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An Economic Study of the Marketing Systems and Marketing Problems for the most Important Agricultural Crops in Central Sinai

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Abstract : The research was a study of methods and pathways of marketing, as well as, estimating the costs and efficiency of marketing problems facing the marketing of the most important agricultural crops in central Sinai. It aims to study marketing problems in the region and offer solutions and proposals suitable for the present marketing problems, improve marketing services and reduce wastage marketing. The search has been adopted on both descriptive and quantitative statistical analysis and was based on exporters of data; published secondary data and the initial data, which was collected by conducting a field questionnaire on crops farmers in the study sample, by testing a random stratified sample, which was 168 farmers for wheat, cantaloupe and olive crops in El-Hassana and Nakhl regions in central Sinai, and the results of the study showed the following : -

The marketing pathways and approaches of agricultural products were limited to five methods; sell in the wholesale markets, farm gate sales, sales to wholesalers, sales to retailers and household consumption. Results of the study also showed that the efficiency of marketing of wheat, cantaloupe and olive amounted to about 63.1% 0.57% 0.61%, respectively. With regard to the most important marketing problems which face farmers in central Sinai region, it was divided into market problems such as the lack of wholesale markets in central Sinai, and problems concerning traders and brokers such as controlling traders on purchase of the crop and having high commission rate. There were also problems concerning transport and other marketing processes, such as high transport costs, poor roads, high packaging prices and the lack of skilled labor on the sorting and grading operations. The study reviewed the most important proposals and marketing solutions to the problems faced by the Bedouin farmers in central Sinai region, and the establishment of a joint stock company for the marketing and export of fruit and vegetable crops, and establishment of units of agricultural industrialization in central Sinai, to provide the means necessary and processed transport, and support production for export.

Key words: Marketing problems, field study, central Sinai, wheat, olive, cantaloupe, descriptive analysis, quantitative analysis.

Introduction

The agricultural marketing is highly significant in directing and organizing the processes of both production and consumption, for achieving the greatest possible total saturation of desires and needs of individuals. It seems, for the producer or farmer, as a way to enable him to sell his crop as soon as possible by rewarding price. The consumer depends on it to satisfy those desires by lowest price, while the broker,

considers it as a source which provide him a cash yield for the completion of the exchange process. Marketing activity includes all activities related to the transfer of agricultural commodity from the original product to the final consumer, so the required benefits were added at the lowest possible cost i.e. with high marketing efficiency[1].

Central Sinai desert region is characterized by the rugged conditions, the scarcity of water resources and severe decline in population density, which ranges from 2-3 inhabitants / km^2. It includes two regions (Markas); El-Hassana and Nakhl, with an area of about 21.7 thousand km^2 representing about 78.6% of the total area of North Sinai Governorate. The area of El-Hassana region is about 10.66 thousand km^2 and its population is about 27.59 thousand people in 2014, while Nakhl region is of about 11.04 thousand km^2 having about 32.72 thousand people in 2014.

Crop area in El-Hassana region reached about 8.2 thousand acres during the agricultural season 2014/2015. The winter crop, summer crops, Nile crops, alfalfa, and fruit crop areas represent each of about 27%, 42.4%, 0.14%, 0.05%, 30.41% respectively, from the total crop area of El-Hassana region.

While, crop area in Nakhl region reached about 2.4 thousand acres representing the proportion of each of the winter crops, summer crops, Nile crops, alfalfa, and fruit crop areas of about 4.83%, 35.34%, 0.45%, 0.25%, 59.13% from the total crop area of Nakhl region respectively, during the agricultural season 2014/2015.

Research problem is representing in the presence of many marketing problems for the most important agricultural crops in the central Sinai region, and the related negative effects which may be reflected on the marketing efficiency of agricultural crops there. Thus, the study and characterization of these problems were required.

The research aims mainly to study the methods, pathways and marketing channels, as well as to estimate the marketing costs and efficiency for the most important agricultural crops in central Sinai. Also, it aims to study the marketing problems in the region and provide effective solutions and proposals suitable for the present problems of the marketing. And to improve the marketing services, and reduce wastage marketing, in light of the possibilities available by the state and the farmers and those in charge of marketing operations for crops under study in central Sinai region.

Methods:

The research was adopted on both descriptive and quantitative statistical analysis, where the relative importance of technical and economic variables, relevant to the subject of the research, were calculated. As well as, marketing efficiency was measured and marketing costs were estimated. Also, Chi-square (X^2) test was used to know the significance of differences between marketing problems as well as the solutions and proposals put forward to resolve them.

Data sources:

Two sources of data are used in this research

1. Secondary sources; including published data which were issued by the Economic Affairs Sector at the Ministry of Agriculture and Land Reclamation[2]. And unpublished data available to the Directorate of Agriculture in El-Arish, agricultural departments in El-Hassana and Nakhl regions[3], the Center for Information Decision Support in North Sinai Governorate[4],and Ministry of agriculture and land reclamation, Agriculture Directorate Arish Dane records, unpublished data, March 2016[5].
2. Preliminary data: It is the data which were more relied upon and mainly used in this study. It is collected by conducting a field survey on farmers' crops, the study sample, personal interviews with some traders and brokers markets in Al-Arish and Ras-Sidr as key markets for producers of agricultural crops in central Sinai region.

To achieve the objectives of the research a stratified random sample was selected which size was 168 Badawi farmers in El-Hassana and Nakhl regions in central Sinai. In El-Hassana region, three villages were

selected according to the relative importance of cultivated area of the study sample crops. These villages were Al-Kaseema, Al- Maghara, and Al-jafjavh" by (93) farmers. Also, three villages were selected in Nakhl region which were; Sadr El-Heetan , Beer Gread and Al-Temd by (75) farmers. The sample was also distributed to various plant agricultural production patterns of field crops; represented by the wheat crop by 57 farmers, vegetable crops; represented cantaloupe crop, by (35) farmers and fruit crops; represented olive crop, by 76 farmers. This was at the level of the selected villages within the El-Hassana and Nakhl regions. It should be noted that selected crops are considered strategy and major crops for farmers in central Sinai.

