

PP3 - RWDS

DESK REVIEW



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Desk Review – Territory Mapping of Agro-Food Production in O.P.

Summary

Within the activities of the project, Sustainable Networks for Agro-food Innovation Leading in the Mediterranean – MedSNAIL. The overall objective of the desk review is to highlight Territorial Mapping, in agreement with the actors and those in charge of rural development at local level, the existence of an agricultural and food heritage, and to use it as an incentive for local development strategies. In order to initiate this virtuous process, it is necessary to develop common tools, easy to use. In a concise territorial characterization which emphasizes, together with the territorial actors, each distinct aspect of the local food farming system, from production to consumption, and the economic and social context of reference. In addition, it is to define the most specific area of intervention that, within the area in which, appears characterized by the presence of products, producers, and communities with traits that match the philosophy of the project, and to introduce data from a context at national level.

This desk review have been prepared on base on characterization tools as meeting with members and local communities in charge of Agro Food production and processing, as well National Agricultural Strategy, local governmental offices, published articles and information, internet surfing, and other projects surveys and analysis. Moreover, it has been allocated for more than two month of readings, information collecting, and discussions to come up with direct messages.

Key messages:

- Agriculture is not only essential component of the Palestinian national, cultural, economic and social fabric but it embodies their perseverance, confrontation and adherence to their land under the threat of confiscation and settlement activities. It also provides a refuge and a source of income and food supplies at times of crises.
- Palestinian also has the chance to compete in local and external markets mainly in the field of cash crop fulfilling good agricultural practices (Organic and Global Gap products) specially; herbs, strawberry, carnation...etc., which open new hope and horizon for the young generations.
- The strategic plan of the Cooperative Sector in Palestine (2011-2013) prepared by the Ministry of Labour focus on the following strategic goals: To provide an institutional environment that enables the development and growth of the cooperative movement as one of the main economic sectors. Increase the total value of current investment in the cooperative societies · Improve the general performance of the current cooperative societies in



accordance with the best practices in cooperative work. Encourage new social initiative for establishing cooperative societies that are able to develop in themselves or develop already established societies. Therefore, Cooperative and community base organizations (CBOs) represent the only applicable solution to achieve rural areas development and have to play their developmental role within the Palestinian context.

When we conducted the desk review we found a deep linkage between a project with the Millennium Development Goals (MDGs), these are

- MDG 1: Eradicate extreme poverty and hunger.
- MDG 3: promote gender equality and empower women.
- MDG 7: Ensuring environmental sustainability.
- MDG 8: Develop a global partnership for development.

To be able to help and support the agricultural sector and the rural community effectively, RWDS moved towards the decentralization of its activities, as it believed that farmers', youth and women community based organization (CBOs) could implement some small agricultural and developmental projects, train the farmers, women and youth and promote all the previously mentioned activities. RWDS believes that by developing the capacities within these CBO's would have tremendous positive implications on the sustainability of the whole agricultural sector, as these CBO's are actually in the field and respond directly to the immediate priorities and needs of the sector. This urges the need to build the expertise of these CBOs to play its role in development.

This desk review has been recognised thanks to the joint collaboration of: RWDS Team represented by Mrs. Hannen Zeidan, Mrs. Rulla Sarras, and Mrs. Soheir Al-Jaloudi. Slow Food Palestine represented by Mr. Saad Al-Dagher and with support of Ms. Nazarena Lanza. Jenin and Tubas Governorate Agricultural Directorates represented by Mr. Hakam Salah and Mr. Basem Hamad, Mr. Sulaiman Abu Amer, Mr. Amer Labadeh Mrs. Zafaf Abu Shehadeh Mr. Maher Salahat, and Mr. Mahdi Bashar.

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1. Background

a. Introduction.

i. The National Agricultural Sector Strategy: “Resilience and Sustainable Development” (2017- 2022)

The Palestinian government is establishing an integrated and unified planning and budgeting management system based on well-deliberated policies that provide clear rules and steps for decision-making, as well as a national reference for civil society organizations, the private sector and international partners. The National Development Plan (2017-2022), in which consists of two key components. The first one is the national policy agenda, which represents a high-level policy document that sets out the national vision, priorities and policies. The second component is the 18 national sector strategies, along with three cross-sector strategies. Twenty ministers and directors of governmental institutions, in addition to the Minister of Agriculture, lead teams sector strategies of agriculture, culture, heritage, education, employment, energy, health, housing, communication and information technologies, international relations, justice, local government, national economy, public finance management, security, social protection, tourism and antiquities, transport and communications, water and wastewater. The cross-sectoral strategies include gender equality, environment and youth. The Manual for the Development of Sectoral Strategies (2017-2022), which was prepared by the Ministry of Finance and Planning has identified a set of expectations that are deemed as the objectives of the sectoral planning process.¹

Based on the directives of the Minister of Agriculture and his deputy, as well as based on the preparation of the strategy manual and findings of the strategic review report, a series of consultations within the ministry and outside were launched to determine the sectoral priorities and the most important policy interventions. That the Ministry of Agriculture, other relevant government, non-governmental and private institutions and agencies will be implementing.²

ii. - RWDS Strategic Planning 2019 – 2022 in enhancing economic justice for women and girls in Rural Palestine.

RWDS has been characterized by its rural feminist identity, as well as by the presence of a women's feminist base in the form of women's clubs the northern and southern Palestinian governorates. In addition to representing the issues and rights of Palestinian women in general, and rural women's and girls in particular, voicing their human rights, developmental needs and liberation at various national, regional and international levels.

¹ MoA, National Agriculture Sector Strategy “Resilience and Sustainable Development”, Nov 2016.

² MoA, National Agriculture Sector Strategy “Resilience and Sustainable Development”, Nov 2016.



In this context, RWDS has worked on the preparation and development of its strategic plan for the years 2019-2023, stemming from the reality of women and girls in the Palestinian society, within the vision of; "Equality between women and men, boys and girls, in rural Palestine, in accordance with the Palestinian Declaration of Independence, as well as international conventions and standards," and within the mission of; "To grow a movement led by Palestinian women that is capable of advocating for and advancing the enjoyment of women's social, economic and political rights, especially in rural areas." Including RWDS governing values consisting of "justice, alignment to the most marginalized and disadvantaged, equality, participation, transparency and accountability, volunteerism, credibility, consistency and non-bargaining when it comes to women and girls rights."

RWDS developed the following three goals³ to achieve its vision:

Goal No. (1): Enhancing justice and equality between men and women and reduce violence against women and girls in the Palestinian Society.

Goal No. (2): Enhancing economic justice for women and girls in Rural Palestine.

Goal No. (3): Improving RWDS's performance and efficiency and increasing its representation and influence at the national, regional and international levels.

Based on the enhancing economic justice for women and girls in Rural Palestine goal, the expected outcome is economic environment supportive of greater participation for women and girls which leads to effective participation of women in economic activity, together with men, which it is essential for building a cohesive society and effective participation of women in the labor force, promotes the level of justice and equality. Despite the progress made by the State of Palestine in providing the enabling environment for women's participation in various economic fields, there is still a large gap in the laws and legislations related to economic empowerment of women. There is a lack of encouraging measures for women's enrollment in the private sector and access to resources, the majority of Palestinian rural women still work in the informal sector (mainly small family businesses) and their contributions are not counted within the Gross National Product-GDP and they still lack legal protection, especially protection against violence in the workplaces.

In terms of technical and vocational training, these programs are designed on a stereotype basis within the traditional culture of the roles of men and women, which reduces the chances for women to enroll in TVET programs and have a fair chance for employment, especially for the newly graduates.

RWDS will work to facilitate women's access to economic resources and services, increase employment opportunities for women and girls in the labor market, by encouraging entrepreneurial initiatives and working with vocational and technical training institutions to provide an encouraging environment for women engagement, this will be accompanied by awareness campaigns to create

³ RWDS, Rural Women's Development Society Strategic planning 2019-2022, July 2019.



incentive measures for employers and industry to employ women graduating from TVET institutions.

b. Agricultural sector background.

i. Palestinian demographic situation

In 2015, the estimated Palestinian population was 4.7 million: 2.86 million Palestinians reside in the West Bank and 1.8 million in the Gaza Strip.⁴ Despite the decline in the total fertility rate in 2014 to 4.06, Palestine still has a high population growth in comparison to the average fertility rate of 2.8 in Arab countries.

The percentage of individuals under the age of 14 constituted 40% of the total population, while people at least 65 years old account for just 2.9% of the population.⁵ Despite the relative shift in the population age groups, Palestine is still experiencing a rise population growth. The above-average birth rate in Palestine has kept the annual growth rate very high for the past few decades. Despite consistent negative net migration, the population continues to swell while the average woman in Palestine gives birth to around four children. The growth rate has slowed somewhat in recent years, but not by much. As of 2019, the population in Palestine was growing 2.65% annually.

