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Production and marketing problems facing olive farmers in North Sinai Governorate, Egypt



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Abstract

Background: Although North Sinai Governorate has a comparative advantage in the production of some crops as olive crop, which generates a distinct economic return, whether marketed locally or exported. This governorate occupies the twentieth place for the productivity of this crop in Egypt. The research aimed to identify the most important production and marketing problems facing olive farmers in North Sinai Governorate. Research data were collected through personal interviewing questionnaire with 100 respondents representing 25% of the total olive farmers at Meriah village from October to December 2015.

Results: Results showed that there are many production and marketing problems faced by farmers. The most frequent of the production problems were the problem of increasing fertilizer prices (64% of the surveyed farmers), and the problem of irrigation water high salinity (52% of the respondents). Where the majority of the respondents mentioned that these problems are the most important productive problems they are facing, followed by problems of poor level of extension services (48%), high cost of irrigation wells (47%), difficulty in owning land (46%), and lack of agricultural mechanization (39%), while the most important marketing problems were the problem of the exploitation of traders (62%), the absence of agricultural marketing extension (59%), the high prices of trained labor to collect the crop (59%), and lack of olive presses present in the area (57%).

Conclusions: In spite of the efforts exerted by the Agricultural Extension Agency in the Governorate of North Sinai to assist olive farmers and raise their knowledge and skills level in relation to this crop, and despite the fact that this Governorate has a comparative advantage in terms of cultivated area and the quality of the final product, olive farmers face many production and marketing problems such as increasing fertilizer prices, irrigation water high salinity, poor level of extension services, high cost of irrigation wells, absence of agricultural marketing extension, and lack of agricultural mechanization. So that agricultural extension as a free educational service should assist farmers through targeted extension programs aimed at guiding them in the best way to address and overcome these problems.

Keywords: Farmers, Marketing, North Sinai, Olive, Problems, Production

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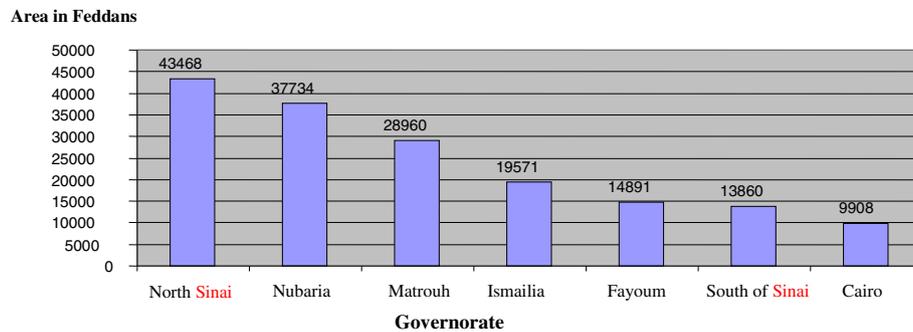


Fig. 1 Governorates and regions according to the cultivated area of olive in 2012. Source: Abstract of the Agricultural Economy Bulletin, Table (96), Central Administration of Agricultural Economics, Economic Affairs Sector, Ministry of Agriculture and Land Reclamation, Giza, 2013, p. 332

Background

Egypt has a competitive advantage in producing olive and olive oil because of its relatively stable climate and its commercial site which is distinctive for the areas of producing the crop, especially it occupies the eighth place in the global ranking of the countries producing olive oil and the third place among the countries producing table olive, as it contributes by about 11.5% of world production. The crop is planted for the purpose of producing olive oil by 10%, and about 90% are for pickling (Bayoumi et al. 2014).

Although North Sinai Governorate has a comparative advantage in the production of some crops such as olive crop, which generates a distinct economic return, whether marketed locally or exported, as North Sinai is the largest region of the Arab Republic of Egypt in terms of area planted with olives, this area in 2012 is about 43,468 feddan. However, this governorate occupies the twentieth place for the productivity of this crop (Fig. 1). (Agricultural Economics Bulletin 2013).

The olive area in the Governorate has increased from 28,309 Feddan in 2008 to 43,468 Feddan in 2012, but

the average productivity of the crop fell from 3.88 tons/Feddan in 2008 to 2.29 tons/Feddan in 2012, which was the lowest productivity, compared to the average productivity in other governorates and occupied the twentieth place for the productivity of this crop (Fig. 2). (Agricultural Economics Bulletin 2008, p. 355 and 2013, p. 332).

