production period. Yet the selling prices of cucumber, tomatoes, squash, pepper, eggplant, and kidney beans are highly affected by production period and marketing balances. There are certain periods of the year where significant differences exist between Israeli and Palestinian markets. Tables 10 & 11 compare Israeli and Palestinian wholesale prices per commodity in relation to the level of commodity production by Palestinian farmers in Tubas. Israeli wholesale prices usually exceed Palestinian wholesale prices except for certain months and certain crops. The exceptions occur when Palestinian production is limited or nonexistent, with special cases for squash in February and kidney beans in March, when production is extremely high.

Generally, there is great potential to market Palestinian products in Israeli markets with sale prices of approximately 3 times Palestinian wholesale prices for cucumber during September, October and November; for tomatoes during November, March, April and May; for squash during May and June; for pepper during October, May, and June; for eggplant during October, and for kidney beans during July and August (see figure 7). The challenge is how to market these commodities to Israel through the existing checkpoints and other logistical constrains imposed on commodity movements in the Palestinian Territory.

Table (10): Monthly changes in market price of vegetables in the governorate of Tubas and Israeli Market during the agricultural year of 2006-2007 (NIS)

Crop		Average Price/ kg / month 2006				Average Price/ kg/ month 2007							
		Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Cucumber	*Israeli price	2.16	2.02	3.11	4.14	3.81	2.93	2.3	1.7	2.27	1.36	1.58	1.9
	**Palestinian price	0.5	0.5	0.8	1.7	2.3	2.7	1.7	1.3	1	0.7	3.3	4.7
Distribution of Palestinian production		(+/-)	(+)	(+)	(+/-)	(+/-)	(+/-)	(+)	(+)	(+)	(+/-)	(-)	(-)
Tomatoes	Israeli price	2.2	3.1	4.09	4.13	3.79	2.7	4.02	4.43	2.59	1.98	2.36	2.7
	Palestinian price	0	0	0.9	1.4	1.8	1.2	0.7	0.5	0.3	0.6	3.5	2.4
Distribution of Palestinian production		(+/-)	(+)	(+)	(+/-)	(-)	(+/-)	(+)	(+)	(+/-)	(-)	(+/-)	(-)
Squash	Israeli price	1.65	1.65	1.67	1.67	1.77	1.97	2.35	3	4.33	3.73	2.52	1.89
	Palestinian price		1	0.7	1.5	3	3	1.5	1	0.5	1	1.7	2
Distribution of Palestinian production		(+/-)	(+/-)	(+)	(+/-)	(+/-)	(+)	(+)	(+/-)	(-)	(-)	(-)	(-)
Pepper	Israeli price	3.95	4.9	4.28	4.11	6.07	5.97	6.2	5.2	4.7	3.99	3.44	2.96
	Palestinian price		1	1.5	2.6	3.8	3.8	2.1	1.9	1	0.9	1.3	1.3
Distribution of Palestinian production		(-)	(+/-)	(+)	(+/-)	(+/-)	(+/-)	(+)	(+)	(+)	(+/-)	(-)	(-)
Eggplant	Israeli price	2.44	2.73	2.73	2.68	4.63	2.52	2.4	2.53	2.48	1.52	1.57	1.82
	Palestinian price		0.8	1.7	1.7	3.5	3	1.7	1	1	1.5	1	1
Distribution of Palestinian production		(-)	(+/-)	(+)	(+)	(+/-)	(+/-)	(+)	(+)	(+)	(-)	(-)	(-)
Kidney Bean	Israeli price	10.38	8.45	13.92	13.03	9.54	11.71	6.67	6.31	6.22	7	8.02	7.4
	Palestinian price			4.4	4	4.5	6.9	6.9	5	3.4	2.1	1.3	1.5
Distribution of Palestinian production		(-)	(+/-)	(+)	(+)	(+/-)	(+/-)	(+)	(+)	(-)	(-)	(-)	(-)

(+)	High production	(+/-)	Medium to low production	(-)	Very low to no production

- *Whole sale prices in the Israeli markets, the Israeli Ministry of Agriculture.
- **Whole sale prices in the Tubas area, the conducted field survey.