Population projections⁶ reveals that the trend of declining growth rate is expected to continue in years to come. Current projections believe that the annual growth rate in Palestine will peak in 2020 at 2.68% before dropping over an entire percentage point by 2050. If these predictions prove true, the population of Palestine will be close to 5,322,629 in 2020, 6,739,073 in 2030, 8,208,074 in 2040 and 9.704,205 by 2050. These trends will lead to increased pressure on the labour market and the need to create new jobs for large numbers of working age population, in addition to the increasing pressure on natural resources, especially land, water and forests.

ii. General overview: The agricultural sector and its contribution in economic and social development.

The agricultural sector and its contribution in economic and social development since 1967, including all its various components and sub-sectors, has been constituting one of the most important pillars of Palestinian resilience in the face of Israeli occupation policies in the West Bank, including East Jerusalem, and the Gaza Strip. Constituting an employment, livelihood and food security source for a large proportion of Palestinians, the agricultural sector is

⁴ PCBS, Population of Palestine 2015.

⁵ worldpopulationreview.com, Palestine Population 2020, Palestine Demographics, <http://worldpopulationreview.com/countries/palestine-population/>

⁶ Prime Ministers Office/National Population Committee and UNFPA, Palestine 2030, Population Growth in Palestine and its Impact on socio-economic sectors, 2016.



also considered as one of the most important pillars of Palestinian national economy. It contributes in ensuring foreign currency through exports. Furthermore, being a supplier to requirements, user of services, and outputs of vital national sectors, the agricultural sector has a key contribution in industry, trade, transport, communications and services sectors.

The Palestinian agriculture sector is characterized by its diversity in terms of agricultural production. It benefits from the climatic variations in Palestine, and opportunities for expanding irrigated and export cash crops, as well as its ability to keep abreast of agricultural technological development, as a result of favourable agricultural patterns on the one hand, and the presence of many entrepreneurs on the other hand. These characteristics reflect the agricultural sector's ability to rapidly develop and effectively contribute in employment, as well as economic growth and development. This is of particular significant opportunity, especially in the case of declining occupation policies that impede the sector's sustainable development, and include the confiscation and access prevention to land, water resources and irrigation development, as well as hinder import and export of agricultural products and inputs.

In 2014, the value of agricultural production at constant prices was \$ 540 million, registering a continuous annual decline since the year 2011, which recorded the highest value of agricultural production and rose to \$ 721.5 million.⁷ Within the same context, the value added of the agricultural sector in Palestine reached 339.1 million dollars in 2012 at constant prices, representing 4.6% of GDP at that time. This contribution fell to 3.8% in 2014,⁸ as the value added of the agricultural sector reached \$ 286.4 million despite its 8.2% contribution to GDP in 2000. Furthermore, the value of agricultural imports and exports was equal in the early seventies of the last century, ranging between 20-30 million dollars.⁹ Over time, the annual agricultural imports increased to exceed exports significantly, as the total agricultural imports amounted to approximately \$ 212 million in 2014, while agricultural exports amounted to \$ 67 million, accounting for nearly 7% of total exports.¹⁰

Historically, the agricultural sector has played an important role in providing employment opportunities, especially in times of crisis, during which it was difficult to work in other sectors. This characteristic enhances the role of the agricultural sector in strengthening the resilience of Palestinians and increasing their capacities to adapt. Nevertheless, since 2006, the agricultural sector has witnessed significant decline in the number of agricultural workers, for both women and men, due to restrictions imposed on the sector's development and its low production. In 2015, labour force in the agricultural sector was estimated

7 PCBS 'National Accounts for the years 2000 – 2014.

8 PCBS 'National Accounts, 2014.

9 MoA 'Extension Service Strategy - 2014, 2014 – 2018.

10 Arab Agricultural Development Association. 4102 ، ، الزراعة للإحصاءات السنوي الكتاب ، ، 42 رقم العدد العربية،



at 7.8% of the total male workers, while 13.1% of the total female workers were employed in agriculture, which indicates the relative importance of the agricultural sector to women.¹¹

iii. Resources: Agricultural lands

Of approximately 6.023 million dunums, which make up the total land area of Palestine, with the largest percentage (94%) in the West Bank¹², 20% is used for agricultural purposes (1.2 million dunums). Ninety per cent of agricultural lands is located in the West Bank, while only 10% is located in the Gaza Strip.

The majority of the Palestinian territories in the West Bank, including agricultural land, are still under full Israeli control, as 62.9% of West Bank area is classified as Area (C) according to Oslo Agreement. On the other hand, only 18.8% of the West Bank area is located in Area (B) that falls under the Israeli-Palestinian administrative control and security, and 18.3% is classified as Area (A), which is the only area under full Palestinian control.

Despite the "Israeli withdrawal" from the Gaza Strip in 2005, during which lands occupied by Israeli settlement were returned to Palestinians, Israel is still preventing farmers' access to their land in what is known as the "buffer or border areas" that stretches along the eastern sector along the borders of Israel and extended over a depth ranging from 150 meters to one kilometres. The total agricultural land in the border areas is estimated to at least 62 square kilometres (40% of agricultural land in the Gaza Strip)¹³. This area is not exploited by farmers due to their inability to access their lands, or is cultivated by field crops that are of little use and cost-effective due to the danger facing farmers reaching their lands there.

In the state of Palestine, rain-fed agriculture is dominant, occupying nearly 81% of the total area of land used for agriculture, while irrigated areas cover approximately 19% of land used in agriculture, located mainly in the governorates of Gaza Strip and the Jordan Valley, as well as in semi-coastal areas in the West Bank only. In general, low soil fertility and weak trends in agricultural land investment, as a result of water scarcity, poor financial resources and high risk, are the key challenges associated with land development in Palestine.

The agricultural land currently used by Palestinians does not exceed half of the Palestinian agricultural land area available for cultivation. The remaining areas are distributed to lands that can be cultivated but are not used for such purposes, or lands that need rehabilitation, lands that cannot be rehabilitated (often used for grazing of ruminants), and lands used for industrial and urban expansion, as well as areas confiscated by the Israeli authorities for settlement expansion, building the separation wall and the construction of bypass roads. Pasture area cover 2.02 million dunums, but only 621 thousand dunums are allowed for grazing of ruminants, leading to increased load on pastoral practices

11 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016.

12 FAO, National Strategy for Food Safety 2017-2022, State of Palestine, <http://www.fao.org/3/i8861en/i8861EN.pdf>

13 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016.



and overgrazing in these areas that are open to at least 250 thousand livestock heads. These areas suffer from low rainfall that ranges between 100 and 250 millimetres per year only.¹⁴

On the other hand, closed forest areas amount to 94,000 dunums and 320 thousand dunums of open forest areas. Of the total 48 natural reserves in the West Bank, the Palestinian National Authority received 17 only that are located in the eastern slopes and the Jordan Valley¹⁵.

iv. Agricultural holdings: Numbers and characteristics.¹⁶

Agricultural holdings in Palestine are usually small (average size 18.6 dunums) household holdings. The majority (88%) are owned outright by the household, but some are either fully rented, or owned land is supplemented by renting an extra area. There are 101,172 holdings in Palestine, nearly 70% of which are plant production holdings only, 7.6% are livestock holdings only, and the remainder practice mixed production.

The total number of agricultural holdings in Palestine reaches 111,310 holdings, of which 90,908 are in the West Bank, (81.7%), and the remaining 20,402 holdings are in the Gaza Strip (18.3%). The governorate of Hebron is one of the largest areas in terms of number of agricultural holdings, constituting approximately 18% of the total holdings in the Palestinian territories, and amounting to 19,768 holdings. On the other hand, the governorate of Jericho has the least number of agricultural holdings amounting to 1612, and constituting 1.4% of the total holdings in the Palestinian territories. The majority of agricultural holders are in the age group between 40-49 years (28.6%), of whom 28.9% are in the West Bank and 27.3% in the Gaza Strip.

Plant holdings are the most common in the Palestinian territories, reaching 79,176 holdings and averaging 71.1% (82.4% in the West Bank and 17.6% in the Gaza Strip). The Palestinian agricultural census reveals that most agricultural holdings are considered as smallholdings, as 83,785 holdings covered less than 10 dunums of area, amounting to 75.3% of total agricultural holdings and 20.7% of total agricultural land holdings. The percentage of large holdings, exceeding 80 dunums of area, constitutes 1.8% only of total agricultural holdings and 29.5% of total agricultural land holdings. In addition, the average area of agricultural holdings reached 10.8 dunums (12.2 dunums in the West Bank and 5 dunums in the Gaza Strip). The highest average area of holdings was in Tubas, Jericho and the Jordan Valley covering 25 dunums. Typically, agricultural holdings in Palestine are small due to the fragmented and divided agricultural holdings as a result of issues related to inheritance cases, lack of a law protecting agricultural lands from fragmentation, as well as the Israeli policies and attacks, including the confiscation, vandalisation and destruction of land.

¹⁴ MoA 'Agricultural Sector Strategy, 2014-2016

¹⁵ Idem.

¹⁶ PCBS, Key Characteristics of Agricultural Holdings in the Palestinian Territories/Agricultural Census/Livestock in Palestine/Agricultural Census 2010.



