

The Palestinian Agricultural Sector- Cash Crops

Sector Brief 2006

Prepared by
Palestine Trade Center - PalTrade

In collaboration with
Agricultural Cooperatives

Gaza Strip



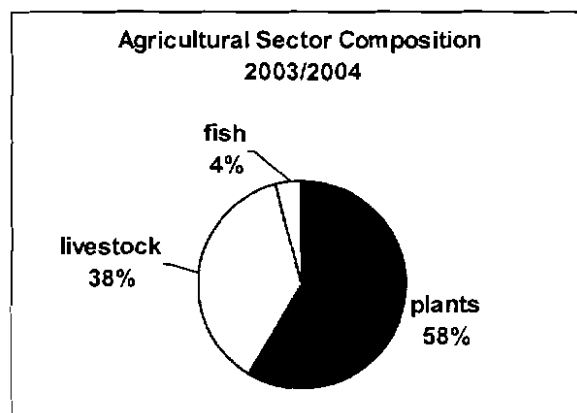
Table of Contents

	Contents	Page
1.	Domestic Market Size & Demand	2
2.	Products and services	2
3.	Sector Output & Capacity	3
4.	Sector Structure	5
5.	Sector Map	6
6.	SWOT analysis	8
7.	Conclusion and Recommendations	8

1. Domestic Market Size & Demand

The Agricultural Sector in Gaza strip is composed of three sub-sectors plants cultivation, fish, poultry and livestock with a total output of US\$206 million in the year 2003/2004, and employing a total of 30,000 workers.

Around 58% of the agricultural sector output is from plant production with a total output of US\$118 million in the year 2003/2004. The main focus of this paper will be the plants sub-sector (cash-crops), based on its size, number of employees, and export potential.



Size and Composition:

The total cultivated area in Gaza is estimated at around 124,000 dunums (of which around 30,000 dunums are utilized twice a year making a total of 154,627 dunums) and has remained more or less stable over the past decade without showing significant growth trends. The sector is composed practically entirely of micro and small enterprises. The number of enterprises estimated to be operating in the agricultural sector is 2000, employing a total of 30,000 workers. The contribution of the sector in Gaza to the total West Bank and Gaza GDP is estimated to be 8%.

Agricultural assets other than land and wells include greenhouses, irrigation systems, pumps, machinery and vehicles. Of a total of about 160,000 cultivated dunums of land, an estimated 21,000 are protected (greenhouses or tunnels), or only about 12%. On the other hand, an additional 95,000 dunums are estimated to be irrigated, which combined with the protected cultivation (which is also irrigated), represents over 70% of cultivation. This high irrigation rate is very high compared to the West Bank (in which only about 7% of cultivation is irrigated) and reflects the climate and nature of cultivation in Gaza. In addition to greenhouses and irrigation equipment such as drip systems and water tanks, the most prevalent equipment is tractors and trailers, cultivators, and ploughs. Determining the degree of mechanization in agriculture is difficult due to poor reporting, however generally speaking the sector is characterized by high manual labor and low mechanization.

2. Products and Services (Leading Cash Crops in Gaza)

Strawberries

Farmers started growing strawberries in the 1970s in Gaza Strip. Most of the Gaza strawberry farms and farmers are concentrated in the north of Gaza Strip, in the town of Beit Lahia. Today, the strawberry planted areas are estimated to be 2,224 dunums, with further potential plans for expansion. Farmers have progressively developed their cultivation, harvesting and post-harvest methods. Gazan farmers currently grow three varieties of strawberry: 328, Sweet Charlie and 329. Strawberries are grown off-season in Palestine, and can reach European markets as early as late November, bringing in high prices. Due to off-season availability and high quality in terms of taste, scent, and form, this crop has been exported very successfully to the European market.

Carnations

Farmers began cultivating carnations in the early 1990s. Today, the Palestinian carnation is one of the unique agricultural exports that Gaza Strip continues to offer. Today, the carnations planted areas are estimated to be 500 dunums, in which there are plans for expansion. Gaza mostly exports red Jouri, red Didi, red Dizio, and orange Magic. The Palestinian Carnation is an

off-season produce that is rated by European importers among the best in the world today. The primary market for Palestinian carnations is the Netherlands, where carnations are mostly re-exported to other markets in the EU.

