

## Marketing Channels of Mango and Grapes in Fayoum Governorate, Egypt

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**Abstract:** To analyze marketing channels of Mango and Grapes in Fayoum Governorate, Egypt. Simple random sampling technique was employed in selecting the sample size for the study, in all a total sample size of 247 marketers were interviewed regarding marketing their produce through four different channels; Channel A (Producer- Consumer), Channel B (Producer- Commission merchant – Consumer), Channel C (Producer-Retailer- Consumer) and Channel D (Producer- Wholesaler before harvesting the crop- Retailer- Consumer. It was found that the marketing efficiency is generally low; this is due to the high marketing costs, marketing losses and the large number of intermediaries without providing suitable marketing. Channel A has achieved the highest marketing efficiency for Mango and Grapes. Channel B has achieved the highest marketing efficiency for Grapes. Several marketing problems of mango and grapes in Fayoum such as: the high percentages of product losses, high costs of marketing services. The study recommended that reducing the marketing margins by reducing the number of Intermediaries and Following the marketing channel A or B to reduce the marketing cost.

**Keywords:** Marketing channels, Mango, Grapes, costs, margins, Egypt

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### I. Introduction

Fruits are referred to as horticultural crops, which play a significant role in developing countries, both in income and social spheres for improving its income and nutrition status. In addition to that, it provides employment opportunities as their management being labour intensive, production and marketing of these commodities should be encouraged in labour abundant and capital scarce countries [1].

Fruits have a great importance for agricultural production in Fayoum; the total cultivated area for fruits represented 7.85% (32.5 thousand feddans) of the total cultivated area in Fayoum (413.9 thousand feddans) as an average from 2015 to 2019. Mango and Grapes represent good portion of fruits area in Fayoum, the total cultivated area with Mango and Grapes in Fayoum represented 3.1% (7.7 thousand feddans), 0.63% (1.14 thousand feddans) respectively of the total cultivated area with Mango and Grapes in Egypt as an average from 2015 to 2019 [2].

Fayoum is considered one of the most important governorate for producing Mango and Grapes in Egypt; because it has several factors which support its competitive ability, represented in production efficiency and the geographical location is close to the main markets. However, marketing system of Mango and Grapes in Fayoum is very traditional; that fruits have long been regarded as minor crops and thus, have attracted little marketing attention, in favor of major crops and cash crops. Also, there is bad performance in the marketing channels and marketing infrastructures thereby leading to a very high and unstable consumer pricing with little money getting to the producers. Also, many marketers are not professional in practicing market activities, because the marketing information is not available, which leads to Increase the marketing margins and marketing losses. Hence, the essence of the study is to analysis the marketing channels of Mango and Grapes in Fayoum.

The marketing system acts as a link between the producer and consumers through several channels: From the producer (farmer) to consumers directly; this resulted in decreasing the consumer's price, from the producer to retailer then to consumers and the producer to wholesaler after that to retailer finally to consumers; here the consumer's price is relatively high, due to the profits of wholesalers and retailers.

Marketing system of Mango and Grapes in Fayoum is similar to the previous marketing system; the producer acts as a retailer or a wholesaler, sometimes the producer sells the crop through commission merchant or by wholesaler before harvesting the crop.

The general purpose of the study was to analysis the marketing channels of mango and grapes in Fayoum, Egypt. Specifically, the purpose of the study is to; (i) determine the marketing costs, margins of the marketers and marketing efficiency, and (ii) describe the marketing problems of mango and grapes in Fayoum.