Results and discussion:

The search includes four main aspects of the results; the first dealing with the approaches used in the marketing of agricultural crops in field study sample in central Sinai, while the second deals with the pathways of marketing for crop sample field study. The third aspect is interested in studying and evaluating costs and efficiency of marketing for crops of the study sample, while the fourth part reviewed the marketing problems facing Bedouins farmers in central Sinai, solutions and proposals put forward to resolve them.

1- Marketing approaches of agricultural crops in Central Sinai:

1-1Selling in the wholesale markets :

In this approach the crop is sold in the wholesale markets in the region or the province or neighboring provinces, where the farmer does all the necessary farming processes to serve crop. He also bears costs of harvest or picking and gathering, as well as transportation costs to markets. In the wholesale market the farmers to pay market fees and auctioneer also takes a percentage from the farmer-peer selling the crop, which amount to about 10%. But, until now, **no formal markets are found in the Central Sinai region**, but there is an informal market which is special for vegetables and fruit crops in El-Hassana region. Bedouin farmers in central Sinai, especially farmers of olive, peach and vegetables depend on wholesale markets in El-Arish, " Al- Daheia market" where the majority of fruit farmers in El-Hassana region and some fruit farmers in Nakhl region visit. Also, there are Ras Sidr market in South Sinai Governorate, and the wholesale market in Suez, where visited by some farmers of vegetables and fruit from Nakhl region.

As shown in Table (1) that the number of farmers who marketed the cantaloupe crop by the above mentioned method, reached eight farmers, representing about 22.9% of the total study sample of cantaloupe farmers who were 35. While the number of olive farmers were 28 farmers, representing about 36.9% of the total study sample of olive farmers who were 76, and number of cantaloupe and olive farmers, which were marketing their crops according to this method amounted to 36 farmers, representing about 21.4% of the total number of farmers sample totaling 168 farmers.

1.2Farm gate sellin*g*

According to this method, the farmer sells his crop to a local merchants or wholesalers or on behalf of brokers, to be delivered yield and the receipt of the price in the field. The price is determined by the merchant in the light of prevailing market prices on that day. In this method farmers bear the costs of collection, harvest, and the mobilization of the crop, while the merchant bears the transportation costs. Farm price usually is less than the price of the wholesale market, including the previous operations (collection and harvest - sorting - packing – transport).

Table (1): marketing approaches of "wheat, cantaloupe and olives" crops for farmers of field study sample in Central Sinai during the growing season 2014/2015.

Crop / Marketing approaches	Wheat		Cantaloupe		Olives		Total sample	
	farmers	%	farmers	%	farmers	%	farmers	%
selling in wholesale markets	-	-	12	22.9	28	36.9	36	21.4
Farm- gate selling	12	21.1	13	25.7	26	34.2	47	28.0
selling to wholesalers	13	22.8	17	34.3	14	18.4	39	23.2
Selling for retailers	17	29.8	15	17.1	8	10.5	31	18.4
household consumption	15	9.0	57	-	-	-	15	26.3
total	57	100	35	100	76	100	168	100

Source: collected and calculated from: questionnaires of a field study sample in El-Hassana and Nakhl regions in central Sinai, during the agricultural season 2014/2015.

It was found that the number of wheat crop farmers who marketed their harvest, according to this approach was 12 farmers representing about 21.2% of the total wheat farmers within the study sample totaling 57 farmers. Number of cantaloupe crop farmers was nine farmers representing about 25.7% of the total number of farmers of cantaloupe study sample, while the number of olive farmers was 26 representing about 34.2% of the total number of olive farmers within the field study sample. And, the number of farmers of wheat, olives and cantaloupe who are marketing their crop by this approach was 47 farmers representing 28% of the total number of farmers within the field study sample in both El-Hassana and Nakhl regions through the 2014/2015 season as shown in table (1).

1-3-Selling to wholesalers (Kalala)

This method usually used in the marketing of olive and some other fruit crops such as peaches, grapes, figs and almonds. In this marketing pattern, traders inspect the farm before fully ripening process period , where the contract between the producer and the merchant has been done to pay the provider of the price of the crop depending on the agreed value under the account of this crop. The merchant bears all marketing costs of collection, harvesting, sorting and packaging costs and transportation fees and commission sales in the wholesale markets in addition to guarding the crop costs and other incidental expenses during the period of collection, harvest, and the receipt of the crop. Farmers resort to this method for the unavailability of cash they have, and the lack of sources of funding, soft interest, or the absence of unions or cooperatives based marketing cooperative. As shown from Table (1) number of wheat farmers who were marketing their crop in this way had reached 13 representing about 22.8% of the total number of wheat farmers in a survey sample, the number of cantaloupe farmers was 12, representing about 34.3% of the total cantaloupe farmers in sample study, and the number of olive farmers was 14, representing about 18.4% of the total number of olive farmers in the sample. While number of farmers of wheat, olives and cantaloupe who are marketing their crop in this way was 39 farmers stood up representing 23.2% of the total number of farmers within the Bedouin in field study sample in central Sinai during the agricultural season 2014/2015.

1-4 Selling for retailers

In this approach, farmers sell the crop directly to a local merchants or retailers in the same area or neighboring provinces, and bear farms costs of collection and harvesting, sorting, packing and transport costs and shipping operations. Farmers - especially small ones - resort to this method when they find difficulty in marketing their crops for the lower prices offered by wholesalers. It is obvious from Table (1) that number of wheat farmers who were marketing their crop by this way amounted to 17 farmers representing about 12.3% of

the total wheat farmers, which surveyed in a study sample. The table shows also that, the number of cantaloupe farmers was six at a rate of about 17.1% of the total cantaloupe farmers in the study sample and the number of olive farmers was eight stood at about 10.5% of the total number of olive farmers in the field study sample. While the total number of farmers of wheat, olives and cantaloupe who marketed their crops by this approach was 31 farmers and reached about 18.4% of the total number of farmers in the field study sample for the three crops, which were 168 farmers.