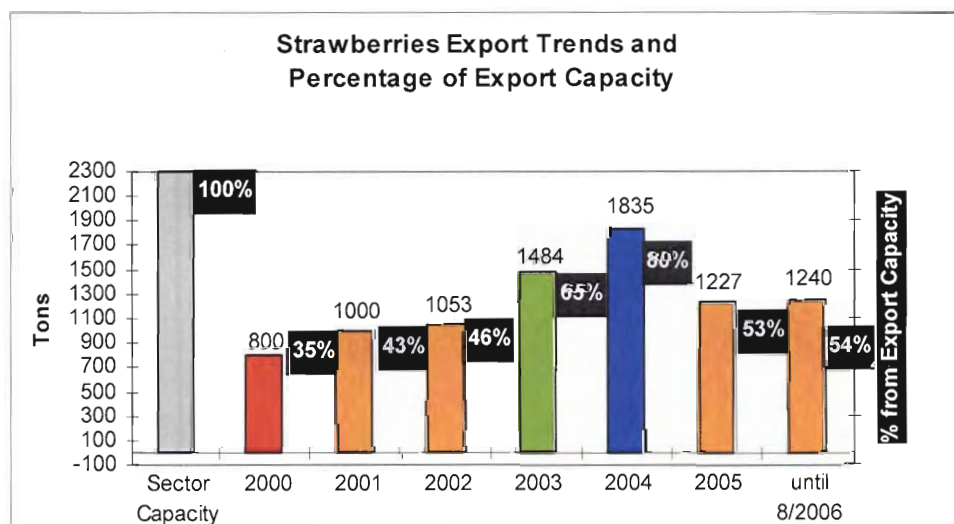
Cherry Tomato

Cherry tomato cultivation is a relatively recent development in the Gaza Strip. Cherry tomato cultivation is estimated at 335 dunums with room for expansion. Farmers grow a number of cherry tomato varieties including TC 30740, TC 495, TC 496 and 522. It is also an off-season produce in which cherry tomato lovers in the EU can enjoy it before the rest of the world with exports reaching Europe as early as late November.

3. Sector Output and Capacity

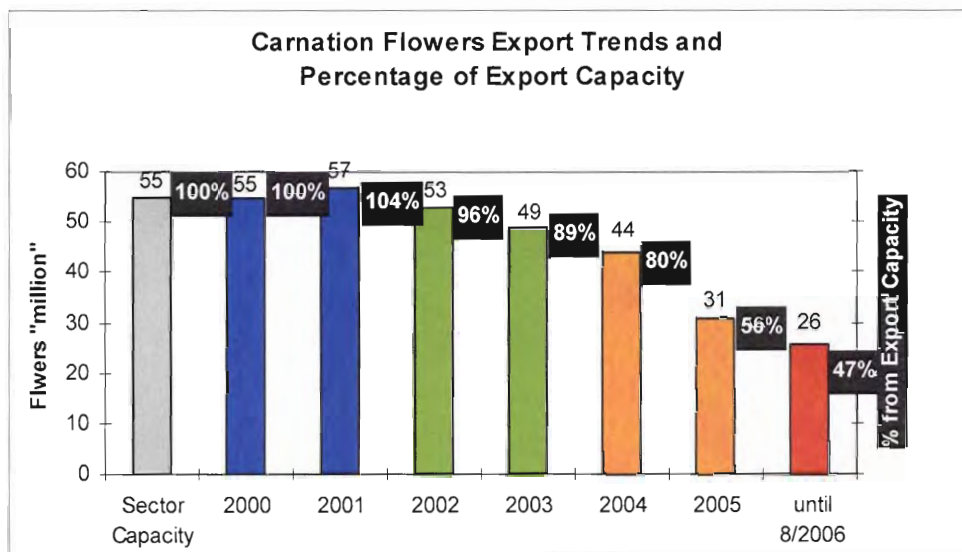
Strawberries Export Trends and Capacity (2000- 2006)

The strawberries export capacity is 2300 tons in the season (239 truckloads) [the export capacity per day is 9 truckloads (3.85 tons per truck)]. The export season for strawberries starts from November 15 until February 15 (66 working days). The export trend of strawberries was inclining through the years 2000 – 2004; this increase was related to the expanded quota offered for Palestinian strawberries in the European markets, nevertheless, export volumes were declining through the years 2005-2006 due to the imposed closure at the export season.



