

The Food Industry Sector in the West Bank

Study summary

1. Introduction

The food processing industry is considered one of the oldest industries in Palestine. In its early days, this industry was limited to the production of few processed foods and sweets. Currently, this industry is a major contributor to the Palestinian economy and its gross domestic product. In addition, this sector has created job opportunities in the local market, and has been employing 11,400 employees as of the year 2012.¹ This sector's importance also lies in its provision of needed processed foods essential for food security in Palestine, through producing 120 different food commodities.

Developing the food processing industry can have spillover effects on all associated sectors and industries, and in particular on the agricultural sector that acts as the main supplier of inputs. It also plays a key role in creating an added value to agro products.

According to the Palestinian Food Industries Union, following are the most important food processing industries in the West Bank, related to agro products targeted in the project:

- **Canned vegetables and fruits:** In Palestine, there are 18 factories specialized in the production of canned vegetables and fruits, currently employing 545 workers. Investment in this industry is estimated at \$30 million, and these products constitute 20% of total market share. In addition, it contributes to \$21 million of the total value of exports. But, this industry still lacks the needed packaging techniques and storehouses, whose provision would drive higher investments.²
- **Oils and vegetable fats:** There are 13 factories specialized in the production of oils and vegetable fats, currently employing more than 295 workers. Investment in this industry is estimated at \$70 million, and these products constitute 20% of total market share. Within this industry, 3 factories have received the ISO 22000 certification, while 10 olive mills have received the Hazard Analysis & Critical Control Points (HACCP) certification. In addition, this industry contributes to more than \$31 million of the value of exports. The olive oil industry still needs to achieve higher international market penetration.³
- **Wheat flour and grains:** There are 9 factories working within this industry, employing more than 236 workers. Investment in this industry is estimated at \$45 million, while these products constitute to 30% of market share.⁴
- **Pasta and vermicelli:** There are 5 factories working in the production of pasta and vermicelli, employing more than 89 workers. Investment in this industry is estimated at \$34 million.⁵

¹ The Palestinian Central Bureau of Statistics (2013). Establishment Census, 2012.

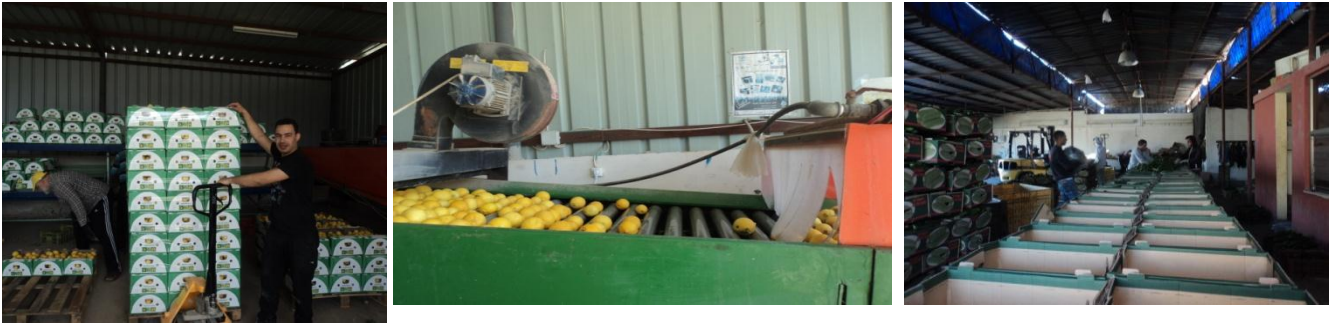
² Palestinian Food Industries Union (2014).

³ Palestinian Food Industries Union (2014).

⁴ Palestinian Food Industries Union (2014).

2. Objectives

The Applied Research Institute – Jerusalem (ARIJ) has conducted several interviews with food processors which depend in their production process on agricultural crops targeted under the activities of the “Food Production-Consumption Assessment to Improve Sustainable Agriculture and Food Security in the West Bank – Palestine”; a project that is implemented by ARIJ in partnership with the Palestinian Ministry of Agriculture and the Palestinian Ministry of National Authority, and funded by the International Development Research Centre (IDRC). Accordingly, 30 interviews have been conducted with a sample representing 4% of food processing factories and cooperatives in the West Bank governorates. These interviews aimed at analyzing the sources of inputs, production mechanisms, and the main actors in the supply chain of processed foods, in addition to understanding other issues such as pricing, profitability, packaging and grading, and the sector’s major challenges.