1-5- household consumption

This approach is specialized for cereal crops and legumes cultivated in central Sinai, "wheat, barley, lentils and Broad Bean" and in particular for small farmers, where the farmer harvests the crop, packs and stores the needs of his family of cereals, which are enough for him for a year, then sells the surplus for the family need to a local wholesalers or retailers or merchants. Table (1) pointed out that, the number of wheat farmers who do this method amounted to 15 farmers, representing about 26.3% of the total sample of wheat farmers in the field study, and about 9% at the level of farmers' field study sample.

2- Marketing pathways of crops in central Sinai study sample during the agricultural season 2014/2015:

Studying marketing pathways and marketing approaches of study sample crops "wheat, olives and cantaloupe" in El-Hassana and Nakhl regions in central Sinai during the growing season 2014/2015 show that:

2-1. Wheat crop :

Table (2) and shape (1) show that the wheat crop area of the farmers in field study sample which was 57 farmers, amounted to about 288.9 acres, the average productivity per acre was about 0.400 tons, and the produced quantity reached about 115.6 tons of the study sample, while the consuming quantity reached about 12.9 tons, accounting for about 11.2% of the produced quantity. It is also obvious that, the volume of marketing waste which was deducted for leased workers was approximately 11.6 tons, at a rate of about 10% of total production, while the marketed quantity reached about 91.1 tons accounted for about 78.8% of the total produced quantity. The marketed quantity of wheat was distributed to sell the farm delivery by about 26.9 tons, accounting for about 29.5% of the total quantity of production marketer, and about 36.5 tons, accounting for about 40.1% of the total quantity marketed sold through wholesalers, while the volume of sales to retailers was about 27.7% tons represent about 30.4% of the total quantity of production marketer of wheat crop on the study sample level.

2-2. Cantaloupe crop:

Data in Table (3) and Figure (2) showed that, the crop area of cantaloupe with farmers in the field study sample (35 farmers) had reached about 22.3 acres, the average productivity per acre was about 5.6 tons, and the produced quantity reached about 124.9 tons of the total study sample. While the consumed amount was about 1.8 tons representing about 1.4% of the produced quantity, and the volume of marketing waste which was deducted for leased labor was approximately 23.7 tons of about 19% from the produced quantity, while the marketed quantity reached about 99.4 tons for about 79.6% of the total produced quantity. It is clear also that, the marketed quantity of Cantaloupe crop was distributed to sell in wholesale markets at about 24.9 tons by 25.1% of the total marketed quantity and about 23.5 tons (23.6%) to sell farm gate, and 32.4 tons (32.6%) to sell to wholesalers, and about 18.6 tons (18.7 %) on selling at retailers level, in the study sample in the season 2014/ 2015.

Table (2): The produced, consumed and marketed quantities and wastage marketing and marketing pathways for wheat, with a field study sample farmers, in El-Hassana and Nakhla regions, during 2014/2015 season.

Area "acres"	Productivity "ton/ acres"	Produced quantity "ton"	Consumed Quantity "ton"	%	Marketed quantity "ton"	%	waste quantity "ton"	%
288.9	0.400	115.6	12.9	11.2	91.1	78.8	11.6	10.0
Marketing Pathways								
Farm- gate selling		**Selling to wholesalers**			**Selling for retailers**			
ton	%	ton	%		ton	%		
26.9	29.5	36.5	40.1		27.7	30.4		

Source: collected and calculated from: questionnaires of a field study sample in El-Hassana and Nakhl regions in central Sinai, during the agricultural season 2014/2015.