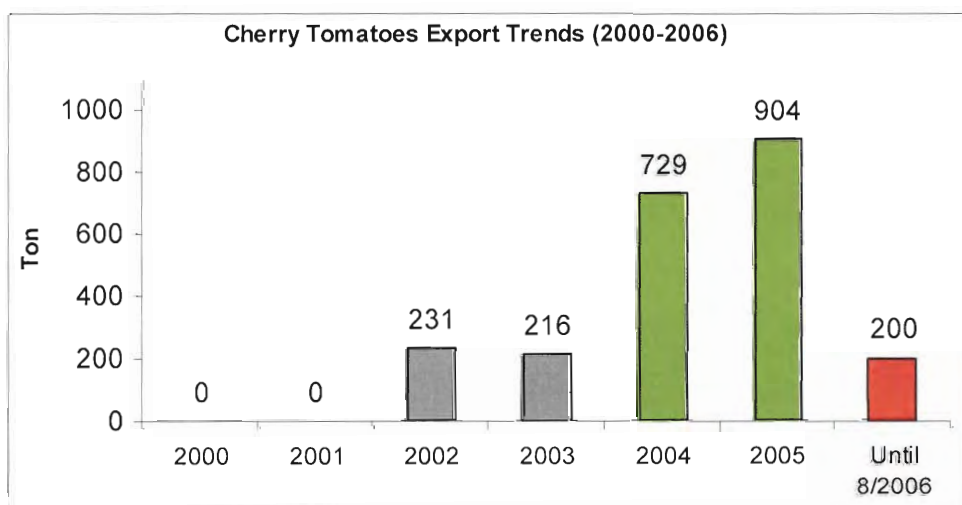
Carnation Flowers Export Trends and Capacity (2000- 2006)

The carnation flowers export capacity is 55 million flower in the season (239 truckloads) [the export capacity per day is 1.8 truckloads (230,000 flowers)]. The export season for carnation flowers starts from November 15 until May 15 (132 working days). In the years 2000 and 2001, carnation exports were of the total capacity; however from the year 2002 to the year 2004 the carnations export volumes dropped from 96% to 80% for the total export capacity, export volumes were dramatically deteriorated in the years 2005 and 2006, were the exported truckloads counted for 56% and 47% respectively of the total export capacity, and that is attributed to the continuous closure of AlMontar/Karni terminal during the high season (peak export period).



Cherry Tomatoes Export Trends and Capacity (2000- 2006)

The cherry tomatoes planting started in the year 2002 in the Gaza strip fields, and that was mainly related to the increasing demand for cherry tomatoes in the world markets. The Palestinian exports of cherry tomatoes started in the year 2002, were export volume of that season was estimated at 231 tons, hence, the export capacity was increased afterwards to reach 904 tons in the year 2004, which is positively beyond the annual expected export capacity of 714 ton (223 truckloads) [the expected export capacity per day is 2.9 truckloads (3.2 tons per truck)]. The export season for cherry tomatoes starts from November 15 until March 31 (77working day).



Impact of Current Crisis – 2006 (carnation, strawberries and cherry tomatoes)

- Planted area reached 50% (of total cultivated land is 3211)
- Unemployment reached 80% - (of total 2000 laborers in the sector)
- Export losses reached US\$ 4.5 million (in comparison with the year 2004)
- Investment transfer: 10 main farmers transferred their investments in new external locations which included plantation of 500 dunums in Egypt employing 700 Egyptian laborers which target the European market.

Note: The aforementioned losses and estimations do not include the losses related to the x-settlements fields.