Agricultural holdings are divided between livestock and mixed holdings, as livestock holdings reached 14,241, representing 12.8% of total agricultural holdings in the Palestinian territories, of which 10,879 holdings (76.4%) were in the West Bank and 3,362 holdings (23.6%) in the Gaza Strip. Mixed holdings reached 17,893, accounting for 16.1% of total agricultural holdings in the Palestinian territories, including 14,762 holdings (82.5%) in the West Bank and 3,131 holdings (17.5%) in the Gaza Strip. Livestock and mixed holdings are similar to plant holdings in terms of average area covered, and are considered as small. For example, 61% of livestock holdings that have cows (1263) do not exceed three heads, 65% of livestock holdings that have sheep (8844) do not exceed 19 heads, and 66% of holdings that have goats (5350) do not exceed 19 heads.

v. Water resources for agricultural purposes.

The water sector is one of the most vital sectors in sustainable agricultural development process at the national level. The Israeli occupation deliberate neglect and constraints imposed on water development over the decades and to our present day directly contributed to hindering real agricultural development opportunities. Israel's control over water resources has been for the benefit of Israeli development needs without taking into consideration Palestinian water needs, or Israel's obligations under the signed agreements. The critical situation and performance of the water sector is reflected by the limited irrigated agricultural areas in the Palestinian territories in general, constituting only 12% of agricultural land in the West Bank, in comparison to 77% in the Gaza Strip, 37% in Jordan and 59% in Israel.

In the absence of significant surface water sources, along with Palestinians' inability to often invest in infrastructure for water resources development (such as springs for example) because of its location in Area C, groundwater remains the primary source of water in the Palestinian territories. However, Palestinians extract only 20% of groundwater "expected quantities" in the West Bank, while Israel extracts large amount of water, exceeding 50% of the renewable quantities without the consent of the Joint Water Committee, which is supposed to operate according to the Oslo agreement to regulate and manage shared water issues. In fact, Israel extracts more than 1.8 times of its share under the Oslo agreement, consequently resulting in several risks to ground water wells and low quantities of water available to Palestinians from shallow wells pumping.

The estimated total water used for agriculture does not exceed 150 million cubic meters annually in the West Bank (60 million cubic meters) and 90 million cubic meters in the Gaza Strip. This amount represents 45% of the total water consumption, which is reflected directly on the limited prospects for the development of irrigated agriculture that can have an important economic, social and political role in rebuilding the Palestinian economy.

Despite the significant interest of farmers in increasing the irrigated agricultural area, especially in protected agricultures, which still provide a



relatively high level of profitability. The old agricultural wells and the inability to rehabilitate them due to Israeli restrictions, in addition to the limited number of licenses granted to new agricultural wells and drought of many springs hindered the desired transformation and growth of irrigated crops in the West Bank. It is worth mentioning here that the growing demand for water due to steady population growth leads to real crisis in the availability of water that consequently raise the price of water and the cost of delivery to farmers. This also plays a key role in the growing phenomenon of unlicensed wells and pumping practices.

The amount of water used in agriculture in the Gaza Strip is estimated by approximately 90 million cubic meters annually, which is equivalent to almost 54% of the total water consumption in the Gaza Strip. The excessive use of groundwater has led to poor water quality and saltwater intrusion from sea water into the groundwater. The proportion of water available for drinking and pumped from underground wells does not exceed 10%. As alternative solutions to water shortages, Palestinians in the Gaza Strip have been drilling private wells and desalinating sea water for domestic and agricultural use, which further exacerbated problems faced by the water sector in the Gaza Strip. The water sector is facing a dangerous situation that may not be reversed within the coming three years if reasons for its deterioration are not rapidly addressed.

2. Agricultural production

a. Plant production.

Plant production in the Palestinian territories fluctuated from year to year due to rainfall quantities fluctuation on the one hand, and the high-yield years followed by low-yield years in olive trees. Despite this, plant production has not experienced significant changes over the last decade. No significant change occurred in terms of the relative distribution of varieties of different crops, which is characterized in general-and especially in the West Bank- by relatively low values crops and the low percentage of irrigated agricultural areas. Olive tree cultivation covers the largest agricultural area in the West Bank, occupying approximately 57% of cultivated land, while field crops, vegetables and other fruit trees occupy the remaining area, by 24%, 10% and almost 9% each, respectively. In the Gaza Strip, vegetable crops constitute 32% of the total cultivated area, followed by olive trees and other field crops and fruit trees, occupying 24% and 23% and 21% respectively of the total cultivated area in the Gaza Strip¹⁷.

In addition to the aforementioned mentioned concentration of low-value crop production, the Palestinian plant production sector, especially in the West Bank, is suffering from low productivity per acre as a result of the nature of plant production on the one hand, and the low percentage of irrigated crops, on the

17 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016.



other hand. According to a report prepared by the Quartet¹⁸, the productivity per dunum in the Palestinian territory was estimated by 0.6 tons, while it reached 1.2 tons in Jordan and 1.4 tons in Israel. Dunum productivity in the Palestinian territories differs by region and types of crops cultivated. Over the last ten years, the Palestinian territories have witnessed an expansion of plant production due to land reclamation and various agricultural development projects implemented by the Ministry of Agriculture and NGOs working in the agricultural sector. Many of these interventions focused and are still focusing on the horizontal expansion in agricultural production and increased agricultural cultivated areas. Despite the importance of the horizontal agricultural expansion for agricultural development and the protection of land from confiscation and settlements, the opportunities to continue this expansion are diminishing, if the competitiveness of other agricultural sub-sectors, as well as economic and social sectors is not taken into consideration. Hence, achieving transformation in plant production to keep pace with the continued growth in local demand, as well as with local and international market demands will also require a focus on improving agricultural technology and encouraging the vertical expansion of the plant production sector, by improving agricultural services and investing in intensive agriculture, that could achieve greater economic return and employment opportunities.

b. Livestock production.

Livestock production plays a major role in improving the lives of families in terms of providing a source of income and food (protein) to a large number of households in the Palestinian territories. The number of households depending primarily or secondarily on livestock is 32,200 households¹⁹. According to the results of the livestock survey conducted in 2013 and that falls within agricultural holdings, livestock population was estimated as follows: 33,980 cows, 730894 sheep, 215335 goats, 2058 camels, 32.5 million broilers (of which 994.6 thousand mothers), 1.8 million laying hens, 546.4 thousand turkeys, 19690 rabbits and 46,226 beehives. There is also a large number of domestic poultry, including 258.9 thousand domestic poultry, 285.6 thousand pigeons, and 5,000 turkeys, 29.1 thousand rabbits, 20 thousand quail birds, and 29.7 thousand of other types.²⁰

Ruminant (cows, sheep and goats) depend on an intensive or semi-intensive breeding system for their livestock. Intensive production entails confining livestock in narrow spaces, where they are fed, watered and milked without being released to graze. This system is adopted mainly by cow breeders (87%) and to a lesser degree by sheep and goat breeders.²¹ On the other hand, semi-

18 Established in 2002, the Quartet consists of the United Nations, the European Union, the United States and Russia. Its mandate is to help mediate Middle East peace negotiations and to support Palestinian economic development and institution building.

19 PCBS, Livestock Survey in Palestine, 2013.

20 Idem.

21 MoA, Livestock Strategy 2015-2019.



intensive production (traditional) allows livestock to graze, while providing supplementary nutritional feed at the same time. Intensive production requires a higher capital investment in infrastructure and administrative systems than the semi-intensive production system. In addition, intensive production requires high technical experience and knowledge in farm management, which is an aspect absent in many farmers, especially the younger ones.

There are two types of production systems in the dairy sector: the traditional and industrial systems. The traditional production system includes small and medium-sized cattle breeders, who sell their products to consumers mainly at the local level, and cattle breeders who produce cow's milk annually. In the West Bank and the Gaza Strip, there are 13 ruminant slaughterhouses, including eight in the West Bank and five in the Gaza Strip, in addition to nine poultry slaughterhouses in the West Bank and one in Gaza.

In the poultry sector, there are also 19 hatcheries in the West Bank and 4 in the Gaza Strip, producing 64,525 chicks in 2012 (0.4324 million layer and 64.0916 million broilers) and 91,861,700 eggs ready for hatching (1,158,700 layer eggs and 90,703,000 broiler eggs).²² During the 2011/2012 agricultural year, the total production of poultry meat reached 72680 tons.²³

Nutrition constitutes the main costs in livestock production, occupying 75-85% of total milk production costs, and 55-65% of the total costs associated with small ruminant animals. More than 95% of wheat feed and 85% of protein feed is imported from Israel to feed sheep and goats. Furthermore, most of feed and coarse fodder (high-cellulose feed, such as hay, straw and grass) to feed dairy cattle is imported from Israel. Feed supply, whether in terms of quality or quantity, is still unable to cover the existing need. The continuous rise in feed prices over recent years indeed, led to increasing production costs, forcing many farmers to sell their livestock or use low-quality forage (low quality protein mixture) to feed their cattle. The significant reliance on imported inputs consequently resulted in the reduction of livestock productivity and its poor quality.

c. Agro-Food Industry Production.