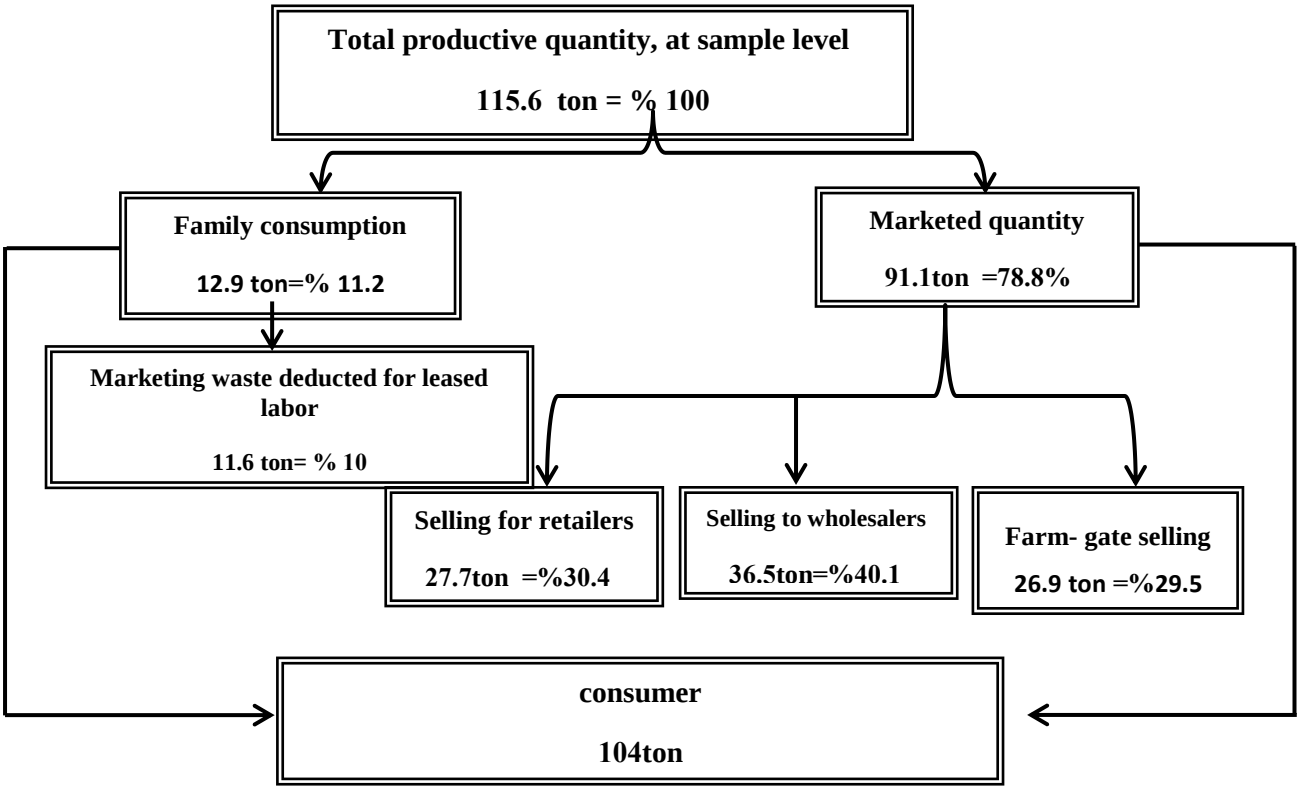

Fig.(1): Pathways and marketing channels of wheat for farmers in the study sample.
Source: field study Sample in central Sinai 2014/2015.

Table (3): The produced, consumed and marketed quantities and wastage marketing and marketing pathways for cantaloupe, with a field study sample farmers, in El-Hassana and Nakhla regions, during 2014/2015 season.

Area "acres"	Productivity ton/ acres ""	Produced quantity "ton"	Consumed Quantity "ton"	%	Marketed quantity "ton"	%	waste quantity "ton"	%
22.3	5.6	124.9	1.8	1.4	99.4	79.6	23.7	19.0
Marketing Pathways								
Selling in wholesale markets		**Farm- gate selling**		**Selling to wholesalers**		**Selling for retailers**		
ton	%	ton	%	ton	%	ton	%	
24.9	25.1	23.5	23.6	32.4	32.6	18.6	18.7	

Source: collected and calculated from questionnaires of a field study sample in central Sinai, during the agricultural season 2014/2015.

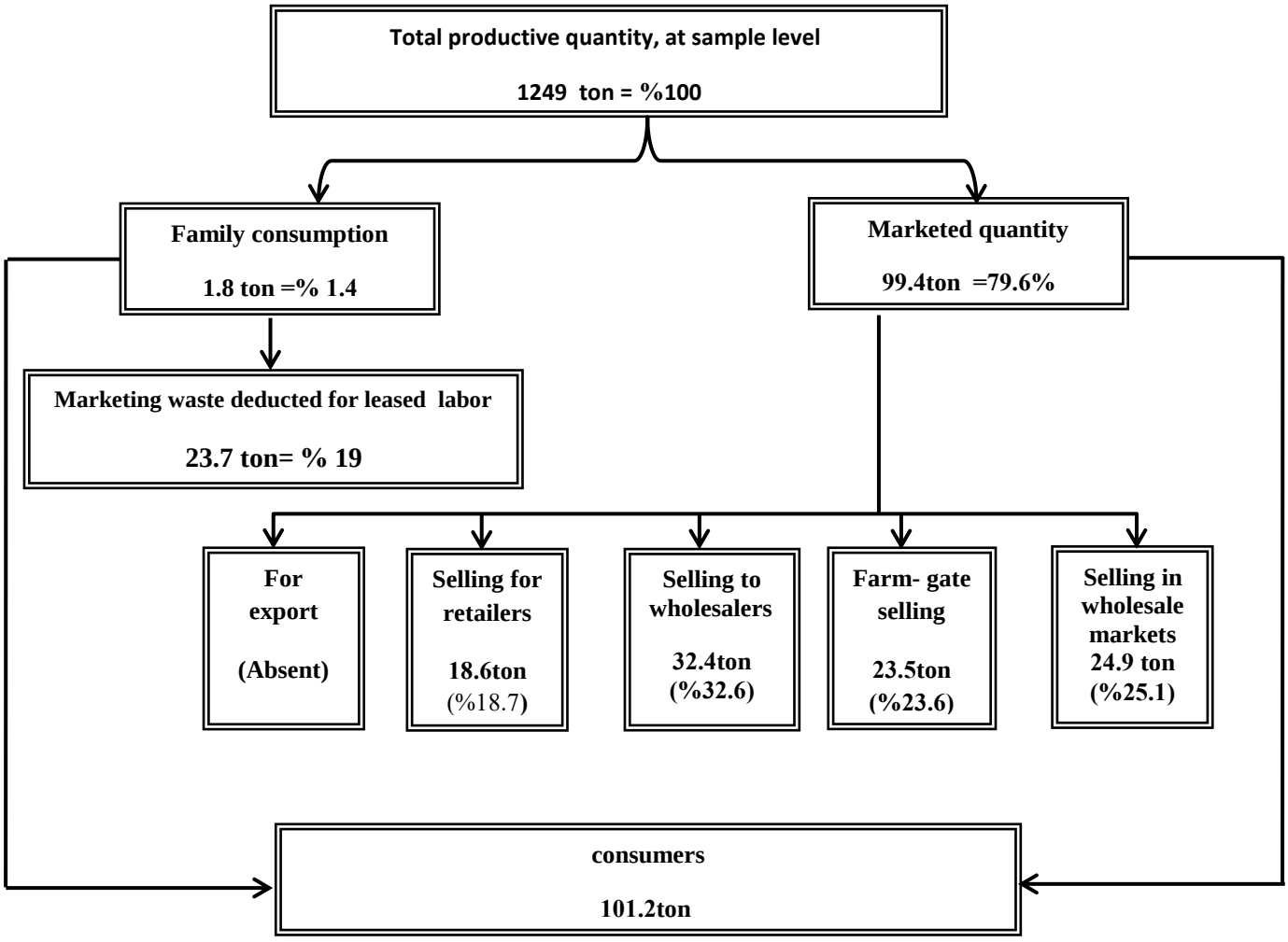

Fig.(2): Pathways and marketing channels of cantaloupe for farmers in the study sample
Source: field study Sample in central Sinai 2014/2015.