Technology & Development

Since the early 1970s Palestinian farmers have incorporated the latest technological (drip irrigation, plastic tunnels, plastic houses) and production techniques (capital inputs) emerging from Israel, and have adapted it to their socio-economic environment. An indication of their success is the fact of continued growth of the sub-sector, in terms of area cultivated and greenhouses established. Adaptability of Palestinian farmers is not only limited to technology and production techniques, but also the changing and evolving markets, for example the growth in the cultivation of carnations, and most recently cherry tomatoes in the Gaza Strip. This tendency towards innovation has potential to provide greater benefits if capital and knowledge constraints are addressed. There is little institutionalized effort towards research and development in the Gaza Strip. In fact, there is only one agricultural R&D station located in the West Bank that serves the sector in both the West Bank and Gaza Strip which is not capable of meeting the sector's needs.

Investment

There is little information regarding the size and trends of private sector investment in the agricultural sector in Gaza. Output trends of certain crops, such as strawberries, show that agricultural investment is evident in crops that have strong export potential.

Donor assisted development is another source of investment that has important impact on the ground. The Ministry of Agriculture and various Palestinian NGOs have worked together with international donor agencies to develop some aspects of the agricultural infrastructure and capacity. Executed and planned projects include water harvesting (cistern and pool construction), construction of agricultural roads, and farmer training through workshops and information dissemination. Donor assistance for these activities has mainly come from the USA, Japan, Spain, Netherlands, Denmark and AusAID. Some of these projects have come about to address the unemployment crisis through labor intensive, relief oriented projects such tree planting, land reclamation, construction, and rehabilitation of agricultural roads.

Note:

Export statistics vary widely in terms of value and volume depending on the source. The export statistics used here are reported by the Ministry of Agriculture "Agriculture Trade Balance" reports. These reports value Palestinian exports much higher than internationally reported trade statistics. The reasons for this difference are the export of Palestinian products under Israeli certificates of origin and limited reporting of Palestinian exports by some countries. It is also important to note that Palestinian-Israeli trade is difficult to determine since both are part of an effective customs union.

4. Sector Structure

According to the latest collected statistics in 2005, agricultural exports from Gaza were valued at USD 29 million, accounting for 43% of Palestine's total agricultural exports destined to Israel, Europe, and the Arab states which totaled USD 68 million. Gaza also represents the primary source of exports to Europe, which represents a much more lucrative market than Israel and the Arab states in terms of size and price, comprising over 86% of all Palestinian agricultural exports to Europe.

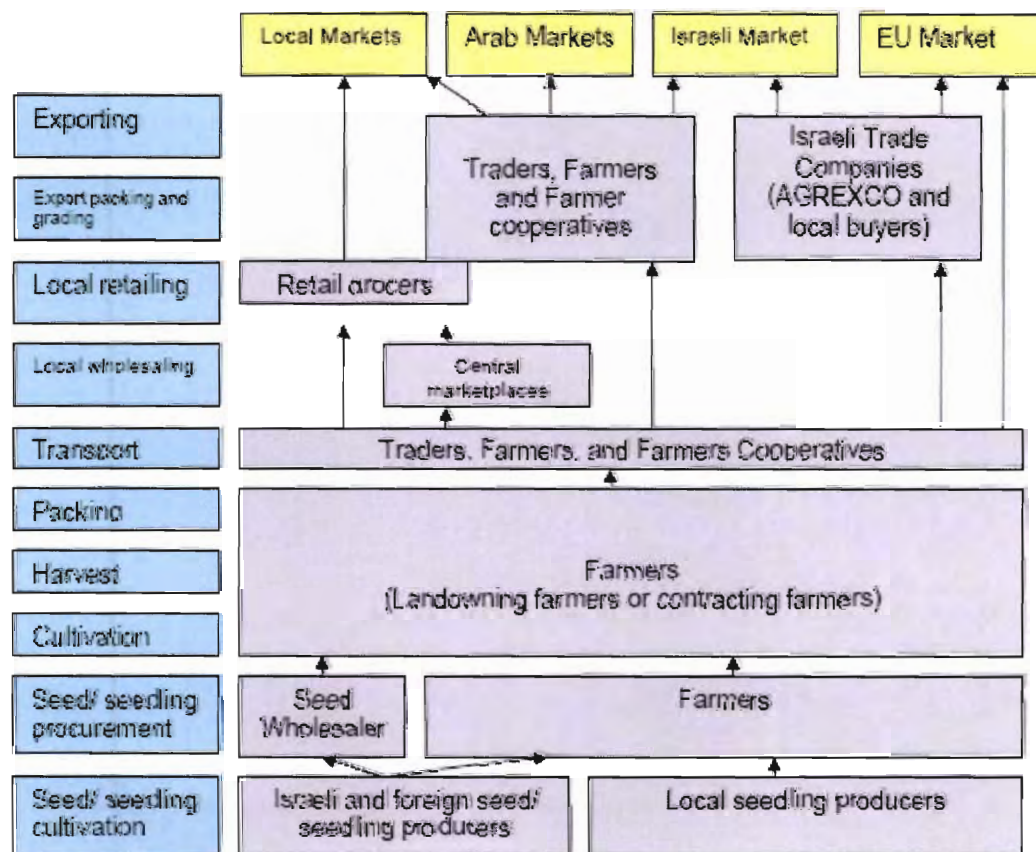
Despite political pressures such as closure of border terminals, political unrest, Israeli incursions and damage to agricultural crops, agricultural exports have remained an important and relatively steady contributor to foreign trade throughout the past few years ranging from USD 87 million in 2004 to USD 68 million in 2005. The drop in 2005 was primarily due to a significant drop in agricultural exports to Arab states, which fell nearly 45% from its 2004 level of USD 22 million, as well as a relatively less dramatic drop (but equally significant in terms of value, ~ USD 10 million in each case) of 20% in agricultural exports to Israel from its 2004 level of USD 51 million. The primary cause of the drop in exports to Arab states was exports of olive oil, which due to being an