3. Input Sources

Agricultural products are the main inputs for the food processing industry. Sources of agro products vary among factories depending on the size of production and the number of production lines. For example, survey results found that 70% of wheat used for the production of food commodities is imported from foreign markets (specifically Russia and the United States of America). This also reflects low rates of self-sufficiency in regards to wheat production and consumption in the local Palestinian market, estimated at only 11%. On the other hand, olive and olive oil used in food processing come from local sources. This also applies to cucumbers, dates, tomatoes, eggplants, almonds and grapes. Furthermore, almost 50%-70% of the supply of potatoes and citrus fruits used in food processing is imported from the Israeli market.

Other targeted agro products like guava, paprika, squash, green beans and onions are considered secondary inputs in the food processing industry, and are therefore purchased in very small quantities.

4. Processed Agro Products

Data collected through interviews indicate that more than 30 food and industrial commodities use targeted agro crops as their inputs. It also reflects that most food

⁵ Palestinian Food Industries Union (2014).

commodities in the West Bank use wheat and grapes specifically. Wheat is a main ingredient in the production of: flour, maftoul, freekeh, bran, and semolina, while grapes are used for the production of: *grape molasses*, *grape Jam*, *malbann*, *raisins*, and *grape vinegar*. Furthermore, results indicate that around 1,763 tons of wheat flour is produced in the West Bank on a monthly basis. (Table 1)

Agro Product	Processed Food Commodity	Production (ton/month)	Production Season
Wheat	Flour	763,1	March
	Semolina	20	June, August
	Bran	280	June, August
	Freekeh	12	April, May, June, July
	Maftoul	12	March, April, May
Eggplants	<i>Spiced Eggplant</i>	0.4	June, July, August, September
	<i>Pickled Eggplant</i>	22.4	September
	<i>Makdous Eggplant</i>	0.3	Variable
Grapes	<i>Grape molasses</i>	1.95	September, October, November
	<i>Malbann</i>	0.74	July, August, September
	<i>Grape Jam</i>	0.28	July, August, September
	<i>Grape Vinegar</i>	0.04	July, August, September
	<i>Raisins</i>	0.33	July, August, September
Olives	Olive oil	127.7	May, June
	Makdous Olive	48.18	November
	Olive Honey Spread	0.5	November
	olive oil Soap	83	Variable
Dates	Date	49	October, November, the month of Ramadan
	Ajwa dates	1.25	September, October
	Dates stuffed	0.05	September, October
Almonds	Peeled almonds	13.73	August, September, October
	Almond oil	0.84	Variable
	Hlawoh almonds with Sesame	0.15	January
	Candied almonds	0.15	January
Cucumbers	Pickle	202	May
Citrus Fruits	Marmalade	0.34	May – November

	Lemonade	0.05	June – November
Tomatoes	Dried Tomatoes	0.63	Variable
	Turkish salad	0.42	June, July, August, September
	Vegetable salad	0.42	June, July, August, September

Table (1): Processed Food Commodities, Production Quantity per Month and Seasonality

5. Targeted Markets

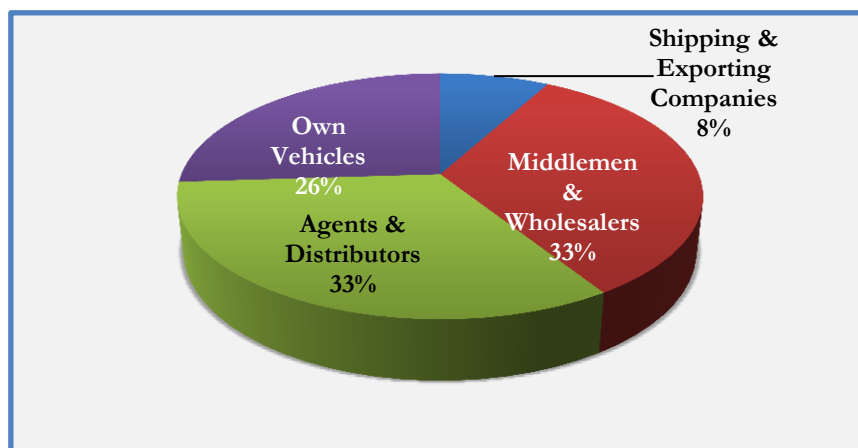
Data collected during interviews shows that 78% of food producers market their production in the Palestinian local market, 52% export their products to Arab and international markets, while the Israeli market is the least targeted. Furthermore, 36% of producers target the northern governorates of the West Bank, 27% target the middle governorates, while 37% target southern governorates. This variation in distribution among governorates depends on the diet norms and trends prevalent in each governorate. (Table 2)