Table (11): The cross analysis between the Israeli-Palestinian whole market selling prices and the level of production per agricultural commodity in the governorate of Tubas during the agricultural year of 2006-2007 (NIS)

Crop	Average Price/ kg / month 2006				Average Price/ kg/ month 2007							
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Cucumber	332.0 %	304.0 %	288.8 %	143.5 %	65.7 %	8.5 %	35.3 %	30.8 %	127.0 %	94.3 %	-52.1 %	-59.6 %
Tomatoes	NA	NA	354.4 %	195.0 %	110.6 %	125.0 %	474.3 %	786.0 %	763.3 %	230.0 %	-32.6 %	12.5 %
Squash	NA	65.0 %	138.6 %	11.3%	-41.0 %	-34.3 %	56.7 %	200.0 %	766.0 %	273.0 %	48.2 %	-5.5 %
Pepper	NA	390.0 %	185.3 %	58.1 %	59.7 %	57.1 %	195.2 %	173.7 %	370.0 %	343.3 %	164.6 %	127.7 %
Eggplant	NA	241.3 %	60.6 %	57.6 %	32.3 %	-16.0 %	41.2 %	153.0 %	148.0 %	1.3 %	57.0 %	82.0 %
Kidney Bean	NA	NA	216.4 %	225.8 %	112.0 %	69.7 %	-3.3 %	26.2 %	82.9 %	233.3 %	516.9 %	393.3 %

(+)	High production	(+/-)	Medium to low production	(-)	Very low to no production

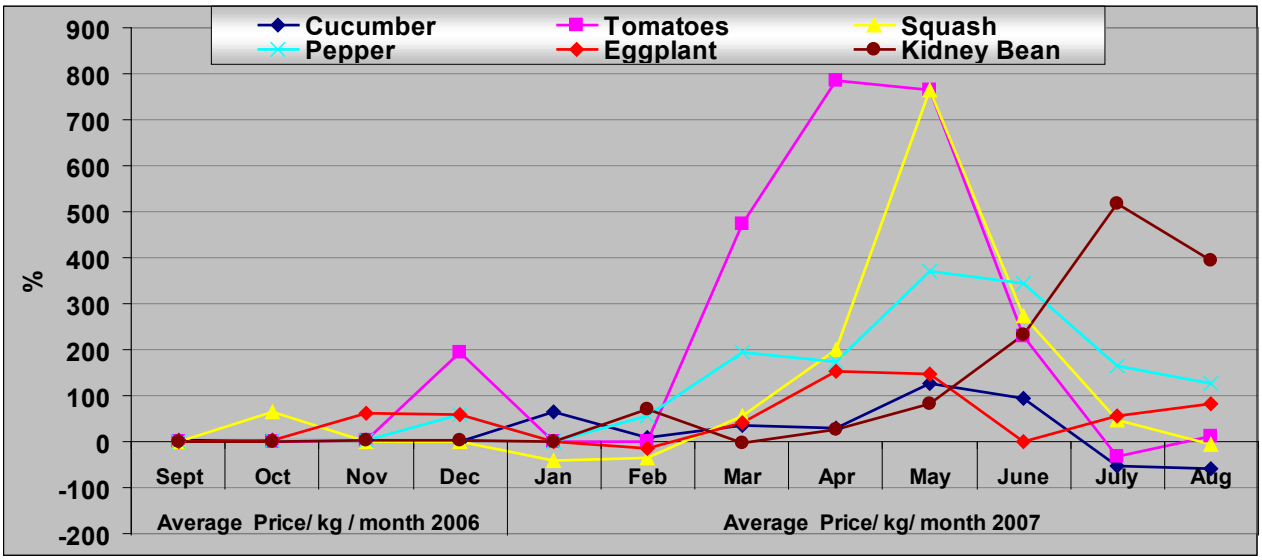


Figure (7): the comparison between the Israeli and Palestinian whole market prices in 2006/2007 production season by commodity.

4. Addresses of key marketing directions in the Palestinian Territory as well as in Israel.

The Inspection Unit for Plants and Livestock, established by the Israeli Ministry of Agriculture in 1994, is responsible for cross-border operations and for the implementation of agricultural agreements between Israel and the PA. This unit is managed by 70 staff members who have received their professional training at the Ministry of Agriculture. The unit's operations spread over three regions - southern, central and northern, and each comprises investigating and intelligence departments, with controllers on the ground. Its staff operates according to the professional instructions and procedures set by the Ministry of Health. The health-related operations consist of the implementation of sample-collection procedures, transfer of samples to the laboratories, the prohibition of marketing produce that presents a health hazard, and liaison and coordination of the crossings between Israel and the Palestinian Authority. *(Peres-ACF, 2007)*

Since the beginning of 2007, the Bissan crossing point has been open to market Palestinian agricultural products in addition to Al-Jalameh (Gilboa) in the northern part of the West Bank. This resulted in reactivating Israeli tests through a sampling process of Palestinian products according to the quotas accorded for every grower. Each microbiological test and each pesticide residue test costs NIS 80 and NIS 180, respectively. Results of the microbiological tests are received from the laboratory within 48 hours, and results of the pesticide residue tests are received within 72 hours from the time the sample is handed in. *(Peres-ACF, 2007)*