alternate bearing crop only produce significant surplus for export every other year (2005 was a low yield year). As for Israel, the reasons for the drop in export sales are much more complex, including price pressures, variations in cultivated areas and yields, and border terminal closures.

Notably, Palestinian agricultural exports to Europe actually increased slightly during this same period to USD 15 million in 2005. Exports from the Gaza Strip to Europe dropped slightly, primarily due to the interruption in cargo flow from Gaza in the height of the strawberry and carnation seasons as a result of the closure of the Al-Montar/ Karni border terminal (mid-January through mid-February of 2005). Nonetheless, export-oriented cash crops bound for EU markets, namely strawberries, carnations, and cherry tomatoes, have the greatest potential for growth in terms of value and volume and for income generation in Gaza.

5. Sub-sector Map

The flow of product through the value chain, the participants in the sector, and their relationships vary greatly in the cash crop sector due to the variety of products, markets, and market channels. The figure below provides a representation of the main channels in this sector.



Value Chain Map for Cash Crops sector in Gaza

Key Drivers

The success of agricultural produce in these markets depends on the competitiveness of the agricultural sector in the Gaza Strip. The key competitive factors of Palestinian agricultural produce can be summarized as follows:

- **Off-season cultivation:** Due to the climate in Gaza, many of the cash crops (strawberries are an example) can be cultivated and harvested prior to the beginning of the season in the target export markets, particularly Europe. This opportunity for off-season cultivation creates an opportunity for market share and higher prices
- **Proximity to major markets:** The geographic location of Palestine means short distance to exports markets in Europe and in the Gulf States.
- **Low cost of production:** Farmers in Gaza enjoy a relatively low cost of production compared to producers in Europe and many other exporters. Furthermore, the existence of clusters and cooperatives of farmers such as the strawberry, cherry tomato, and carnation give the farmers greater selling power and provide potential savings on inputs.
- **International Standards:** Production in compliance with international standards increases price and market access. Strawberry farmers in Gaza have already been certified to Eurep Gap standards.
- **Support organizations:** A number of NGOs and other institutions operate in the agricultural sector and have programs committed to improving the livelihoods of farmers and the productivity of the agricultural sector.
- **New production methods:** Palestinian farmers have incorporated the latest technological (drip irrigation, plastic tunnels, plastic houses) and production techniques, particularly through exposure to technology in Israel.
- **Free-Trade Agreements:** Palestinian farmers enjoy tariff-free access (although subject to quota) with key importing markets including the EU and Arab states. .

Influencers

There are various institutions, organizations, committees and cooperatives working in the agricultural sector.