Throughout the Study conducted by ARIJ Society, between the years 2013 and 2015 and as main outputs of their project titled: Food Production-Consumption Assessment to Improve Sustainable Agriculture and Food Security in the West Bank- Palestine²⁴, a remarkable study have been done in the agro – food production. Whereas, 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

²² MoA, National Agriculture Sector Strategy “Resilience and Sustainable Development”, Nov 2016.

²³ Ministry of Agriculture «Livestock Strategy 2015-2019

²⁴ secheresse.info, Food Production-Consumption Assessment to Improve Sustainable Agriculture and Food Security in the West Bank- Palestine, 2013, <http://www.secheresse.info/spip.php?article51563>



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 over 11,400 employees as of the year 2012.²⁵ 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 spill over 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 project²⁶:

- **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. However, this industry still lacks the needed packaging techniques and storehouses, whose provision would drive higher investments.
- **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, three 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.
- **Wheat flour and grains:** There are nine 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.
- **Pasta and vermicelli:** There are five factories working in the production of pasta and vermicelli, employing more than 89 workers. Investment in this industry is estimated at \$34 million.⁵

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

²⁵ The Palestinian Central Bureau of Statistics (2013). Establishment Census, 2012.

²⁶ Palestinian Food Industries Union (2014).



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.²⁷

More than 30 food and industrial commodities in WB use targeted agro crops as their inputs. It also reflects that most food commodities in the West Bank use wheat and grapes specifically. Wheat is a main ingredient in the production are flour, maftoul, freekeh, bran, and semolina, while grapes are used for the production like grape molasses, grape Jam, malbann, raisins, and grape vinegar. Indeed the study shows indicators of Pricing, production quantities per months and seasonality, average price in the local market per kilo, for the most processed agro foods as the table below.

Agro Product	Processed Food Commodity
Wheat	Flour
	Semolina
	Bran
	Freekeh
	Maftoul
Eggplants	Spiced Eggplant
	Pickled Eggplant
	Makdous Eggplant
Grapes	Grape molasses
	Malbann
	Grape Jam
	Grape Vinegar
	Raisins
Olives	Olive oil
	Makdous Olive
	Olive Honey Spread
	Olive Oil Soap
Dates	Date
	Ajwa dates
	Dates stuffed
Almonds	Peeled almonds
	Almond oil
	Hlawoh almonds with Sesame

²⁷ The Applied Research Institute – Jerusalem / Society. The Food Industry Sector In The West Bank, 2013-2015, <http://www.arij.org/component/content/article/210-publications/food-market-assessments/baseline-surveys/672-the-food-industry-sector-in-the-west-bank.html>

	Candied almonds
Cucumbers	Pickle
Citrus Fruits	Marmalade

Table 1, Processed Food Commodities in WB Palestine.

With highlighting the Challenges, facing the Food Production Industry and Information conducted by ARIJ Society with food processors and factory owners have shown the following:

- 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 terminated.
- High cost of transportation, delivery and storage.

Thus, the Study by ARIJ shows recommendations as follow:

- 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.

d. Agricultural services.

Governmental and non-governmental organizations, as well as private sector companies provide a wide range of services to Palestinian farmers. These



services include agricultural extension services (including its various components and elements of agricultural education and awareness raising), veterinary services, agricultural research and funding. In general, the agricultural sector suffers from weak agricultural services, hindering hence sound agricultural investment, as well as weakening the sector's competitiveness and profitability. The following sections present the status of the main agricultural services provided in Palestine:

i. Agricultural research and education.

The Palestine National Agricultural Research Center (NARC) is responsible for conducting agricultural research, through its' five research units and seven agricultural experiment stations, of which five are located in the West Bank and two in the Gaza Strip. In addition, five faculties of agriculture in AnNajah University, Hebron University, Al-Azhar University, Palestine Technical College (Khadoury) and Al-Quds Open universities, offer agricultural bachelors and masters' degrees in some disciplines. There are two agricultural secondary schools; one is Beit Hanoun Agricultural School in Gaza, and AlAroub Agricultural School in the West Bank. In addition, there are some NGOs, which conduct agricultural research, such as the Jerusalem Institute for Applied Research (ARIJ) and the Land Research Center.

NARC, agricultural colleges and non-governmental research centers have relatively large areas of land, experiment stations, as well as basic and some modern equipment that facilitate access to externally funded projects. However, there are weaknesses in the coordination mechanisms between these institutions and some duplication of research. Furthermore, institutions face challenges in renovating and maintaining their tools, equipment and facilities. Universities continue their exploratory and theoretical research in isolation from the reality of Palestinian farmer and the national extension service system, and without coordinating with national agricultural research centers. All these knowledge-generating institutions, are influenced by fluctuating and unsustainable financial resources allocated for research.

Many students graduate from universities and agricultural training programs annually, but their qualifications and abilities are not aligned with the requirements and needs of the labour market. Furthermore, academic research has low impact despite meeting global quality standards. The country's lack of a national reference library for agriculture weakens policy advice abilities. Unfortunately, consulting services in the field of agricultural policy are also weak.

ii. Agricultural extension services and training.

MoA provides extension services to farmers on a regular basis and indirectly, in which, are offered through companies supplying production inputs, which in turn provide agricultural extension services to farmers as part of their purchase process. In addition, a number of civil society organizations provide such services as part of their agricultural development projects, which are usually limited in



scope and lifecycle. As per farmers' perspective, MoA and companies supplying production inputs are the most important sources of extension services.

The Palestinian National Agricultural Extension Strategy (PNAES) of 2015-2018 refers to the limited scope of coverage of extension services that, in general, are still deemed insufficient to cover effectively all agricultural holdings, given that the individual visit to farms is the most common method used when providing extension services. In addition, agricultural testing stations are not playing an active role in providing advice or responding to the problems faced by farmers.

The lack of coverage of operational costs is one of the key factors adversely influencing the efficiency and effectiveness of governmental agricultural extension services in Palestine. Agricultural extension officers are not allocated sufficient financial resources to ensure their adequate coverage of all areas, in addition to the lack of financial allocation dedicated for agricultural experiments and observations, which are some of the agricultural extension methods.

iii. Veterinary services.

Veterinary services play a pivotal role in animal health, food hygiene and public health protection. Livestock productivity is highly dependent on the availability of animal health care services that are characterized by their quality and regular availability. Veterinary services in the Palestinian territories (which are provided for a great part by MoA) include free animal vaccination against foot and mouth disease and Maltese fever, while fees are charged for vaccination against other diseases, as well as the provision of clinical and laboratory diagnosis. In addition, fees are almost free of charge for most important animal diseases, and for undertaking pathological surveys, control programs, eradication of important diseases, such as bird pathogenicity influenza, follow-up of slaughterhouses and the general health of consumers through animal products safety monitoring, as well as animal tracking via the national identification program. The government provides veterinary services in the West Bank through its veterinary clinics affiliated to MoA, as well as via the private sector.

iv. Plant protection.

Plant protection services play a vital role in protecting agricultural plant production through the implementation of regulations, as well as phytosanitary measures that prevent the introduction and spread of agricultural pests at national level. These services provide all international trade requirements and agreements related to plant protection and quarantine. MoA is the competent authority responsible for recording, controlling and regulating all national trading operations and use of agricultural pesticides. It also has a key role in determining the safe use of pesticides and chemicals, as well as rationalizing their use and direct effects on agriculture, the environment and food safety. Moreover, the



private sector undertakes some extension activities in this area, focusing on marketing aspects.

v. Agricultural and rural funding.

The annual demand for agricultural loans is estimated at about \$ 200 million, while only 30% is available, since a large proportion of agricultural funding comes through traders, brokers and borrowing from relatives and acquaintances. Palestinian financing and banking institutions perceive the agricultural sector as a high-risk sector. In 2015, the Palestinian government established the Palestinian Agricultural Credit Institution, under the Decree Law No. (8) for the year 2015²⁸, to be a governmental mechanism that helps Palestinian farmers and agricultural companies to obtain loans for the establishment and development of agricultural projects, as well as for agricultural production and inputs projects that are in line with the agricultural sector development strategy. The association is in process of developing its administrative and financial systems to ensure the implementation of its tasks.

vi. Agricultural insurance.

Due to the high risk factors and uncertainties in agricultural work, agricultural insurance activities face many problems and obstacles, namely high cost, resulting in an unfeasible service for farmers given its pure commercial base. The Palestinian government created the Risk Prevention and Insurance Fund based on the Decree Law No. (12) for the year 2013 to be the governmental institutions specialized in the management of risks that hinder agricultural development in Palestine.²⁹ It also aims at reducing the impact of these risks by implementing various interventions, tools and methods to mitigate damages caused to the agricultural sector, and to enable Palestinian farmers to cope with the negative effects of climatic and political changes. Despite the establishment of the Fund by a decision of the Palestinian government, it still needs to activate its work and funding mechanisms to be able to accomplish the tasks assigned to it by law.

vii. Agricultural marketing and post-harvesting services.