The decrease in the average yield of the olive crop in North Sinai may be due to several reasons, including the existence of some problems facing farmers in the field of production and marketing. Therefore, this study aims at identifying the most important production and marketing problems facing olive farmers in North Sinai Governorate and placing these problems in front of agricultural extension, in order to help farmers deal with these problems because the philosophy of agricultural extension is to help people to help themselves change their intellectual, operational, and sensory behavior to cope with their life problems in order to raise their economic and social status as a result of this behavioral change (Omar 1992). The farmer is the main focus of agricultural extension based on the philosophy of the extension system which is to

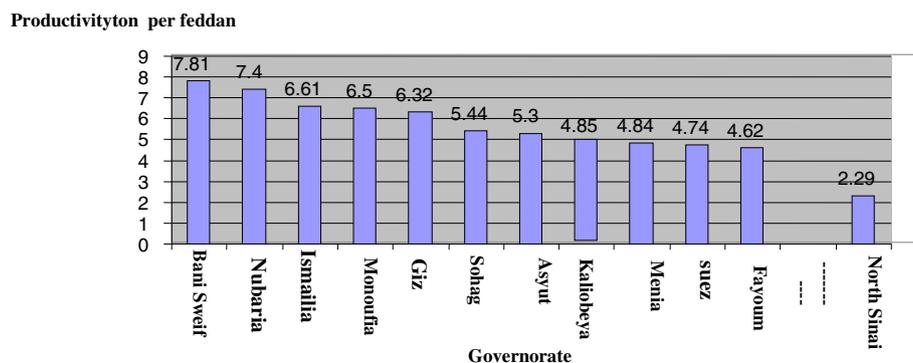


Fig. 2 The productivity of the olive crop in 2012. Source: Abstract of the Agricultural Economy Bulletin, Table (96), Central Administration of Agricultural Economics, Economic Affairs Sector, Ministry of Agriculture and Land Reclamation, Giza, 2013, p. 332

Table 1 Olive areas in North Sinai Governorate for the 2013/2014 season

Center (district)	Olive area	Center (district)	Olive area
Arish	7607	Bir al-Abd	9818
Sheikh Zwaid	4930	Alhasana	1390
Rafah	6296	Nikhil	547
Total	30,588		
Fruitful area	16,939		

Source: Agricultural Administration in Bir al-Abd, July 2015

“Help farmers to help themselves” (Terblanché 2008). Agricultural extension is an educational process with the aim of conveying useful information for rural producers and changing their insight, knowledge, attitude, and skills in order to access better life for their family and society (Abedi et al. 2011).

Table 2 Characteristics of participating farmers and their farms

Characteristics	No. farmers	Percentage %	Mean	Std.
Age	Young (< 38 years)	28	28	
	Middle (38 to 50 years)	47	47	44.5
	Old (> 50 years)	25	25	
Education	Illiterate	22	22	
	Primary education	8	8	
	Intermediate	51	51	
Farm work time	University	19	19	
	Full-time	13	13	
Agricultural area planted with olives	Part-time	87	87	
	Less than feddan	30	30	1.7
	feddan—less than 2 feddan	26	26	
Average productivity	2 feddan and more	44	44	
	Less than a ton	4	4	
	Ton—less than 2 tons	44	44	1.94
Farm experience in olive cultivation (years)	2 tons and more	52	52	
	Less than 16 years old	52	52	
	16—less than 27 years	29	29	17.6
Organizational participation	27 years and over	19	19	
	Low participation (less than 6 degrees)	76	76	
	Medium participation (6–10 degrees)	21	21	3.4
Altitude towards agricultural extension	High participation (more than 10 degrees)	3	3	
	Negative (less than 17 degree)	33	33	
	A neutral (17—less than 24 degree)	30	30	20
	Positive (24 degree and more)	37	37	6.4

Source: collected and calculated from the questionnaire form

Purpose of the study

The objectives of the study are to:

1. Describe the characteristics of respondents and their farms.
2. Identify the most important production and marketing problems facing olive farmers in North Sinai Governorate.

Methods

This study was based on the social survey method as the most commonly used descriptive research pattern; this research was conducted in North Sinai governorate. Due to the large area of the governorate, the largest center has been selected in terms of area cultivated with olives. The center of Bir al-Abd (9818 feddan) Table 1. The same criterion was chosen for the largest village in this

Table 3 Production problems facing olive farmers

Problems	%	
1	High price of fertilizers	64
2	High salinity of irrigation water	52
3	Poor level of extension services	48
4	High cost of irrigation through wells	47
5	Difficulty owning land	46
6	Lack of agricultural mechanization	39
7	Lack of know-how in various production processes	38
8	Rising prices of pesticides	38
9	Rising soil salinity	35
10	Lack of trained technical workers	31
11	High cost of maintenance of irrigation networks	28
12	High prices of suitable olive seedlings	27
13	Lack of irrigation network requirements	27
14	The spread of some pests and diseases	27
15	Lack of government services to farmers	25
16	Non-leveling of soil	24
17	Irregularity and insufficient rainfall	22
18	Lack of suitable varieties and seedlings	12
19	The harmful effect of floods	8

Source: collected and calculated from the questionnaire form $N = 100$

center (Al Meriah village), with a total area of 1310 feddan (530.14 ha) for the year 2015 (Agricultural Administration in Bir al-Abed: Arish Agriculture Directorate, Ministry of Agriculture and Land Reclamation, Unpublished). The research consists of all the olive crop

farmers registered by the village agricultural cooperative association (400 respondents).