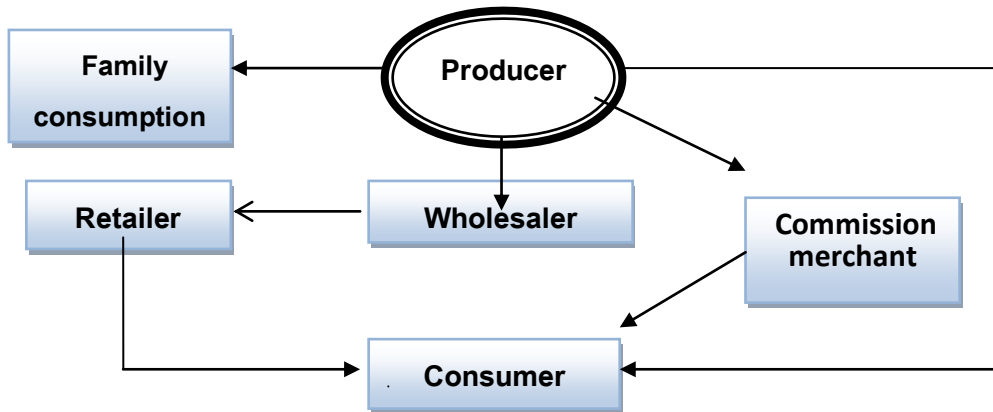
**II. Materials and Methods**

**Data source**

Primary data were collected from 247 marketers; Mango and Grapes wholesalers, retailers and commission merchants in Fayoum, Egypt, during 2019. The instrument for data collection included copies of structured questionnaires, were structured in line with the specific objectives of the study. Data tabulated and analyzed to provide concrete estimates.

**Sampling**

Simple random sampling technique was employed in selecting the sample size for the study, in all a total sample size of 247 marketers were interviewed regarding marketing of Mango and Grapes, found that; 121 Mango marketers (49% of the total sample) and 126 Grapes marketers (51% of the total sample) who sold their produce through the following marketing channels: **Channel A**; Producer (Retailer)- Consumer, **Channel B**; Producer- Commission merchant - Consumer, **Channel C**; Producer- Retailer- Consumer and **Channel D**; Producer- Wholesaler (before harvesting the crop)- Retailer- Consumer. The four marketing channels prevailing in the area under study are given below in fig. 1



**Fig. 1:** Marketing channels of Mango and Grapes in Fayoum

Out of the total 121 Mango marketers 31, 30, 30 and 30 marketers sold Mango through channel A, B, C and D respectively. Out of the total 126 Grapes marketers 30, 32, 32 and 32 marketers sold their Grapes produce through channel A, B, C and D respectively. Out of the total marketers under study, 61 (24.7 %) marketers sold their produce through channel A, 62 (25.1 %) marketers sold through channel B, 62 (25.1 %) sold through channel C and 62 (25.1 %) marketers sold through channel D. This is summarized in Table 1.

**Table 1:** Summary of the Study Sample

Marketing channels		Channel A	Channel B	Channel C	Channel D	Total
Mango	No of marketers	31	30	30	30	121
	% Mango Sample	25.6	24.8	24.8	24.8	100
	% Total Sample	12.6	12.1	12.1	12.1	49
Grapes	No of marketers	30	32	32	32	126
	% Grapes Sample	23.8	25.4	25.4	25.4	100
	% Total Sample	12.14	12.95	12.95	12.95	51
Total sample	No of marketers	61	62	62	62	247
	% Total Sample	24.7	25.1	25.1	25.1	100

**Source:** Directorate of supply. (2019). Registers of wholesale markets (unpublished data). Fayoum Governorate, Egypt [3].

**Data Analysis**

Descriptive statistics (such as means, percentages and frequency distribution) were used in analyze data collected. More so, marketing margin analysis, the Intermediaries' share in consumer's price and the marketing efficiency were employed to analyze the data collected.