Following the receipt of the required permits confirming that the crops are unpolluted, every grower has the right to export to Israel, according to a quota calculated on the basis of the number of dunums he owns. This procedure has been established to prevent the possibility of exporting products that do not belong to that particular grower (in his name). For example, every grower can export ten 14-16 kilogram cases of cucumbers or ten 14-16 kilograms cases of tomatoes a day per dunum. A list of growers that are allowed to market their products after successfully passing the aforesaid tests, and their quotas, are on file at the crossings. Table 12 below describes the quotas for the main crops.

Table (12): Agricultural Quotas for daily movement to Israel (2007)

Crop	Per eligible Dunum Quota
Cucumbers	10 boxes daily
Tomatoes	10 boxes daily
Corn	10 boxes daily
Pepper	6 boxes daily
Zucchini	3 boxes daily
Okra	1.5 boxes daily
Grapes	2 tons during the season

Data of the Liaison Office of the Israeli Ministry of Agriculture, (Peres-ACF, 2007).

The Palestinians, on the other hand, issued a list of pesticides to be used inside the Palestinian area. There is a Palestinian law regarding toxic residues on vegetables and fruits but it is not yet ratified or enforced. Only regarding animal products do the Palestinians ask for veterinary certificates. Also, there is no data concerning the number or type of vegetables and fruits that enter the Palestinian Territory, since the data recorded by MoA represent only 10% of what reaches the PT as the Palestinian Authority hasn't full control over the borders or even the entrances of main cities. This indicates that there is a need on the Palestinian side for a better organized, managed, and monitored marketing/trade system in the PT, which can enforce laws and protect the PT form any leakage of hazardous materials. Additionally, the Israeli side should coordinate more with the Palestinian Authority to control the movement of commodities on both sides. The Israeli commodities enter the Palestinian Territory without control while the Palestinian commodities have to pass through several types of tests, including security tests, which takes a long time and exposes the commodities to spoiling, as well as increasing transportation costs and the possibility of loss due to delays at checkpoints and the back to back transport system.

If the Palestinians expect to take a share in the export process then they have to rely on international law:

- ***EUREPGAP Certificates:*** these are based on Integrated Crop Management (ICM) and cover food safety, traceability, record keeping, and internal inspection; seeds, fertilization, and water use; crop protection; producing, packaging and post-harvesting; waste and pollution management; worker safety and environmental protection. ACDI/VOCA through a sub-grant to the Palestine Trade Center (PalTrade) has provided an intensive year of training and extension activities targeting 40 strawberry and cherry-tomato farmers. In May 2006, the first group of 29 Palestinian farmers (24 Strawberry's farmers and 5 cherry tomatoes' farmers) received the first EUREPGAP certificates in the Palestinian Territory.
- ***Fair Trade:*** A trading partnership, based on dialogue, transparency, and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions and securing the rights of marginalized producers and workers. Fair Trade organizations, backed by consumers, are actively engaged in supporting producers, raising awareness and in campaigning for changes in the rules and practices of conventional international trade. Palestinians manage to export olive oil and other commodities and hand crafts mainly through Fair Trade and continue seek to export other products.
- ***Geographical Identity Crops (GI):*** A geographical indication (sometimes abbreviated to GI) is a name or sign used on certain products or which corresponds to a specific geographical location or origin (e.g. a town, region, or country). The use of a GI may act as a certification that the product possesses certain qualities, or enjoys a certain reputation, due to its geographical origin.

The Palestinian Territory, through its diverse environments and traditional agricultural system, is specialized and famous for a number of local varieties that have distinguished characteristics that lend themselves to marketing. For instance, snake cucumber (Faqouse) from Beit Sahour is famous, and the Batteri eggplant comes from the village of Batter. Rain-fed tomatoes are distinguished for their sour taste. Enhancement of producing these special crops can help in decreasing market crises of other crops and improving the Palestinian agro-marketing system.

5. Possibilities of carrying out similar studies of export potential in other parts of the West Bank.

Grapes and plums are mainly produced in the Hebron governorate, with an average of 65.9% and 57.7% of total West Bank production, and yet they face marketing crises, especially during the peak period of production. Due to closures, lack of safety tests, and a lack of quality post-harvest facilities, including packaging and related food industries, these two commodities are of low marketing value. Therefore, improving the production and marketing processes commercially is needed. For example, seedless grape varieties should be adopted (even partially) to increase opportunities for marketing grapes. Food processing activities should be improved, especially for raisins, juice, jam, molasses, and dried fruits.