1- A key stakeholder is the Ministry of Agriculture (MOA) that is responsible for technical assistance and extension, planning, supervision, policy and law making, and marketing services. MOA does not directly intervene in the production and marketing process.

2- The cooperatives in Gaza play an active role in providing production requirements and in exporting the farmers' produce. The relation between the farmers and the cooperatives is variable depending on the benefits offered by the cooperatives to the farmers. Many farmers end up being members in more than one cooperative as to take advantage of their services. Many of the cooperatives are profit-seeking organizations which conflicts with the essence of cooperative mandate and mission.

Agricultural Cooperatives in the Gaza Strip, below is the main agricultural Cooperative in the Gaza Strip:

3- The Palestinian NGOs support farmers through the implementation of small projects like setting-up irrigation networks, constructing rainwater reservoirs, and supplying farmers with nurseries. On the other hand, NGOs indirectly help in the production and marketing process, but they fall short of coordinating among each other and the MOA, which sometimes leads to duplication and less service utilization.

6. SWOT Analysis

Strengths of the cash crops sector are mainly adaptability and ability to incorporate new production methods and products, off-season cultivation, proximity to major markets, indigenous knowledge and varieties, cooperative cultivation, and NGO presence and commitment to improve the livelihood of farmers and the productivity of the agricultural sector.

Weaknesses of the sector are; poor quality consciousness, lack of post-harvest processing activities, lack of developed marketing and distribution channels, lack of business management and marketing skills, lack of R&D, lack of testing and laboratory services, and poor access to financial services.

Opportunities for the agricultural sector opportunities are; favorable trade conditions in key export markets, strong markets, Palestinian produce brand, traditional dry-farming in Palestine is for the most part organic and can be developed into organic farming for the lucrative organic, new crops and varieties of existing crops can be developed for exports, and alternative marketing channels.

Threats, continued political and economic instability, continued Israeli restrictions on movement, regional competition and lack of compliance to technical requirements in export markets.

7. Conclusion and Recommendations

Based on the conducted SWOT analysis, and in response to revealed results and constraints, and after consultation with the sector stakeholders, the following development priorities for the Cash Crops sector in Palestine were identified:

High yield cultivation methods: Increasing yields of export-oriented cash crops such as strawberries, cut flowers, and cherry tomatoes by investing in greenhouse production, introducing higher yielding varieties, and introducing improved technology and cultivation methods.

New crops: New and appropriate crops could be introduced. Traditional varieties can be considered as new crops (i.e. newly re-introduced). There are a number of traditional Palestinian varieties of cash crops, namely the dry-farming tomato, whose cultivation has ceased, mainly due to its low productivity rate. However, this tomato is in high demand in the local market for its unique taste. Re-introducing this variety with proper marketing strategy (i.e. promotion, labeling and brand name) in a niche market is a viable opportunity. Another under-cultivated product is herbs. Other crops such as the production of seeds and seedlings for export or as inputs for local agriculture also have potential.

Organic produce: The organic produce market is a growing and a high priced market in Europe, and potentially in the local market. Given that traditional Palestinian agriculture production was more or less an organic method of production. The option/opportunity of organic farming is not alien, nor far-fetched, and it would be merit consideration. This can be incorporated with re-introduction of traditional varieties of cash crops. Although these are low yield crops, they can be grown in the dry farming region, do not need irrigation. The output will be much less than the capital intensive farming methods, but the qualitative difference in terms of being organic as well as the distinct and desired taste will allow it to fetch a higher price.

Post harvest handling (processing): Grading and packing is a major part of the production process. At present this operation is not performed as efficiently as is possible. Post harvest processing can improve the marketing of Palestinian produce not only in export markets, but also in the regional and local markets by providing differing grades of produce at varying prices for differing consumers within a market. Lower quality produce may be marketed to food processing sub-sectors of the agribusiness sector. However, this would depend on the variety of the crop being cultivated, and would fall under production opportunities and expand the options of the farmer.

Branding: Another opportunity is brand names. This will compel the producer to maintain quality by improving post harvest processes and at the same time builds trust and confidence in the consumer towards the product. It not only facilitates the marketing of the product it also increases the value of the product. Brand names impart trust and confidence in the product. This enhances market share, and imparts stability to the market share.