2-3. Olive crop:`

Data in Table (4) and Figure (3) showed that the olive crop area of farmers in the field study sample in central Sinai during the 2014/2015 season's (76 farmer) had reached about 471.2 acres and the average productivity per acre was about 2.5 tons, and the produced quantity reached to 1178 tons of the total study sample. The consumed amount was about 45.1 tons representing about 3.8% of the produced quantity, and the volume of marketing waste, which was deducted for leased labor, was about 189.2 tons, of about 16.1% of the produced quantity, while the marketed quantity reached about 943.7 tons for about 80.1% of the total produced quantity. It is clear also that, this marketed quantity was distributed to sell in wholesale markets at about 398.6 tons by 42.2% of the total marketed quantity and about 267.3 tons (28.4%)to sell farm delivery, and 194.5 tons (20.6%) to sell to wholesalers (farm gate), and about 83.3 tons (8.8%) on selling at retailers level, in the study sample of the season 2014/ 2015.

Table (4): The produced, consumed and marketed quantities and wastage marketing and marketing pathways for olive crop, with a field study sample farmers, in El-Hassana and Nakhla regions, during 2014/2015 season.

Area "acres"	Productivity "ton/ acres "	Produced quantity "ton"	Consumed Quantity "ton"	%	Marketed quantity "ton"	%	waste quantity "ton"	%
471.2	2.5	1178	45.1	3.8	943.7	80.1	189.2	16.1
Marketing Pathways								
Selling in wholesale markets		**Farm- gate selling**		**Selling to wholesalers**		**Selling for retailers**		
ton	%	ton	%	ton	%	ton	%	
398.6	42.2	267.3	28.4	194.5	20.6	83.3	8.8	

Source: collected and calculated from: questionnaires of a field study sample in El-Hassana and Nakhl regions in central Sinai, during the agricultural season 2014/2015.

3-Estimation of the marketing costs, of the study sample crops, in central Sinai during the 2014/2015 season

Marketing costs meant both fixed and variable costs incurred by the enterprise or marketing bodies for the acquisition of the necessary factors of production, while conducting its activity marketable commodity or a particular product from the producer to the consumer. Marketing costs of a commodity or service depend on the size and quality of services, processes and functions performed by brokers and agencies and marketing required by the consumer, the size and quality of the waste and damaged (qualitative or mechanical), how high and low prices of production inputs, and how near or after marketing production Centers (transportation cost), and the multiplicity of mediators during the course of marketing.

Table (5) showed marketing cost estimation for the field study sample crops (wheat, olives and cantaloupe) in El-Hassana and Nakhl regions in central Sinai during the agricultural season 2014/2015 as follows:

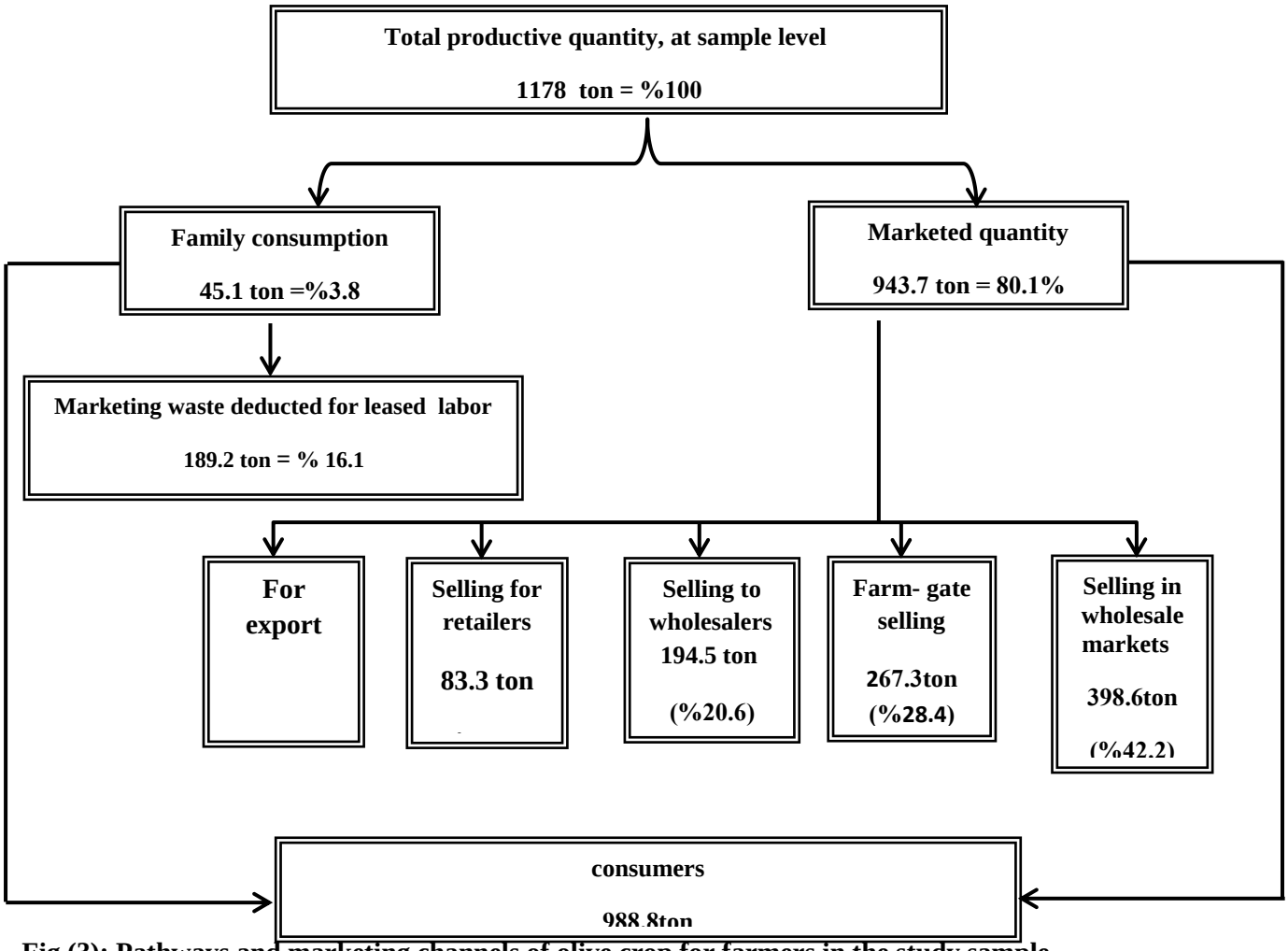

Fig.(3): Pathways and marketing channels of olive crop for farmers in the study sample

Source: field study sample in central Sinai 2014/2015.

3-1. Wheat crop- :

The trading and marketing of wheat crop harvest process includes operations; the price of packaging and loading the harvest, and transport costs, which were estimated in its entirety at about 700 pounds, accounting for about 88.6% of the total marketing costs (790 pounds / ton). While the commission of wholesaler and retailer amounted to about 65 pounds, accounting for about 8.2% of the total marketing costs, and the rest of the other costs which include (costs of internal transport, transport permit fees from the production to markets areas, and petty cash and gratuities) amounted to about 25 pounds represented about 3.2% of the total marketing costs per ton to the farmers of the study sample in central Sinai in 2014/2015 season.

3-2. Cantaloupe crop:

It includes trading and marketing of cantaloupe harvest, collection, sorting, grading and packaging costs, packing and loading containers and costs of transportation process, which has amounted to about 225 pounds, accounting for about 60% of the total marketing costs (375 pounds / ton). While the commission of wholesaler and retailer amounted to about 110 pounds, accounting for about 29.3% of the total marketing costs. And other costs were estimated at about 40 pounds, accounting for about 10.7% of the total marketing costs per ton to the cantaloupe farmers in the study sample.

3-3. Olive crop:

Trading and marketing of olive harvest includes combined operations; collection (picking) process, sorting, grading and price packages, packing and loading containers and transport costs, where the cost of these combined operations estimated at about 460 pounds, representing about 61.3% of the total marketing costs, which amounted to about 750 pounds / ton. While the commission of wholesaler and retailer reached about 205 pounds, accounting for about 27.4% of the total marketing costs. Other costs were estimated at about 85 pounds, representing about 11.3% of the total marketing costs per ton, and on the level of the field study sample farmers in central Sinai during the 2014/2015 season.

Table (5): Estimation of the marketing costs of crops (wheat, olives and cantaloupe) with farmers of field study sample in central Sinai during the agricultural season 2014/2015.

crop / cost items	wheat		cantaloupe		olives	
	costs "Ton/pounds"	%	costs "Ton/pounds"	%	costs "Ton/pounds"	%
Harvesting	600	76.0	75	20.0	250	33.3
Sorting	-	-	10	2.7	50	6.7
The price of containers	20	2.5	50	13.3	70	9.3
Packing and loading containers	20	2.5	30	8.0	30	4.0
Transportation costs	60	7.6	60	16.0	60	8.0
Wholesaler commission	25	3.2	35	9.3	75	10.0
Retailer commission	40	5.0	75	20.0	130	17.4
*Other costs	25	3.2	40	10.7	85	11.3
Total marketing costs	790	100	375	100	750	100

*Include: internal transport, traffic permits, fees, market fees, commission connotation, petty cash and perks" .

Source: collected and calculated from questionnaires of a field study sample through the 2014/2015 season.

4. Marketing efficiency of study sample crops in central Sinai in 2014/2015 season:

"Marketing Efficiency" expresses for the ratio between the input and output in the marketing process. Its inputs were represented in various economic resources used in marketing channels, and the outputs represent the extent of saturation, which is obtained by the consumer goods and services.

Marketing efficiency is measured by using the following equation:

Marketing Efficiency = 100 - (marketing costs / (marketing costs + production costs) × 100 [6,7]

Table (6) showed that the production and marketing costs of wheat crop at farmers of field study sample, in El-Hassana and Nakhl regions in central Sinai during the 2014/2015 season, had reached about 1353 and 790 pounds per ton, respectively. The table showed that the marketing efficiency of wheat amounted to about 63.1%, which indicates that marketing costs were lower than production costs for wheat. While total production and marketing costs of the cantaloupe crop farmers sample were about 498 and 375 pounds per ton, respectively, and the marketing efficiency reached to about 57% in the study sample of cantaloupe farmers in 2014/2015 season.

The table showed also that, production and marketing costs totaled to harvest olives in a study farmers sample were about 1175 and 750 pounds per ton, respectively, and the marketing efficiency reached of about 61% of a field study sample of olive farmers at El-Hassana and Nakhla regions through the 2014/2015 season.

Table (6): Estimation of marketing efficiency for ton of "wheat, olives and cantaloupe" among farmers of field study sample in central Sinai during the agricultural season 2014/2015 .

crop / item	wheat	cantaloupe	olives
Production costs "per ton"	1353	498	1175
Marketing costs "per ton"	790	375	750
Total production and marketing costs, "ton"	2143	873	1925
Marketing efficiency %	63.1	57.0	61.0

Source: collected and calculated from questionnaires of a field study sample through the 2014/2015 season.