**Marketing Margin Analysis (MMA)**

This descriptive tool was used in determining the efficiency or the costs and returns analysis of the selected marketers. Marketing margin is the difference between the price paid by the ultimate consumer and the

price received by the producer, or the difference between the producer price (farm gate price) and the retail price, adopted the method of deducting the purchase price from the consumer price. It is pertinent to note that marketing margin is widely adopted by researchers because of its simplicity and easiness in computation [4]. It is also known as the difference between the consumer price and the marketing cost [5]. It can be expressed below;

$$MM = CP - MC \quad \text{or} \quad MM = MC + MP$$

Where;

MM; Marketing Margin,

CP; Consumer Price,

MC; Marketing Cost.

$$MP; \text{Marketing profit} = CP - (MC + \text{Producer Price}) = MM - MC.$$

The marketing costs refers to the total value of marketing services which performed by the producer (farmer). The producers' share of the retail price is the retail price less the value of the wholesale and retail marketing margins.

$$\text{Marketing efficiency \%} = 100 - (\text{Absolute marketing margin (EGP)} / (\text{Absolute marketing margin (EGP)} + \text{production costs per ton}) * 100$$

### III. Results and Discussion

#### Marketing costs and margins of mango and grapes marketers

From the study, a good number of services rendered by producers such as harvesting, transportation of the product (from the farm gate to where they are marketed), loading and off-loading, sorting, grading, packing and distribution to consumers.

#### Channel A (Producer- consumer directly)

In this channel, it is pertinent to note that the producers (farmer) interviewed performed dual marketing roles as either producers or retailer; the producer sells the crop to consumers from the nest that he established it on roads. Sometimes, he transfers the crops (by his wife and his children) to the markets and then to consumers.

Table 2 shows, total marketing costs in channel A comes to 1666 EGP/ton for Mango and 1609 EGP/ton for Grapes, therefore the share of marketing costs in consumer's price is 13%, 18% for Mango and Grapes respectively. It shows also marketing margin comes to 4199 EGP/ ton for Mango, but comes to 2910 EGP/ ton for Grapes. The share of marketing margin in price which paid by consumer is 31.84%, 32.33% for Mango and Grapes respectively. As table 3 indicates, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango in channel A are 28%, 39% and 56% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes in channel A are 26%, 35% and 63% respectively.

**Table 2:** Average marketing costs and margins of mango and grapes in marketing channel A

Purchase price components	Mango			Grapes		
	EGP /ton	% from total margins	Distribution of consumer's price	EGP /ton	% from total margins	Distribution of consumer's price
Producer price (Farm price)	8987	-	68.15	6089	--	67.66
Harvesting costs	399	9.5	3.02	439	15.08	4.87
Sorting & grading costs	211	5.02	1.6	189	6.49	2.10
Packing costs	99	2.35	0.75	88	3.02	0.97
Packing packages	199	4.73	1.5	199	6.83	2.21
Loading and unloading costs	149	3.54	1.12	131	4.5	1.45
Transportation costs	311	7.4	2.35	230	7.9	2.55
Distribution costs	199	4.73	1.5	230	7.9	2.55
Plastic bags	99	2.35	0.75	100	3.43	1.11
<b>Marketing costs</b>	<b>1666</b>	<b>39.66</b>	<b>12.63</b>	<b>1610</b>	<b>55.18</b>	<b>17.84</b>
<b>Marketing profit</b>	<b>2534</b>	<b>60.33</b>	<b>19.21</b>	<b>1304</b>	<b>44.81</b>	<b>14.49</b>
<b>Marketing margin</b>	<b>4199</b>	<b>100</b>	<b>31.84</b>	<b>2910</b>	<b>100</b>	<b>32.33</b>
<b>Consumer price</b>	<b>13187</b>	<b>-</b>	<b>100</b>	<b>8999</b>	<b>--</b>	<b>100</b>

Source: Analysis of the study field data, 2019.