And because of the difficulty of collecting data from all the holders due to security conditions and problems in the governorate, a simple random sample was selected. Based on what some statisticians mentioned about the appropriate size of the sample if we want to choose a simple random sample with a high degree of accuracy from homogeneous study community, the sample appropriate size is 23% (Kheder, 2016). Therefore, the researchers chose a simple random sampling of 23% of the total farmers in the village (92 farmers) that were increased to 100 farmers to facilitate the conduct of statistical analysis. Data collection tool was a questionnaire, and the field data were collected from October to December 2015 through a personal interview with the respondents.

Results and discussion

Results

First: description of the research sample

Characteristics of participating farmers and their farms summarized in Table 2 showed that 47% of respondents fall in the middle age group (38 to 51) years, 51% of them had an intermediate education qualification. The high percentage of respondents with intermediate or university qualifications is an opportunity for agricultural extension in the region if there is the will to deal with a more educated audience with the ability to learn and absorb the new in agriculture. Results show that

Table 4 Marketing problems facing olive farmers

Problems	%	
1	Exploitation of traders	62
2	The absence of marketing extension	59
3	High prices of trained labor to collect the crop	59
4	Lack of olive presses	57
5	Lack of suitable packaging for olive	44
6	The olive presses are far from the farm	38
7	Lack of marketing information on quantities traded in the markets and ways of production distributing	38
8	Delay the process of squeezing because of the quantities are relatively large than presses capacity	38
9	Lack of trained labor to collect the crop	32
10	Lack of fitted warehouses	30
11	Production areas far from markets	30
12	High transport cost	27
13	Lack of information on how to Group marketing	26
14	High percentage of losses during collection	25
15	Reliance on traditional methods of collection	20
16	Lack of associations of olive producers and exporters	16

Source: collected and calculated from the questionnaire form $N = 100$

87% were part-time agricultural workers, 44% of them had agricultural area planted with olives (2 feddan and more) and it is a relatively large area allowing the farmer to experiment with the new ideas and modern agricultural methods in the production and marketing of the olive crop, and 52% of them had average productivity 2 tons and more. The maximum yield of the olive harvest in the surveyed farmers did not exceed 2.7 tons/fed. This low productivity requires the extension apparatus in the region to increase the level of production by providing more educational activities and programs aimed at raising the average productivity of the crop. The degree of social participation of the majority of farmers respondents (76%) was low, and only 37% of respondents had a positive attitude toward agricultural extension which requires the extension staff to play a more active role in changing the negative and neutral agricultural attitude toward agricultural extension (Table 2).

Second: the most important production and marketing problems facing olive farmers in North Sinai Governorate

The results in Tables 3 and 4 indicated that there are many production and marketing problems faced by farmers. The most frequent of the production problems were increasing fertilizer prices (64% of the surveyed farmers) and irrigation water high salinity (52% of the respondents). Where the majority of the respondents mentioned that these problems are the most important productive problems facing them, followed by problems of poor level of extension services (48%), high cost of irrigation wells (47%), difficulty in owning land (46%), and lack of agricultural mechanization (39%), while the most important marketing problems were the problem of the exploitation of traders (62%), the absence of marketing extension (59%), the high prices of trained labor to collect the crop (59%), and lack of olive presses present in the area.

Discussion

The previous results show a decrease in the productivity of the olive harvest in North Sinai compared to many other regions and governorates. This low productivity requires the extension apparatus in the region to increase the level of production by providing more educational activities and programs aimed at raising the average productivity of this important crop; agricultural extension should also help farmers to overcome the most important productive problems facing them, which were increasing fertilizer prices, irrigation water high salinity, poor level of extension services, and high cost of irrigation wells. In addition to the most important marketing problems which were exploitation of traders, the absence of marketing extension and lack of marketing

information on quantities traded in the markets and ways of production distributing.

Conclusions

In spite of the efforts exerted by the Agricultural Extension Agency in the Governorate of North Sinai to assist olive farmers and raise their knowledge and skilled level in relation to this crop, and despite the fact that this Governorate has a comparative advantage in terms of cultivated area and the quality of the final product, olive farmers face many production and marketing problems such as increasing fertilizer prices, irrigation water high salinity, poor level of extension services, high cost of irrigation wells, absence of marketing extension, and lack of agricultural mechanization. Agricultural extension as a free educational service should assist farmers through targeted extension programs aimed at guiding them to the best way to address and overcome these problems.

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Availability of data and materials

Materials described in the manuscript, including all relevant raw data, will be freely available to any scientist wishing to use them for non-commercial purposes. The dataset supporting the conclusions of this article is included within the article.

Authors' contributions

MAEA secondary data collection. NEAG collection of questionnaire forms. SSAeG statistical analysis of data. TGIM wrote the research paper (research design, scientific background writing, presentation and interpretation of results). All authors read and approved the final manuscript.

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Ethics approval and consent to participate

All participants in the study know the purpose and participated in it voluntarily.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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