5- The most important marketing problems facing the Bedouin farmers at the level of El-Hassana and Nakhl regions in central Sinai:

The study focused primarily on identifying problems and marketing constraints faced by the Bedouin farmers in El-Hassana and Nakhl regions in central Sinai, which may reflect negatively on the marketing efficiency of agricultural crops. Through the questionnaire and personal interview, with a sample of farmers and producers in central Sinai, possible inventory of the most important marketing problems they face are as follows:

5-1. Problems concerning markets, including- :

5-1-1. Low sale prices of agricultural products and no-immediate payment for the crop price .

5-1-2. Lack of local wholesale markets in El-Hassana and Nakhl region.

5-1-3. Lack of marketing information to the farmers, especially, information on prices and the supply in markets.

5-1-4. Lack of markets, specialized for exporting agricultural products, which are characterized by the Center Sinai region in production, such as olive and some vegetable crops, especially as it is of clean and organic cultivation.

5-2. Problems concerning traders and brokers including:

5-2-1. Govern the merchants to accept or reject agricultural crops by their quality for fruit and vegetable crops.

5-2-2. Monopoly wholesalers and their control in prices especially those who provide advances and loans to farmers for the supply of the crop.

5-2-3. high rate of commission to brokers in wholesale markets.

5-3. Problems concerning transfer of crops and other marketing operations including- :

5-3-1. Difficulty and high cost of transportation for after markets in central Sinai production regions.

5-3-2. Lack of proper transportation and fitted chillers and refrigerators.

5-3-3. Rising prices of containers and cages to collect crops.

5-3-4. Poor condition of the roads from the production areas to major markets, and difficult transport especially in light of the current circumstances in the Sinai mobility.

5-3-5. Lack of experience and skill-based employment in harvest operations, collection, sorting and grading specially for fruit crops.

Through the questionnaire and describing the results, it is clear from table (7) that the marketing problems facing field study sample farmers (168 farmer), can be divided into three main groups, according to their relative importance and therefore priority from the standpoint of the respondents which are specialized for*;* the markets, traders, brokers and problems of the transfer of crops and other marketing operations. Under these three problems, there are many marketing problems which are arranged in the table according to the relative importance of the occurrences of each problem separately from the total repetitions for each set. It can refer to the table to get to know the order of these problems, according to priority. Generally, total repetitions of each group refer to the special problems of the market. Lower prices come in the first rank of the concerns of farmers in the study sample, followed in importance those of the transfer of the crop problems and other marketing operations, then problems related to traders and brokers in third place. The total repetitions of these groups has reached separately 435,427,385 with a relative importance of the total of all repetitions, for all types of problems amounted to about 34.9%, 34.2%, 30.9% respectively. After referring to the marketing problems facing the Bedouin farmers sample study, according to the division mentioned groups, you can identify marketing problems classified under these groups in detail, so that it can be studied and problems can be arranged according to their importance and priority . In order to know each of them seen more urgent and has the first interest from the point of the farmers view, and by reference to the data in the table (7) it is clear that; the problem of low sale prices for crops and the lack of inter nearby markets, high transportation costs, has been ranked in the first, second and third relative importance amounted to about 13.5%, 13.2%, 13.0% respectively of the total repetitions (1247). Those problems, followed in relative importance by, governing traders in the purchase of the crop and the lack of prompt payment for the price of the crop, then the problem of the high commission rates in the wholesale markets, then the problem of governing traders in the purchase price of the crop, with the relative importance of about 12.2%, 9.9%, 8.8% respectively of the whole total repetitions. Then comes the problem of the poor condition of the roads from the production areas to markets and centers of consumption, followed by the problem of lack of marketing information especially about the price, then the problem of the lack of means of transport and the relative importance of about 7.8%, 5.8%, 5.7% respectively of the total repetitions. Then, problems of very high prices, and the lack of trained labor to sorting and packing and grading, followed and in last place the problem of non-availability of markets for the export of crops from central Sinai, and the relative importance of 4.6%, 3.1%, 2.4% each, respectively, of the whole total repetitions.

As the data shown in the table (8) to chi squared test results (X^2) for the most important marketing problems facing farmers in El-Hassana and Nakhl regions in Central Sinai, which explains statistically significant relationship at 1% probability level for all market problems, and problems concerning with transportation and other marketing processes, and at 5% level for a group of problems for traders and brokers.

With regard to the results of the chi square (X^2) test for all types of marketing problems, the results showed that there was statistically significant relationship at the 1% level between the 12 marketing problems. The significance of differences between the problems, can be explained at the level of each group separately, or at all sorts of problems, to the lack of equality of the problems in their importance, and that there are marketing problems having greater priority and importance to the Bedouin farmers of central Sinai than others. The problems had been arranged in the review according to the relative importance from the point of view of Bedouin farmers and producers in central Sinai.

Table (7): The most important marketing problems facing farmers of field study sample in El-Hassana and Nakhl regions in central Sinai during 2014/2015 season.

Types of problems	frequency	Relative importance			
		for each group separately	rankings	for all kinds of problems	ranking
I. problems concerning markets					
1- lack of wholesale markets close to production areas	165	37.9	2	13.2	2
2- low sale prices of crops especially of fruits and vegetables.	168	38.6	1	13.5	1
3- lack of marketing information	72	16.6	3	5.8	8
4- lack of export markets	30	6.9	4	2.4	12
total	**435**	**100**		**34.9**	
II. problems concerning the traders and brokers					
1. Traders govern to buy the crop by quality.	152	39.5	1	12.2	4
2 Traders govern in the purchase price of the crop	110	28.6	3	8.8	6
3. The high commission rate	123	31.9	2	9.9	5
total	**385**	**100**		**30.9**	
III problems concerning transport and other marketing operations					
1-High transport costs	162	38	1	13.0	3
2- Lack of proper transportation and fitted	71	16.6	3	5.7	9
3- Rising prices of packages	57	13.3	4	4.6	10
4- Bad roads from the production areas to markets	98	23.0	2	7.8	7
5- Lack of skilled labor on the sorting and grading operations	39	9.1	5	3.1	11
Total	**427**	**100**		**34.2**	
Total of all	**1247**	**-**	**-**	**100**	

Source: collected and calculated from: questionnaires of a field study sample in El-Hassana and Nakhl regions in central Sinai, during the agricultural season 2014/2015.