**Table 3:** Marketing efficiency of mango and grapes in marketing channel A

Marketing efficiency	Mango	Grapes
Production costs (EGP/ ton)	4789	3987
Producer price (EGP/ ton) (1)	8987	6089
Consumer price (EGP/ ton) (2)	13187	8999

Product losses Kg/ Ton	79	87
Conversion factor per Ton (3)= 1000/ amount without losses	1,086	1,095
Producer price after converting it (EGP/ ton) (4) = (1) * (3)	9490	6669
Absolute marketing margin (EGP) (5) = (2 -4)	3697	2330
Intermediaries' share in consumer's price % (6) = (5/2) 100	28	26
Producer's share in consumer's price % = (100 - 6) = (4/2) 100	72	74
The rate of price increase % = (5/4) 100	39	35
Marketing efficiency % = 100 - (5/ (5+ production costs per ton) * 100	61	63

**Source:** Analysis of the study field data, 2019.

### **Channel B (Producer- Commission merchant- Consumer)**

Channel B reveals that the crop moves from producer (farmer) to consumers through commission merchant, to reach the consumer more easily. In this channel, in addition to marketing costs, the producer (farmer) pays a commission to the commission merchant, and the producer resorts to this channel because his lack of experience in marketing, he does not have time, or a desire to obtain a higher price that the commission dealer achieves for him.

Table 4 shows, total marketing costs in channel B comes to 1933 EGP/ton for Mango and 1715 EGP/ton for Grapes, therefore the share of marketing costs in consumer's price is 14%, 18% for Mango and Grapes respectively. It shows also that marketing margin comes to 4802 EGP/ ton for Mango, but comes to 3543 EGP/ ton for Grapes. The share of marketing margin in price which paid by consumer is 34.83%, 36.78% for Mango and Grapes respectively. It is clear from Table 5, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango in channel B are 30%, 43% and 54% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes in channel B are 31%, 44% and 60% respectively.

### **Channel C (Producer- Retailer - Consumer)**

Channel C shows that producer (farmer) brings the crop to retailer then the retailer sells it to consumers. In this channel, the farmer neither plays the role of retailer nor uses the commission merchant.

#### **-Producer to Retailer**

When the producer sells the crop to the retailer in channel C, Table 6 indicates, total marketing costs comes to 974 EGP/ton for Mango and 981 EGP/ton for Grapes, therefore the share of marketing costs in consumer's price is 7%, 9.7% for Mango and Grapes respectively. While Table 7 indicates, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 13%, 15% and 77% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 18%, 23% and 73% respectively.

**Table 4:** Average marketing costs and margins of mango and grapes in marketing channel B

Purchase price components	Mango			Grapes		
	EGP /ton	% from total margins	Distribution of consumer's price	EGP /ton	% from total margins	Distribution of consumer's price
Producer price	8987	--	65.17	6089	--	63.22
Harvesting costs	311	6.47	2.25	369	10.41	3.83
Sorting & grading costs	177	3.68	1.28	159	4.48	1.65
Packing costs	77	1.6	0.55	65	1.83	0.67
Packing packages	187	3.89	1.35	147	4.14	1.52
Loading and unloading costs	123	2.56	0.89	123	3.47	1.27
Transportation costs	289	6.01	2.09	165	4.22	1.71
Distribution costs	159	3.31	1.15	187	5.27	1.94
Plastic bags	111	2.31	0.8	123	3.47	1.27
Commission agent's fee	499	10.39	3.61	377	10.64	3.91
<b>Marketing costs*</b>	<b>1933</b>	<b>40.26</b>	<b>14.01</b>	<b>1715</b>	<b>48.41</b>	<b>17.8</b>
<b>Marketing profit</b>	<b>2869</b>	<b>59.74</b>	<b>20.8</b>	<b>1828</b>	<b>51.59</b>	<b>18.97</b>
<b>Marketing margin</b>	<b>4802</b>	<b>100</b>	<b>34.83</b>	<b>3543</b>	<b>100</b>	<b>36.78</b>
<b>Consumer price</b>	<b>13789</b>	<b>--</b>	<b>100</b>	<b>9632</b>	<b>--</b>	<b>100</b>

\*Marketing costs = the total value of marketing services which performed by the producer + commission agent's fee.