MoA, General Directorate of Marketing ensures access of agricultural products to local and international markets through focusing on the concept of producing what can be marketed instead of marketing what is produced. It also protects national products, provides economic and marketing information to investors and producers, as well as develops measures for export crop development. A group of Palestinian private companies contribute to the export of local agricultural products abroad, especially the Gulf, America and Europe. Local companies and some traders work on marketing agricultural products in Israel. Many of the official and civil society organizations, companies, as well as farmers' associations and cooperatives organize exhibitions, marketing days and

28 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016

29 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016



festivals for marketing of national products, such as grapes, apricots, oil and cooperative products, dates and snake cucumber.

3. Agricultural institutions in oPt.

a. Agricultural legislative framework.

The Agriculture Law No. (2) of 2003, as amended, for the year 2005, constitutes the basic legal framework that regulates the work in the agricultural sector, in addition to many agricultural by laws that have been adopted, after the issuance of the Agriculture Law. During the past period, various laws and by-laws have been issued to namely include the Agricultural Pesticides by law, Plant Product Smuggling by-law, Fodder by-law, Animal Recording and Identification by-law, Veterinary by-law, Animal health Control and Veterinary Quarantine by-law, Risk Prevention and Agricultural Insurance law, and the law of the Palestinian Agricultural Credit Institution. A by-law for the National Center for Research was also adopted.

Despite these achievements, there remains an urgent need to prepare many of the regulations and instructions to complete the legal framework, and needless to say that enforcement of legislation is as important as issue. Laws and regulations presented to the Council of Ministers and that are awaiting approval include a draft law on specialized agricultural councils, in addition to modifying some of the approved regulations, including (the agricultural quarantine by-law that has been replaced by the draft law on phytosanitary). There is a set of regulations that are currently being modified including namely, livestock and poultry markets, agricultural fertilizers, bio-safety, plant products smuggling, slaughterhouses, poultry farms and the agricultural law.

It is worth mentioning that the Palestinian legislative framework suffers from outdated laws, dating from the era of the Ottoman Empire, the British Mandate and even the Israeli occupation. Some of these laws are still in effect, consequently impeding agricultural development processes. In the case of accession to international treaties and conventions, Palestinian laws should be updated to remove any incoherence between international conventions and the national legislative framework.

The recognition of United Nations General Assembly of the State of Palestine – represented by the Palestinian Liberation Organization - as a non-member observer in the United Nations system in November 2012, resulted in a turning point to the Arab-Israeli conflict, as well as to international community perspective on Palestine and Palestinians. This enabled the State of Palestine to join international frameworks, through international organizations and treaties. It should be noted that Palestine's accession to international organizations and treaties affects the work of the agricultural sector. The State of Palestine joined the United Nations Economic and Social Commission for Western Asia (ESCWA) that aims to stimulate economic and social development in member countries.



In addition to all mentioned, the State of Palestine also joined Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and Their Disposal in 2015, nonetheless the Convention on Biological Diversity of 1992, the Cartagena Protocol on Biosafety of 2000. Also, the United Nations Framework Convention on Climate Change of 1992, the Paris Agreement within the United Nations Framework Convention on Climate Change, and the Convention on the Law of Non-Navigational Uses of International Watercourses of 1997. According to the negotiations, Affairs Department report on organizations and treaties related to the agricultural sector in 2015 there is more than 20 international organizations and treaties to join as a future priority for the Palestinian government³⁰.

b. Ministry of Agriculture & governmental organizations.

MoA is the main governmental body that leads agricultural development and is responsible for the formation of the umbrella under which civil society and international institutions work. The Ministry has 1710 employees with various technical and managerial disciplines divided between the southern (472 employees) and the northern governorates (1238 employees, including 440 employees working on regular contracts and day labourers), within an organizational structure led by the Minister of Agriculture.

There are many ministries and public institutions that play key role in the development, organization and service provision to the agricultural sector. Development objectives and agricultural progress are achieved, as the policies and investments that fall within the mandate of these ministries and institutions are crucial to the success of policies, programs and development initiatives in the agricultural sector.

Some institutions implement their interventions in Agricultural Sector include the following: the Water Authority, Environment Quality Authority, the Palestinian Investment Fund and its affiliated companies specialized in agricultural investment, the Ministry of National Economy, Ministry of Local Government and local government units, the Ministry of Finance and Planning, Ministry of Health, Ministry of Labour, the Ministry of Women's Affairs, Ministry of Interior, Governorates, Palestinian Central Bureau of Statistics, PEC DAR, Land Authority, Palestine Standard Institution, and the Palestinian Investment Promotion Agency.

c. Risk prevention and agricultural insurance fund.

The Palestinian government established the Risk Prevention and Agricultural Insurance Fund based on the Decree Law No. (12) for the year 2013 to be the governmental institution specialized in the management of risks that hinder agricultural development in Palestine. It also aims at reducing the impact of these risks by implementing various interventions, tools and methods to mitigate damages caused to the agricultural sector, and to enable Palestinian farmers to cope with the negative effects of climatic and political changes. Despite the establishment of the Fund by a decision of the Palestinian government, it still

30 MoA, National Agriculture Sector Strategy "Resilience and Sustainable Development", Nov 2016



needs to activate its work and funding mechanisms to be able to accomplish the tasks assigned to it by law.

d. Palestinian Agriculture Credit Institution.

In 2015, the Palestinian government established the Palestinian Agricultural Credit Institution, under the Decree Law No. (8) for the year 2015, to be a governmental tool and mechanism that helps Palestinian farmers and agricultural companies to obtain loans for the establishment and 18 development of agricultural projects, as well agricultural production and inputs projects, in line with the agricultural sector development strategy. The association is in process of developing its administrative and financial systems to ensure the implementation of its tasks.

e. Agricultural Cooperatives in Palestine.

Historically mentioning cooperative is defined as a legal entity representing a group of individuals that come together to achieve a common objective. Their purpose is to serve themselves and their community and to work together as a team. In Mr. Qadous article posted in ARENA BLOG titled “The Importance of Cooperatives in Palestine”, he express that the first cooperative in Palestine – and in the larger Arab community – was founded in 1920. Located in Akka, it was an agricultural cooperative specializing in tobacco.³¹

However, long before the first official cooperatives appeared, people would come together informally to help each other in the fields. Neighbours would pitch in with their labour and equipment to harvest crops. Sharing the labour made the work move quickly and efficiently. It also built a sense of social cohesion. Olive picking particularly benefited from this communal approach as the quality of olive oil hinged on moving the picked olives quickly from the tree to the press.

In 1948, with Israel’s founding and a weakening Palestinian society, the importance of Palestinian cooperatives grew, as they provided some structure and ability to get things done. Twenty years later, after the 1967 war, development and aid organizations recognized that cooperatives were effective and legal entities with which to work in Palestine.

Palestinian cooperatives take many forms. Agricultural entities are the most common, with specialties like beekeeping, livestock and irrigation. There are also cooperatives to help people with housing, to provide services for savings and credit, to protect consumers, to share electricity and water resources, etc.

Nevertheless, as any other institution even the Cooperatives faces obstacles and challenges, and in light of shortcomings and deficiencies, there is a need to enhancing and spreading the idea of cooperative work by learning from the rich

³¹ Qadous, Naser, July 5, 2019, The Importance of Cooperatives in Palestine, Arena Blog, <https://www.anera.org/blog/the-importance-of-cooperatives-in-palestine/>



experiences and developments seen by the global cooperative movement. The Ministry on 2017 updated law for cooperatives based on the principles of international cooperation and the resolutions and recommendations of the United Nations, the International Labour Organization (ILO), and the International Co-operative alliance (ICA).³²

f. The private sector, non-governmental and farmers' organizations

Non-governmental and civil society organizations, amounting to 35 organizations, have historically played key roles in agricultural development before and after the establishment of the Palestinian National Authority. They are characterized by their long expertise enabling them to cope with changes. Working in the agricultural sector by Private sector played a complimentary integral role with the MoA, also it played a key role in the agricultural production value chain, as well as in investing in the agricultural sector and providing various business services needed by farmers, especially, in the production and post-harvest processes.

The private sector is the only player in the food-processing sector, as well as in the local and external marketing. Thus, coordination with and involvement of the private sector and farmers' organizations, as well as their encouragement to invest in the agricultural sector are key pillars in the Palestinian agricultural development efforts.

Private sector organizations that are directly involved in the agricultural sector include the following: Chambers of Commerce, Industry and Agriculture scattered in all provinces as well as their public union, based in the city of Ramallah, the Palestinian Food Industry Union, the Palestinian Trade Center (PalTrade), the Private Sector Coordinating Council, Union of Agricultural Cooperative Associations, agricultural marketing and export companies, the Palestinian Shippers Council, and companies of agricultural inputs, including nurseries. The private sector organizations also include farmers' organizations and unions, and the ten agricultural commodity councils that have been formed based on the first article of the amended Agriculture Law No. (11) for the year (2005) and under special regulations they are classified as semi-government institutions. In which, these councils provide a framework for all stakeholders involved in the aforementioned commodities. The preparation of the draft law of the General Union of Agricultural Councils is under progress, with the aim of regulating the work of these councils to ensure sustainability and organization of work.