Table (8): Results of the chi square test (X^2) to the most important marketing problems facing the edouin farmers in central Sinai 2014/2015 season

problems	degrees of freedom	calculated X^2	tabulated X^2		significance
			%5 significance	%1 significance	
problems concerning markets	3	15.9	7.8	12.5	%1
problems concerning the traders and brokers	2	9.6	7.8	11.4	%5
problems concerning transport and other marketing operations	3	32.5	6.2	10.7	%1
all types of marketing problems	12	101.5	24.9	30.2	%1

Source: collected and calculated from questionnaires of a field study sample through the 2014/2015 season.

6. The most important proposals of solutions for marketing problems facing farmers Bedouin in central Sinai region:

Basing on the previous mentioned marketing problems, study suggests some solutions to these problems, which may help to ease them for producers of crops and vegetables in central Sinai region. These proposals are as follows:

6.1. Establishment of collection centers for Agricultural Crops in central Sinai-

These centers will be equipped by coolers and refrigerators, and stations for sorting, grading, packing and packaging of horticultural crops and vegetables. These centers will be attached by the work of the cardboard factory and plastic cages, reticulate sacks and transport fleet. Because the collection and harvesting of agricultural crops in the central Sinai is usually at the same time, it would lead to an increase in supply and thus lower prices. The establishment of such centers will lead to the organization of supply throughout the year and thus achieve the best price for rewarding farmers Bedouins in central Sinai. The intensity of production, roads and communities areas of collection centers must be taken into consideration when creating these centers.

6.2 Establishment of a joint stock company for the marketing and export of fruit and vegetable crops in central Sinai region:

The establishment of this company will contribute to a large extent in eliminating the problem of marketing of agricultural crops in central Sinai. Producers, exporters and the Federation of Exporters of Horticultural Crops in Egypt will participate in the establishment of this company. It is worth noting that the study surveyed in this regard saw a great agreement of farmers with a total number of 165 farms importance accounted for about 98% of the study sample phrase on the company. It will be able to advance planning for production, any pre-engagement with the producers and farmers, and in the solution for most of the current problems of farmers. On this basis, the company contracts with producers to buy their crops, contracting with exporters to supply their needs, contracting with importers directly, and also to carry out sorting and grading and packing of the products, as the company can manufacture overstocks sorting of agricultural and marketing crops locally on other provincial level.

6-3 Create units of agricultural industrialization in central Sinai:

The results of the field study showed the high volume of marketable surplus crops horticultural, which estimated its relative importance of about 97.8% of the total production of horticultural crops. That, in view of the limited demand for this surplus in central Sinai as a result of declining population on the one hand and non-existence of plants to absorb the surplus on the other hand, making farmers fall under penalty of traders (wholesale and retail), which necessitating the need for manufacturing as much of this surplus in central Sinai area. This proposal can be carried out by:

6-3-1- investors which are invited to create a multi-purpose factories to manufacture much of the surplus horticultural crops as vegetable juices, jams and making peach compute, as well as pickled olives and extracting oil along with manufacturing and packing palm products as dates and pressed .

6-3-2- encourage a small craft industries by young graduates to establish a low-cost manufacturing units for olive press and manufacturing dates, jam and juice and tomato sauce.

6-3-3- provide the benefits of soft loans through government and non-governmental lending institutions to encourage the establishment of small craft industries on horticultural crops and vegetation.

6-3-4- civil society organizations, represented in associations and organizations as well as governmental action, make programs to educate and train the families of producers to do such industries. Proceeds, realized from the implementation of this proposal, will increase net returns to producers of agricultural products as a result of absence of exploit them from traders, and bring added value as a result of processing those crops with increased employment opportunities for young people in central Sinai.

6-4- Work to provide necessary transportation to reduce the distance between the centers of production and consumption centers.

6-5- Activating the role of cooperatives, extension and marketing in central Sinai region.

6-6- Production support for export*:*

That is by strengthening the knowledge, attitudes and skills related to private agricultural operations transactions post-harvest to achieve export targets, as well as provide economic and technical support to farmers Bedouins in central Sinai.

Data in table (9) showed the most important solutions and proposals on the table to solve marketing problems facing farmers in central Sinai region, which may help greatly in raising the marketing efficiency of agricultural crops in central Sinai. It is clear that proposal of the establishment of private joint-stock company for the marketing and export of agricultural crops has occupied ranked first with a total number of repetitions reached 165 and represent about 17.8% of the total number of repetitions of 926. It was followed the proposed by the work on the provision of transport by about 153 agreement by about 16.5% of the total number of repetitions, and then the propose to activate the role of marketing cooperatives by 16.1 %, and the proposal to create an assembly Agricultural Crops centers by 15.8%, then the proposal to encourage the craft industries such as olive pressing and Pressed and manufacture of jams, ketchup and juices by 125 represents about 13.5%, followed by the establishment of units of agricultural industrialization by about 12.1%, comes in last place the proposal to support production for export and about 76 represent about 8.2% of the total number of repetitions.

Table (9): The most important solutions and proposals on the table to solve marketing problems facing farmers in central Sinai during the 2014/2015 season.

Solutions and Proposals	Frequency	%	Ranking
- Establishing collection centers of agricultural crops**.**	146	15.8	4
- Establishment of joint stock company for the marketing of agricultural products.	165	17.8	1
- Establishment of units of agricultural industrialization in central Sinai.	112	12.1	6
- Encourage the establishment of small craft industries "olive press, manufacturing dates, tomato sauce and juice. "	125	13.5	5
- Work on the provision of transport.	153	16.5	2
- Activating the role of agricultural marketing cooperative societies..	149	16.1	3
- Production support for export.	76	8.2	7
total	926	100	-

Source: collected and calculated from questionnaires of a field study sample through the 2014/2015 season.

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