Performance of a similar study in other areas such as the Hebron, Jenin, Qalqiliya and Tulkarem governorates is suggested. Both Qalqiliya and Tulkarem are suggested not only because of availability of water, but also because they suffer from the closures and the separation wall and have potential to improve agriculture, especially citrus production, as both Governorates form 63.3% of West Bank citrus production and 28.8% of vegetable production. The Jenin Governorate is considered one of the largest agricultural areas as it contributes 24.9% of olive production and 23.2% of vegetable production coming from the West Bank. Therefore, there is a need to study and investigate better mechanisms to improve the production calendar, diversify crops in order to assist in improving food security, and to plant the most marketable crops. Regarding the Jordan Valley, there is a need to perform an integrated study in this area regarding available resources (land and water), production potential, and a land/crop suitability mapping system (as salinity increases). Also, there is a need to develop production calendars and cropping patterns for the area to match its physical and climatic conditions and marketing chain.

6. Benefit from existing agro-marketing agreements.

Agriculture continues to play an important role in the economy of the Palestinian Territory. Several economic agreements were signed to restructure the agricultural trade and economic relations between the Palestinian Territory and Israel and Arab countries and European countries in order to serve as a link between the Palestinian economy and the international community.

In 1994, with the founding of the Palestinian Authority, the first agreement of the **Paris Protocol on Economic Relation between the Government of Israel and the PLO** was introduced *(Paris Protocol, 1994)*. This agreement governed the Palestinian economy and stated the basic principle of free trade with Israel. In addition, it was made up of three important pillars concerning International trade regarding the Palestinian agriculture, as follows:

- "The Palestinians will have the right to export their agricultural produce to external markets without restrictions, on the basis of certificates of origin issued by the Palestinian Authority."
- "Without prejudice to obligations arising out of existing international agreements, the two sides will refrain from importing agricultural products from third parties which may adversely affect the interests of each other's farmers."

- "Each side will take the necessary measures in the area under its jurisdiction to prevent damage which may be caused by its agriculture to the environment of the other side."

Other Palestinian trade agreements signed regarding Agricultural trade include:

- Paris Protocol 1994-5: Establishes the principle of free trade with Israel
  - o No export restrictions for Palestinian products
  - o Full and equal access to Israeli ports
  - o Exempts certain imported products from Israeli customs
- Palestinian – U.S. Free Trade Agreement
  - o Palestinian products enter U.S. duty-free and vice versa
- Palestinian – Canadian Free Trade Agreement
  - o Reduces or eliminates duties on agricultural products, within quotas
- Palestinian – European Union (EU) Interim:
  - o Exempts the customs duties and reduces the tariffs on the Palestinian agricultural products exported to the EU within quotas.
  - o Reduces or eliminates duties on agricultural imports from the EU to the Palestinian Territory.
- Palestinian – European Free Trade Agreement
  - o Reduces or eliminates tariffs on processed agricultural products
- Preferential or abolished tariffs for trading agricultural products with other Arab countries, like Jordan, Egypt and Saudi Arabia

However, implementation of the agreements was halted and the agricultural sectors have been subjected to pressures caused by the systematic policies that Israeli occupation authorities oppose on Palestinian trade.

The main obstacle facing the improvement of Palestinian agricultural trade is Israeli control over Palestinian borders and crossing points, and on the imports and exports of the Palestinian products and production inputs. Israel imposes taxes and customs, impairs product quality due to long inspection processes thereby lowering marketing prices, increasing transportation costs, and creating unfair competition between Israeli and Palestinian products due to the delay imposed at checkpoints.

Additionally the limitations and constraints created by restrictions are affecting the functionality of the marketing process. Israel is able to sell its products freely (without quality control testing) in the Palestinian Territory, while on the other hand Palestinians selling their products to the Israeli market operate under very tight, restricting procedures. Additionally, all traders are facing problems in marketing their products inside the West Bank due to checkpoints across the Palestinian Territory.