Agro Product	Processed Food Commodity	Average Price in the Local Market (NIS/kg)	Average Price in the International Market (NIS/kg)
Wheat	Flour	2.2 – 2.5	No exports
	Semolina	8	No exports
	Bran	0.7	No exports
	Freekeh	12 – 15	20
	Maftoul	15	20
Eggplants	<i>Spiced Eggplant</i>	3	No exports
	<i>Pickled Eggplant</i>	3.5	3.5
	<i>Makdous Eggplant</i>	30	30
Grapes	<i>Grape molasses</i>	20 – 30	20 – 30
	<i>Almbann</i>	20 – 25	25 – 30
	<i>Grape Jam</i>	25	25 – 30
	<i>Grape Vinegar</i>	8 NIS/litre	No exports
	<i>Raisins</i>	17 – 20	17 – 20
Olives	Olive oil	30	33
	Makdous Olive	5.3	72.7
	Olive Honey Spread	No local sales	55.6
	olive oil Soap	3 NIS/piece	5 NIS/piece
Dates	Date	15 – 40	15 – 60
	Ajwa dates	20	No exports
	Dates stuffed	50	No exports

Almonds	Peeled almonds	22	57
	Almond oil	NA	218
	Hlawoh almonds with Sesame	55.6	No exports
	Candied almonds	20	No exports
Agro Product	Processed Food Commodity	Average Price in the Local Market (NIS/kg)	Average Price in the International Market (NIS/kg)
Cucumbers	Pickle	4.3	10
Citrus Fruits	Marmalade	20	No exports
	Lemonade	15.4 NIS/litre	No exports
Tomatoes	Dried Tomatoes	66.7	86.7
	Turkish salad	3	No exports
	Vegetable salad	3	No exports

Table (2): Distribution of Processed Food Commodities by Market

Furthermore, the channels most frequently used for the delivery of processed food commodities to markets were agents & distributors (33%) or middlemen & wholesalers (33%). (Graph 1)



Graph (1): Delivery Channels of Processed Food Commodities to Markets

6. Prices of Processed Food Commodities

Commodity prices vary according to cost of production, and targeted markets. (Table 3)

Agro Product	Processed Food Commodity	Average Price in the Local Market (NIS/kg)	Average Price in the International Market (NIS/kg)
Wheat	Flour	2.2 – 2.5	No exports

	Semolina	8	No exports
	Bran	0.7	No exports
	Freekeh	12 – 15	20
	Maftoul	15	20
Agro Product	Processed Food Commodity	Average Price (NIS/kg)	Average Price (NIS/kg)
Eggplants	<i>Spiced Eggplant</i>	3	No exports
	<i>Pickled Eggplant</i>	3.5	3.5
	<i>Makdous Eggplant</i>	30	30
Grapes	<i>Grape molasses</i>	20 – 30	20 – 30
	<i>Malbann</i>	20 – 25	25 – 30
	<i>Grape Jam</i>	25	25 – 30
	<i>Grape Vinegar</i>	8 NIS/litre	No exports
	<i>Raisins</i>	17 – 20	17 – 20
Olives	Olive oil	30	33
	Makdous Olive	5.3	72.7
	Olive Honey Spread	No local sales	55.6
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Dates	Date	15 – 40	15 – 60
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Almonds	Peeled almonds	22	57
	Almond oil		218
	Hlawoh almonds with Sesame	55.6	No exports
	Candied almonds	20	No exports
Cucumbers	Pickle	4.3	10
Citrus Fruits	Marmalade	20	No exports

	Lemonade	15.4 NIS/litre	No exports
Tomatoes	Dried Tomatoes	66.7	86.7
	Turkish salad	3	No exports
	Vegetable salad	3	No exports

Table (3): Processed Food Commodity Prices in Local and International Market

7. Profitability

Profit margin is the difference between revenues collected through sales and the cost of production. This margin varies among factories for many reasons that include the availability of agro products, and the market size. Research findings estimate that the average profit margin for processed food commodities is 12% in local markets, and 20% in international markets.