³² Srouji, Fathi. 2015. *Reforming the Cooperative Sector in Palestine*. Ramllah: MAS, <https://www.mas.ps/files/server/20151012092147-1.pdf>



g. International development partners

A large proportion of the agricultural sector projects is funded and overseen by donors and international institutions, through project-based arrangements. These projects are often implemented, either by state institutions, such as the MoA, Water Authority and PEC DAR, or by Palestinian civil society organizations or foreign NGOs that are registered in Palestine. Despite the sectoral and cross-sectoral coordination, the agricultural sector-working group is an important mechanism to coordinate stakeholders' efforts in the agricultural sector. The group includes Palestinian and international organizations, as well as donors.

4. Spot light on Agriculture Sector Jenin & Tubas Governorates.

As preparation of the MedSNAIL project, on January 13, 2020 MedSNAIL-RWDS Team composed of Mrs. Haneen Zeidan, Mrs. Rulla Sarras, Mr. Amin Juaidi and Mrs. Soher Al-Jaloudi made a filed visit to each of Jenin and Tubas governorate agricultural directorate. It was in purpose of collecting data and information, and in aim of better understanding for the agriculture production of both plants and livestock.

a. Findings based on Jenin Governorate Agricultural Directorate.

The meeting was held with Mr. Hakam Salah the Director of the Support Services Department, and on behave of Mr. Basem Hamad General Director of Jenin Governorate Agricultural Directorate. That, Mr. Hakam have provided us with the following information:

Jenin Governorate is consist of 82 communities, they almost inhabit at the foot of the rugged northernmost hills between 4 large plains as known of Arraba plain or the Plain of Sanur to Wadi Bal'ama, and across the plain of Marj Ibn Amer and Lajjun to Haifa, Maysaloon plain, and Qabatia plain. In which it have brought to Jenin communities the biological diversity into the agro food production as Horticulture Trees, Vegetables, Field Crops, herbs and Livestock. Whereas, the vegetables are divided into irrigated and dry farming, including the irrigated exposed vegetables as onion.

Presenting each plains as mentioned, Mr. Hakam came across the data and information as the list below:

Arraba plain is consist of:

Arrabah cultivated land

Irrigated farming

Dry Farming

About 32k dunums³³.

About 7-9k dunums.

About 23-25k dunums.

33 عرابة (سهل)، الموسوعة الفلسطينية

<https://www.palestinapedia.net/%D8%B9%D8%B1%D8%A7%D8%A8%D8%A9-%D8%B3%D9%87%D9%84/>



Main Crops

Maysaloon plain is consist of:

Maysaloon cultivated land

Irrigated farming

Dry Farming

Main Crops

Qabatia plain is consist of:

Qabatia cultivated land

Irrigated farming

Dry Farming

Main Crops

Marj Ibn Amer plain is consist of:

Marj Ibn Amer cultivated land

Irrigated farming

Dry Farming

Main Crops

Exposed and Irrigated Vegetables

About 16k dunums³⁴.

About 16k dunums Contains about 5
Artesian aquifer wells & 22 pond.

Not determined

Exposed and Irrigated Vegetables,
including herbs as parsley, spearmint,
Common sage, Sesame and Wheat.

About 14k dunums³⁵.

Not determined

Not determined

Not Exposed and Dry farming Vegetables
as Potato.

About 350k dunums³⁶.

About 20% of the land is irrigated
farming.

Almost over 80%.

Exposed and Dry farming Vegetables,
including 21k dunums of irrigated
vegetables, 55-60k dunums of Wheat,
80k pastoral crops, 18-25k dunums of
Dry vegetables, and about 150k dunums
of Olive trees, and Grapes trees about
3.5 k.

Indeed it was been mentioned that there are about 3 companies of
production the Thyme in Jenin Governorate as Alnasr company, Sanabel
company, and Al-Quds Co.

مرج ميثلون، ويكيبيديا، 34

https://ar.wikipedia.org/wiki/%D9%85%D8%B1%D8%AC_%D9%85%D9%8A%D8%AB%D9%84%D9%88%D9%86

2010, مركز الإحصاء الفلسطيني وزارة الزراعة، التعداد الزراعي، النتائج النهائية – محافظة جنين

<http://www.pcbs.gov.ps/Downloads/book1843.pdf>

Nov 2015 , أين يقع مرج بن عامر, موضوع 36

https://mawdoo3.com/%D8%A3%D9%8A%D9%86_%D9%8A%D9%82%D8%B9_%D9%85%D8%B1%D8%AC_%D8%A8%D9%86_%D8%B9%D8%A7%D9%85%D8%B1



In discussing the livestock and polarity, Mr. Hakam declared the estimated farming products in Jenin Governorate as following:

Item	Production per year
Dairy Cattles	About 4.5 k
Sheep	About 90 k
Bees	About 4 k
Hatcheries farms	7 Farms
Laying Hens Farms	3 Farms
Broiler chicken	12 m
Turkey (Bird)	15 k

Asking about the Holdings per person in Jenin governorate for the Land, the answer was not clearly determined, but the estimation leads to that each holding person has about 36% of the a total of One Dunums Plant production and Livestock holding. The agricultural holdings in Jenin are small due to the fragmented and divided agricultural holdings. Indeed, that effects on the Labour force in which depends of Family business and workforce.

In addition, asking about the cost of the irrigated or drinking water, Mr Hakam expressed that the price per each cube is about 3.5 New Israeli Shekel equivalent to 1.0 USD.

Where almost the agricultural production in Jenin governorate is automated or semi-automated, in some areas of east of Jenin Governorate there is the traditional and manual production still in practice.

At the end of the interview with Mr. Hakam, his recommendation were toward the productive and economically business agriculture is to go with consultation and advisory activities to the farmers is many fields as:

- Irrigation methods and cultivation mechanisms.
- Capacity and Farm management.
- Consultancy in Making Decisions.
- Safety Period of consumption agro food.
- Pest control and Pesticide safety.
- Harvesting methods and procedures.

b. Findings based on Tubas Governorate Agricultural Directorate.

RWDS team was supposed to meet with Mr. Sulaiman Abu Amer the director of the Department of Vegetables of Tubas Governorate Agricultural Directorate. Being lucky, RWDS team got the chance to meet also with, Mr. Amer Labadeh the director of the Department of the Support Services, Mrs. Zafaf Abu Shehadeh the director of Horticulture Trees Department, Mr. Maher Salahat the director of Field Crops



Department, and Mr. Mahdi Bashar the director of Livestock Department, who have kindly provide the RWDS team with the relative information of each department and sector as following:

Mr. Abu Amer has introduced the geographic and climate diversity of Tubas Governorate, in which it provides growth of a wide range of agricultural products, although agricultural area is relatively small, the climate makes it suitable for the production of vegetables year-round. Tubas is known as the Northerners Aghwar or “AlAghwar Alshamaleyah”, in which it lays on two of ecological zones according to the classification of MoA, the steppe zone that extends from Eastern Jenin to the Dead Sea in the south and is considered a range-land, and the Ghor (Western Jordan Valley) zone. Tubas is famous with its plains as; Tubas Plain on the lands of Tubas city and town, Al-Kfeer Plain on the land that expands between Jenin and Tubas Governorates, Al-Beqe’ah Plain of Tamoun Town, and Al-Smaeet Plain of the Al-Far’ah Valley. In addition, there is the mountain land, which is known as Ahrash Tubas, with its dry climate.

Tubas Governorate have about 95k dunums of Agricultural land, 35k dunums are considered as of vegetables crops and production, about 50k dunums are for field crops, the exposed cultivation expands on 30k, whereas about 50k are depending on Green Houses. Herbs are planted on about 0.8k dunums mainly by 4 Palestinian companies, in which their production of herbs are for export to North America and Europe, estimated by Mr. abu Amer that up to 99% of the production are for export. The main vegetables irrigated crops produced in tubas governorate lands are; Potato is estimated to be planted on 15k dunums annually, Cucumber, Onion and Zucchini.

Tubas Governorate has about 40 artesian aquifer wells, mainly the irrigation are depending on Israeli Water Supply companies, the price per each cube of water is estimated to 2.5 – 2.7 NIS is which is equivalent to 0.75 cent of USD. However, at Tubas Plain, the price may reach to 3.8 NIS, 1.10 USD for each cube of water, and since it has dry climate it requires more irrigation than other plains.

Farming on Horticulture Trees is estimated to be around 25k dunums, mainly the Grape is about 800 dunums of seedless and 250 dunums of local Grape. The Citrus trees have been planted on almost 600 dunums, and recently there is the Guava Trees, which is planted on about 450 dunums, nonetheless the Palm trees with 100 dunums. The olive trees are estimated to be 22k dunums, including about 1k Dunums of the Almonds Trees, which are not irrigated mainly planted on mountainsides of Tubas. Tubas is known also with it is a vast area of Bushes in which extends over 65000 dunums, and almost there are about 50k dunums more were recently planted.