To some degree, Israeli activities have prejudiced signed agreements with the Palestinian Authority. They have violated the main fundamental concept of the Paris protocol, which is the free movement of goods to and from the Palestinian Territory, and jeopardized the agricultural marketing system and thus the Palestinian economy. The violations of the signed agreements include:

- Since 1995, Israel has had the freedom to export to the Palestinian Territory, but Palestinian products are not allowed into Israel except by special permits.
- Israeli policy and restrictions make it difficult to obtain, install, and utilize proper equipment in the Palestinian Territory, such as cold storage systems and refrigerated trucks for exported commodities. The justification given for these limitations is always security.
- Israeli post-Intifada policy requires Palestinian distributors to rent Israeli vehicles in order to reach markets in Israel. This increases the transportation costs, reducing Palestinian profit.
- Agricultural exports to Jordan have decreased sharply since 1984, due to Israeli restrictions as well as Jordanian restrictions imposed on the amounts and types of commodities allowed to cross the King Hussein Bridge into Jordan.
- Since 2000, the political crisis created in the PT, the construction of the separation barrier, and limited access to land, borders, and markets have resulted in decreased availability of Palestinian commodities for exportation. Therefore, exportation is concentrated mainly on non-perishable commodities, such as olive oil, olive wood, handy crafts, etc.
- Losses due to closures, limited access to borders, and restricted movement inside the PT have increased significantly since 2000, where many Palestinian traders have lost their signed marketing contracts. The Ministry of Agriculture stated that Palestinian losses only in export to Israel and abroad reached up to 62,668,000 USD between the beginning of 2001 and the end of 2005.

* * *

Part Six: Recommendations for improving the Palestinian Agro-marketing system

- Current socio-economic situation: There is a need to foster development of the Palestinian agricultural sector - a source of household employment, food security and income. Rural livelihoods may be supported through diversification, input provision, and infrastructure rehabilitation.
- Increase the potential of irrigated areas: encourage water harvesting, as well as re-use of grey water, and restore and improve water supply and irrigation system infrastructure.
- Combat the weak production calendar and low competitiveness of Palestinian agricultural produce: Encourage agricultural diversification and help overcome seasonality and marketing crises.
- Develop a support program for improving intensive cultivations in the PT, including a farmer insurance and compensation system with the participation of the private sector to serve farmers, especially small farmers, to overcome unexpected crises, both natural and political, and increase farmers' credibility.
- Produce geared towards greater market acceptability in external markets: It is proposed to assist in the development of post-harvest produce, including processing, infrastructure, machinery and equipment for post-harvest (cleaning, grading, and labeling) and cooled transportation systems.
- Assist farmer networking and cooperation through empowering the existing cooperatives to reduce production cost and enhance collective purchasing and marketing systems for agribusiness.
- Provide extension services for Palestinian farmers to improve protected field management according to the market needs.
- Strategies to enhance coordination and cooperation between NGOs, community organizations and governmental bodies are also suggested, in order that interventions may be implemented in an integrated manner nationally and across borders.
- Develop human resources and capacities at the MoA and related organizations, as well as grass roots in marketing practices and marketing chains.
- Establish an agro-marketing information system that monitors and assesses changes in agricultural performance and needs for development.
- Establish mechanisms for coordination between Israelis and Palestinians to activate existing marketing and exportation systems to guarantee free movement of Palestinian commodities to Israeli as well as worldwide in an integrated way that serves market stability on both sides and allows Palestinians to practice exportation and create their own marketing channels.
- Establish agricultural facilities which assist in improving the production system and post-harvesting services, and facilitates agribusiness activities and increases marketing value for Palestinian production.
- Improve the Palestinian-Israeli marketing system by developing a system that stabilizes and sustains the flow of agricultural goods from the PT and vice versa, with full cooperation between the Palestinian Authority and the Israeli side to guarantee safety and security measures.
- Improve access to Israeli, regional and other markets: build and improve farmers' practices and know-how regarding the exportation requirements.

- Memo of understanding with Israeli traders and companies should be reactivated in official and legal ways that can insure the rights of both parties.
- A continuous contact with International NGOs should be strengthened in order to market Palestinian products and an advocacy plan should be adopted through a comparative markets and faire trade markets.

The Tubas Governorate:

- The Tubas Governorate has the potential to improve agribusiness activities, as well as to create agri-business and agro-marketing agreements with Israeli trades and other countries.
- The Tubas Governorate has the potential to produce more marketable products during the off-season.
- The Tubas Governorate can supply cucumbers, tomatoes (normal and cherry), eggplant, colored pepper, and squash at present. Additionally, peas, cauliflower, broccoli, cabbage and other brassicas, green beans, string beans, almonds and other stone fruits, garlic, sesame seed, anise, fennel, coriander, other leafy herbs, and sorghum are all crops with high marketing potential.
- There is a need to focus on protected agriculture, which will consume the same amount of water but yield higher production.
- Areas where water cost is high may switch to supplementary irrigated crops or rain-fed cultivations, especially sesame and fruit trees such as olives and almonds.
- Convert to organic agriculture to produce healthy food and open additional marketing channels.

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