8. Packaging

Packaging techniques are different from one commodity to another, based on the commodity's size and form. But, findings indicate that plastic packages are the most prevalent among food processors given their affordability and availability in different sizes and designs. (Table 4)

Agro Product	Processed Food Commodity	Package Size	Package Type
Wheat	Flour	20kg, 50kg	Plastic bag
	Semolina	50kg	Plastic bag
	Bran	50kg	Plastic bag
	Freekeh	250g, 25kg	Deflated plastic bag
	Maftoul	250g, 25kg	Deflated plastic bag
Eggplants	<i>Spiced Eggplant</i>	180g, 450g, 850g	Plastic can
	<i>Pickled Eggplant</i>	600g, 3kg, 9kg	Metal can
	<i>Makdous Eggplant</i>	600g	Glass can
Grapes	<i>Grape molasses</i>	1kh, 3kg, 5kg	Plastic or glass can
	<i>Malbann</i>	500g	Plastic can
	<i>Grape Jam</i>	1kg	Plastic can
	<i>Grape Vinegar</i>	1litre	Plastic can

	<i>Raisins</i>	1kg	Plastic bag
Olives	Olive oil	250ml, 500ml, 750ml, 1000ml	Glass can
		1litre, 3litre, 5litre, 10litre, 16litre, 50litre, 200litre	Metal can
		1litre, 2litre, 3litre, 16litre, 1000litre	Plastic can
Olives	Makdous Olive	600g, 3kg, 9kg	Metal or plastic can
	Olive Honey Spread	180g, 320g	Glass can
	olive oil Soap	200g	Cardboard box
Dates	Date	250g, 500g, 1kg, 2kg, 5kg	Cardboard box
	Ajwa dates	1kg	Deflated plastic bag
	Dates stuffed	1kg	Plastic can
Almonds	Peeled almonds	1kg, 20kg, 30kg	Deflated plastic bag or plastic bag
	Almond oil	250litre	Metal can
	Hlawoh almonds with Sesame	45g	ورق بروبليم
	Candied almonds	1kg	Cardboard box
Cucumbers	Pickle	600g, 3kg, 9kg	Metal can
Citrus Fruits	Marmalade	1kg	Glass can
	Lemonade	1.3litre	Glass can
Tomatoes	Dried Tomatoes	150g, 180g	Glass can
	Turkish salad	180g, 450g, 850g	Plastic can
	Vegetable salad	180g, 450g, 850g	Plastic can

Table (4): Size and Type of Package for Processed Food Commodities

9. Challenges facing the Food Production Industry

Interviews conducted with food processors and factory owners have shown the following challenges:

- High cost of inputs of agro products, due to fluctuations in their available quantities and lack of coordination between farmers on cultivation and collection dates, in addition to their seasonality.
- Unfair competition between local and Israeli products, given that these products are allowed into the Palestinian local market, and the absence of protection policies for Palestinian infant industries.
- Barriers to entry into new markets due to the high costs of exporting, and the Israeli restrictions on crossings.
- The limited local market size and its inability to absorb all local production, especially during the ongoing financial and economic crisis. As a result, many factories have been shutdown.
- High cost of transportation, delivery and storage.

10. Recommendations

- Adopt new technologies in production, and respond to local and international market needs.
- Provide producers and exporters with data from market research.
- Enhance infrastructure and regulations.
- Follow Palestinian and international quality standards in the production of processed food commodities.
- Coordinate activities and reinforce monitoring in central wholesale markets.
- Provide storage, cooling, delivery, packaging and grading services.
- Create an information system on marketing services, and market needs.
- Conduct feasibility studies on the exporting possibilities of processed food commodities.
- Encourage and support agriculture-related exports.