Questioning about the Fields Crops plants and grains, Tubas have annually planted about 40k dunums. Wheat is the main production, it is estimated to be planted over 25k dunums, also 4k Fodder is produced such as Clover and Bekka, and 5k dunums of Barley. Chickpeas is also produced of planting about 3k dunums; mainly 90% of chickpeas are consumed as green grain. About 10k dunums are



planted with the other grains as Okra and Peas. It is mainly planted between November and February, and the harvesting take place between March and July.

Livestock in Tubas has enormous effect on Palestinians production. It has 50k of Local Sheep known as “Awase Sheep”, about 8k Crossbreed known as Mahala, the milk is used mainly in Chees production, individuals as traditional processing produce it, which its price for selling is 12-18 NIS per one kilo, the milk costs 4.5 – 5 Nis. Cows on another hand, is ranching in almost 20 farms with estimated number of 1.5k, the breeding is local and there is lack in production new cows as weak breed, the feeding of livestock depends on both green pastures and produced fodder, about 70% depends on the produced fodder. Whereas, AREEJ Center have installed in tubas Milk collection Unit to help the farmers in selling and marketing their production. In addition, there are 1 - 1.2m Poultry production, recently about 5 to 6 farms were terminated, and only one farm is working as laying chicken farm, whereas, no hatchery farms are there. For Turkey birds, there are two farms with production of 75k annually.

East of Tubas has Salty Soil, the potentiality of using it in agro food production is denial, Israeli Settlers and Military have done many offences toward the farmers and population, destruction of Artesian wells, pot fire on planted lands and crops, sabotage of agro crops, and Confiscation of machineries and tractors and, doing military trainings on planted lands.

The holdings in tubas is mainly limited to few reasons, as Estimated about 95% of farmers have about 30% of total Holdings. Al-Ghor part of tubas are known as family business where the family do not have holdings, and they work as partner to big agro food producers, as agreed for a proportion of the Crops produced.

Tubas has no Bank of seeds, the Tubas Governorate Agricultural Directorate is working with the National Agricultural Research Center in founding a bank of seeds, nowadays, they mainly works with the farmers as source of seeds. Tubas Governorate Agricultural Directorate with repetitive field visits and consultancy to farmers in their farms, they try to assure the good seeds source of the local agricultural products. In which the Beit Qad Agricultural Station works of experimental and examination of agricultural products with the National Agricultural Research Center. Nonetheless, the role that is recently played by the Genebank and National Herbarium of registering and collecting the medicinal and nutritional herbs.

The agricultural cultivation in Tubas is looking for Economical agriculture, in which basically it leads to income generating, and the farmers are mainly seeking for Safe cultivation, to be introduced and advocated toward how to reach agricultural production density, Best practice in using pesticides and general safety, and safety period of consumption.

5. The role of women in the Palestinian agricultural sector.

a. Palestinian Female Net Holdings.



As indicated previously, the results of the agricultural census carried out by the Palestinian Central Bureau of Statistics in cooperation with the Palestinian Ministry of Agriculture in 2010, indicated that the number of agricultural holdings in the Palestinian territories amounted to 111,310 holdings, of which 90,908 holdings in the West Bank accounted for about 82%, while in the Gaza strip the number of holdings is 20,402 holdings, which constituted about 18% of the total holdings.

At the governorate level, the largest number of holdings in the Hebron Governorate was 19,768 holdings, which constituted 18% of the total holdings in the Palestinian territories, while the lowest number of holdings in Jericho and Al Aghwar Governorate was 1,612 holdings, constituting less than 2% of the total holdings.

For the types of holdings in the Palestinian territories, the results indicated that the number of plant agricultural holdings amounted to 79,176 holdings, it constituted 71% of the total agricultural holdings, while, the number of mixed agricultural holdings 17,893 holdings, in which formed 16% of the total holdings. Nonetheless, the number of animal holdings amounted to 14,241 holdings, in which formed about 13% of the total holdings.

As for gender, the results indicated that the number of holdings held by a male amounted to 97,592 holdings and accounted for 87.7% of agricultural holdings in the Palestinian territories, while the number of holdings held by a female amounted to 7,561 holdings and constituted 6.8%. While the rest of the holdings were distributed among joint holdings, where the number reached to 6,034 holdings and accounted for 5.4% distributed, and according to the gender of the holder, including male and female partnership, or male, or female partnership. While there are 123 holdings by 0.1%, in which the gender of the holder is not shown or does not apply to the sex of the holder. Perhaps these percentages indicate that women have less access to agricultural resources, especially agricultural land, which is the main resource for agricultural production.

When focusing on the net female holdings in the Palestinian territories, which are held by women or women's partnerships only, the census results indicated that the number of these holdings amounted to 7,666 possessions, in the West Bank it reached 6,388 holdings, 83% of the total net female holdings, While the number of these holdings in the Gaza Strip reached 1,278 holdings, which constituted 17% of total female holdings.

It is noteworthy that these percentages do not go far from the total distribution of holdings percentages between the West Bank and the Gaza Strip, as the rates as indicated above were 82% and 12%, respectively.

According to the distribution of net female holdings in the Palestinian territories and according to the type of possession, plant, animal and mixed, it is indicated that plant holdings accounted for 78% of net female holdings, and animal holdings



accounted for 14% of them, while mixed holdings accounted for only 8% of mixed holdings³⁷.

These percentages indicate the concentration of holdings held by agricultural women on plant production, are more than the concentration of total holdings at the level of the Palestinian territories, where plant holdings accounted for 71% of total holdings, representing 78% of net female holdings.

It shows that the distribution of net female holdings in the Gaza Strip by type of occupancy. It is noteworthy that plant holdings accounted for 64% of net female holdings in the Gaza Strip, and animal holdings accounted for 26% of them, while mixed holdings accounted for only 10% of mixed holdings.

In contrast to the reality in the West Bank, these percentages indicate the concentration of holdings held by agricultural women in the Gaza Strip on plant production less than the concentration of total holdings at the level of the Palestinian territories, where plant holdings accounted for 71% of total holdings and 64% of net female holdings.

b. Palestinian Women as Agricultural Worker.

Many Palestinian women work as agricultural workers, with data on labour and the Palestinian workforce available in labour force surveys implemented by the Palestinian Central Bureau of Statistics. Agriculture occupies about 10.4% of the workforce during the year 2014. However, agriculture employment, work permanence, and terms of wages differs between males and females.³⁸

Whereas, the relative distribution of agricultural workers in agricultural holdings in the Palestinian territories, according to the type of employment, gender, and region of the family members without pay (permanent workers).

It is indicated that 24.5% of the total number of family members working permanently in the holdings of these families are male, while 10.6% of them are female. These percentages differ, of course, between the West Bank and the Gaza Strip, where the percentage of female working family members without pay and permanently in the West Bank is 11.2%, while this percentage is lower in the Gaza Strip, where it is 7.9%. As these percentages differ among the governorates of the West Bank, the highest percentage of women working as such reaches 16% in the governorates of the southern West Bank, while the lowest percentage is in the governorates of the northern West Bank, which is 7.9%.

As for the relative distribution of agricultural workers in agricultural holdings in the Palestinian territories according to the type of employment, gender, and region of the family members who work without pay (temporary employment), and that

³⁷ Srouji, Fathi, Enhancing the role of women in the Palestinian agricultural sector, MAS, Ramallah, 2016, <http://mas.noursoft.com/records/1/22525.aspx>

³⁸ Economic and Social Monitor, Annual Volume 2015, Vol. 44, 2016, <http://www.pcbs.gov.ps/Downloads/book2203.pdf>



21.6% of the total number of family members working temporarily in the holdings of those families are male, while 16.6% of them are females. These percentages differ, of course, between the West Bank and the Gaza Strip, where the percentage of female workers who are unpaid family members and temporarily in the West Bank is 18.5%, while this percentage is lower in the Gaza Strip, where it reaches 7.5%. Similarly, these percentages differ between the governorates of the West Bank, where the highest percentage of women working in this way is 22.2% in the governorates of the northern West Bank, while the lowest percentage is in the governorates of the southern West Bank, which is 9.3%.

With regard to the relative distribution of agricultural workers in agricultural holdings in the Palestinian territories, according to the type of employment, gender, and region of the family members who work for wages. It should be noted that these ratios are very modest if compared to the employment of unpaid family members, whether permanent or temporary. Statistics indicate that 2.1% of the total workforce of family members working permanently and with wages in the holdings of those families are male, while 0.3% of them are female. These percentages differ, of course, between the West Bank and the Gaza Strip, where the percentage of female working family members with permanent wages in the West Bank is 1.3%, while this percentage is lower in the Gaza Strip, where it is 0.4%. These percentages do not differ between the West Bank governorates, as they range between 0.3% in the northern governorates and 0.5% in the southern governorates.