Merchandising, distribution, and export marketing services: The vast majority of Palestinian cash crop exports are exported through the Israeli export marketing firm, Agrexco. No Palestinian produce export marketing company exists today despite the clear need for such a service. A few attempts, with the aid of EU pressure, were made to export directly to the European markets. However, these independent attempts largely failed, primarily due to difficulties of moving goods through Israeli controlled border terminals (namely Al-Montar/ Karni in Gaza). The only feasible exporting channel is mainly through the Israeli marketing firm AGREXCO. This channel is effective in terms of exporting, but does not maximize revenues from exports. Alternatives for developing greater options for export marketing channels include:

Developing collaboration and consolidation among agricultural cooperatives, This would give cooperatives greater bargaining power with AGREXCO and furthermore develop their own capacity for direct export.

Establish a Palestinian export marketing company, This option would be ideal if such a company were able to gain the same type of priority status that AGREXCO enjoys at the terminal points into Israel.

Establish a joint venture (Palestinian-Israeli) marketing company, which would have greater probability of speedy processing of exports through terminals and act as a facilitator of collection and transport of goods within the Palestinian Territory.

Identification of alternative Israeli exporters, while this would still concentrate export power in Israeli firms, yet it would provide some competition to AGREXCO and potentially improve the negotiating position of farmers.

Packaging and labeling services: Most Palestinian manufacturers purchase packaging materials from Israeli manufacturers. A few packaging materials establishments operate in Palestine but have limited package and label design capacity. Mandatory requirements in export markets related to packaging and labeling have become increasingly complex, and there are no local services available to provide exporters with information or design services for export products. Most agricultural produce is packaged in simple plastic or wooden crates not appropriate for protecting agricultural produce against damage and deterioration during transport.

Testing and certification services: Testing for pesticide and other contaminant residues, critical to ensure compliance with Maximum Residue Limits (MRLs) in export markets, is practically nonexistent in the Palestinian territories but there is available capacity for such testing at the Bir Zeit University Laboratories. PARC has partnered with the Egyptian Center for Organic Agriculture (ECO) where inspectors from PARC were trained in organic inspection for certification through the ECO. ATDP has also initiated certification in Eurep Gap. The first

farmers to be certified are strawberry farmers in the Gaza Strip who have met the traceability and pesticide control elements of Eurep Gap.

Transportation and warehousing services: Transportation services in Palestine are impeded by the closures within and between the West Bank and Gaza. Delays and restrictions on movement have increased transaction costs and have a serious impact on the competitiveness of Palestinian producers, even in the local market. Nonetheless, access to transportation services is available, including access to both Palestinian and Israeli vehicles, but at a price. Warehousing services are to some extent limited, particularly for specialized needs such as cold storage and transport. Cold storage is available in limited capacity in central marketplaces for long-life produce such as potatoes. Cold transport is not available in the agricultural sector. The lack of infrastructure at border terminals with Jordan and Egypt, such as warehousing and loading/unloading facilities, creates further impediments to trade.

Equipment and parts supply and maintenance: The introduction of new equipment in agriculture is relatively slow due to the high costs of such equipment and machinery in comparison with the sometimes low return from exports. Agricultural equipment and parts, such as greenhouse frames and plastic, irrigation pumps and pipes, harvesting equipment is mostly imported from or through Israel. Maintenance and spare parts supply services for this equipment is also limited. Commercial services to help source, procure, install, and maintain such equipment could have potential, particularly in light of improved investment prospects overall where capital investments would be expected to increase.

Value-added Processing: The viability of processing factories for agricultural produce depends on the cost and quantities available. While this needs to be investigated fully, potential processing facilities include pickling for vegetables, individual quick freezing (IQF) for fruits, and processed tomato plants.

Financial services: The lack of financial services to the agricultural sector has already been highlighted as a weakness. On the other hand, in an improved investment environment, this deficiency represents an opportunity for agricultural lending and insurance firms to provide this service in a market where there is practically no competition. The interest of development agencies in this area could provide financial service providers with an opportunity to organize guarantees or other forms of support for their services.