It was not possible to obtain detailed information about the paid workers temporarily in terms of their gender distribution, but it is clear that they constitute just over a fifth.³⁹

In addition to the difference in workers' wages by region and economic activity, the data reviewed confirm that the average wage of male workers exceeds the rate of female workers in all regions and in all economic activities. In agricultural activity in particular, the wage differential between males and females can be explained by the nature of the work that each can do, as the males perform muscular tasks that many females cannot do; such as ploughing, loading and unloading, and the use of chemicals of all kinds, which explains Males receive higher wages. However, what is unacceptable is that males receive higher wages than females when doing the same work: irrigation, weeding, picking, sorting and grading.⁴⁰

c. Palestinian Female Affiliation with Cooperative Societies and RWDS Women's Clubs.

Nowadays, cooperative societies are formed in Palestinian Territories to achieve the common interests of their members, women farmers of plant and animal

³⁹ PCBS, Palestinian Labour Force Survey, Annual report of 2014, April 2015,

<http://www.pcbs.gov.ps/Downloads/book2120.pdf>

⁴⁰ Srouji, Fathi, Enhancing the role of women in the Palestinian agricultural sector, MAS, Ramallah, 2016,

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production can benefit from the presence of cooperative societies spread over the Palestinian territories, or through the establishment of new cooperative societies that achieve specific objectives for these farmers. Based on the results of the analysis of the survey conducted by Mr. Fathi Masrouji, on ways to advance the role of Palestinian women in the agricultural sector, indicates that 41% of the women farmers who were interviewed knew of the existence of cooperative societies in the region where they live, but only 19% participated to these associations. 43% of the affiliates affirm that their associations are feminist (especially for women), that 37% of them belong to agricultural service-oriented cooperative societies, 22% of credit and savings societies, 20% of craft associations, and a small percentage not exceeding 2% affiliated with each of the housing, service, and consumer associations.

The analysis of the survey also shows that 15% of the members of cooperative societies are members of their boards of directors. In addition to that, 2% of the women affiliated to the premiership of the cooperative, while others reached the Secretariats or the Treasurer positions.

In addition, it indicates that 35% of the female livestock farmers interviewed are aware of the existence of cooperative societies in the area in which they live, and that 34% attribute these associations.

Whereas 39% of women who affiliates to cooperative or societies confirm that their associations are feminist, that 52% of them belong to agricultural service-oriented cooperative societies, 9% are credit and savings societies, 19% are service societies, and 14% are practiced societies. The results of the analysis also indicate that 12% of the members of cooperative societies are members of their boards of directors. Just as 2% of female members came to the management of the cooperative.

As women farmers benefits of affiliation in the cooperatives and societies, the results of the analysis that 48% of the women respondents indicated that they benefited from affiliation with the cooperatives. Regarding the forms of benefit, the results indicate that 21% of the women farmers surveyed reported that the benefit was in the field of product marketing, and 26% in the field of purchasing production requirements collectively. The results also indicate that 32% of them benefited from cooperatives in various forms, such as: constructing a water collection well, having coupons for buying fodder, participating in agricultural and handicraft courses and workshops, as well as building a social and economic knowledge network.

It should be noted that most of the supporting institutions with those in charge of enhancing women roles in their Palestinian communities socially and/or economically are motivating women to engage in agricultural cooperative societies, throughout providing services to women and men farmers mainly through their cooperatives. These services are provided to Palestinian farmers and cooperatives through many international and local institutions, in particular mentioning the International Food and Agriculture Organization (FAO), Agricultural Development



Association (PARC), The Applied Research Institute Jerusalem (ARIJ), WE EFFECT - Palestine, Economic and Social Development Center of Palestine (ESDC), and Oxfam International, including the Rural Women's Development Society (RWDS).

In addition, RWDS has 10 women's clubs in Jenin Governorate, and has good relations with several other women's societies in the governorate. These clubs were established to empower rural women economically and socially for more than 30 years, with 30-50 members of each club. More women who are not members of the village's councils nowadays benefit from women's clubs service. There are production units in all of these clubs and other women societies, where women produce agricultural products from their localities, such as jams, pickles, maftool, thyme, tomato juice, in addition to dairy products, pastries, sweets, and soap.

RWDS has been working for years to rehabilitate these units and build their capabilities in order to register them to become formal, organized and sustainable cooperatives. RWDS also works to network between these cooperatives to exchange experiences between them and help in marketing their products. There is 24 cooperatives in Jenin Governorate, 3 of them only registered as women cooperatives, One of them is the Jalboun Cooperative Society of the Jalboun Women's Club, which we will target in this project.

Through this project, the following women's clubs will be targeted: Anza, Jalboun, Maythalon, Faqoua, in addition to the Al-Jalama Women Club society and Burqueen charitable society.

6. Slow Food in Palestine

A meeting was held between a team from RWDS and Mr. Saad Dagher a Consultant Lead of Slow Food International in Middle East, it was held in the main office located in the city of Ramallah - Al-Masyoun - Sabat Building 2nd floor on Sunday, January 12, 2020.

At the beginning of the meeting, Mrs. Haneen and Mrs. Rulla has presented the Project titled "Sustainable Networks of Agro-food Innovation Leading in the Mediterranean (Med SNAIL)", including RWDS recent future activities and aims. She mentioned the Funder as EU, and the Partners including the Lead as Andalusian Federation of Municipalities and Provinces (FAMP) as Lead Beneficiary, Slow Food Foundation for Biodiversity, American University of Beirut (UAB), Rural Women's Development Society, University of Sfax, Gozo Development Agency, and Women for Cultural Development (Namaa).

Later on Mr. Saad Dagher introduced to RWDS his role and Consultant Representative of Slow Food foundation in Arab World as his specifications in Agriculture and Ecological Agriculture. He also has expressed the goal of implementing Slow Food politics on agriculture and biodiversity into practice. In addition, he explained the race by the Israeli to register the plants and gastronomic sciences of origin of Palestine as Israeli Products, so his referred to the latest 10 year



of efforts on creating the project called “Akli Baladi- I Eat Local” in which calls all for good, fair and clean food production for all.

Moreover, Mr. Saad expanded the definition of Slow food with bringing and holding Events for the local and ecological Agro–food produces, and the goal of marketing their products as traditional and cultural gastronomy. He also revealed about the intended efforts about registering certain foods and recipes under Slow Food Palestine, such as Al- Charadeesh, Al-Badoudi Oil and Al-Rashtaya.

Despite the Good Food concept, Mr. Saad has declared it as the Agro –food products, which are planted and raised with no use of chemical Pesticides. Also it refers to, the biodiversity in the planted products in aim of protection of environment, eliminating pests with nature’s balance, and gaining access to more balanced food diet by agricultural biodiversity, in which it leads to better nutritional value. Moreover, he has added that ecological farming does not need to till the ground/soil, and the ground/soil in covered with the remains of the cultivated plants.

Then, Mr. Saad presented to RWDS team the Slows food Project focus, in which are reflected on maintaining foods and diets that people almost are up to forget, registering traditional and original foods and agro products, and reviving of vegetarian foods in Palestinian Society.

The Slow Food project may touch other aspects as:

- National, to register all historical and cultural foods and cultivated plants.
- Biological, maintain the diversity within plants and animals.
- Ecological, to keep and preserve the local resources, including soil and water, in which the ecological farming preserves about 50% of irrigation required for same crops.
- Social, to gather the people about their heritage, culture and traditions.

In addition, Mr. Saad expressed that there are efforts toward reviving the Local Tomato. But, that some of the inappropriate activities of cultivating lands, turn some of lands poor as the one of flatland of Derbalout located in Salfit Governorate. Whereas, there is other flatlands as between Senjel and Almughayar in Ramallah and Albereh Governorates are up to lose their lands value in regards to poor practice of cultivating the land. It is the same with Al-Jeeb in west of Jerusalem which main reason or the inappropriate use of cultivation is the use of chemical pesticides.

In reference to the Badoudi Oil, as Mr. Saad mentioned that it has a high value return and its acidity pH is less than 0.02 free fatty acids. Moreover, the Badoudi Oil depends on the period of harvesting the olive fruit, which mainly the purple colour covers between 50-70% of the fruit (Mshalhebeh).

About the products of animals, Slow Food registering focus on Milk Products as Chees. Also mentioning, the period of safety after using the pesticides is very important to prevent any harms to the human beings who will use these products.



As Mentioning Al-Nassareyeh and flatland of Smeet in Nablus Governorate are turning into the ecological farming by several projects there, including the global Ecovillage Network activities in Palestine.

Mr. Saad reassures the harmony between the food production and farming and the Role of the Women, thus the meaning of Terra Madre, which come out of the concept “Pachamama”, the Earth Mother, reveals all over the world intend to show the relation between the women and the earth. In addition, his consumptions are that women are going with better practice of ecological farming, since they are more related and close to the cultivation, and the way they produce the delicious foods and diets, as Rashtaya food.

The known institution, which has providing training and was working with farmers in the ecological practice of farming and cultivation is Youth Men Christian Association (YMCA), they are providing training for more than 3 years in Palestine.

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