**Source:** Analysis of the study field data, 2019.

**Table 5:** Marketing efficiency of mango and grapes in marketing channel B

Marketing efficiency		Mango	Grapes
Production costs (EGP/ ton)		4789	3987
Producer price (EGP/ ton)		8987	6089
Consumer price (EGP/ ton)		13789	9632
Product losses Kg/ Ton		69	89
Conversion factor per Ton		1,0741	1,0976
Producer price after converting it (EGP/ ton)		9652	6683
Absolute marketing margin (EGP)		4137	2949
Intermediaries' share in consumer price %		30	31
Producer's share in consumer price %		70	69
The rate of price increase %		43	44
marketing efficiency %		54	60

**Source:** Analysis of the study field data, 2019.

#### **-Retailer to Consumer**

When the retailer sells the crop to consumers in channel C, Table 6 shows, total marketing costs comes to 1178 EGP/ton for Mango and 1051 EGP/ton for Grapes, therefore the share of marketing costs in consumer's price is 8.5%, 9.4% for Mango and Grapes respectively. Table 7 shows, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 17%, 21% and 66% respectively. It shows also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 17%, 20% and 70% respectively.

**Table 6:** Average marketing costs and margins of mango and grapes in marketing channel C

Purchase price components		Mango			Grapes		
		EGP /ton	% from total margins	Distribution of consumer's price	EGP /ton	% from total margins	Distribution of consumer's price
Producer to Retailer	Producer price	8987	--	64.84	6089	--	60.32
	Harvesting costs	358	7.34	2.58	369	9.21	3.65
	Sorting & grading costs	123	2.52	0.88	123	3.07	1.21
	Packing costs	147	3.01	1.06	166	4.14	1.64
	Packing packages	147	3.01	1.06	123	3.07	1.21
	Transportation cost to retailer	199	4.08	1.43	200	4.99	1.98
	Marketing cost (producer) (1)	974	19.98	7.02	981	24.49	9.71
	Marketing profit (producer) (2)	956	19.61	6.89	699	22.44	8.9
Retailer to Consumer	Retailer price	10917	--	78.76	7769	--	78.94
	Transportation cost to consumer	211	4.32	1.52	199	4.96	1.97
	Road-tolling	22	0.45	0.15	19	0.47	0.188
	Loading and unloading costs	223	4.57	1.6	247	6.16	2.44
	Distribution costs	258	5.29	1.86	231	5.76	2.28
	Plastic bags	199	4.08	1.43	99	2.47	0.98
	Other fees	265	5.43	1.91	256	6.39	2.53
	Marketing cost (retailer) (3)	1178	24.16	8.49	1051	23.74	9.42
	Marketing profit (retailer) (4)	1766	36.23	12.74	1174	29.31	11.63
<b>Marketing costs (1+3)</b>	<b>2152</b>	<b>44.16</b>	<b>15.52</b>	<b>2032</b>	<b>48.24</b>	<b>19.14</b>	
<b>Marketing profits (2+4)</b>	<b>2722</b>	<b>55.84</b>	<b>19.63</b>	<b>1873</b>	<b>51.76</b>	<b>20.53</b>	
<b>Marketing margin</b>	<b>4874</b>	<b>100</b>	<b>35.16</b>	<b>3905</b>	<b>100</b>	<b>39.68</b>	
<b>Consumer price</b>	<b>13861</b>	<b>--</b>	<b>100</b>	<b>10035</b>	<b>--</b>	<b>100</b>	

**Source:** Analysis of the study field data, 2019.

#### **-Producer to Consumer directly**

When the producer sells the crop to consumers directly in channel C, Table 6 indicates, total marketing costs comes to 2152 EGP/ton for Mango and 2032 EGP/ton for Grapes; therefore the share of marketing costs in

consumer's price is 15.5%, 19.14% for Mango and Grapes respectively. It indicates also marketing margin comes to 4874 EGP/ ton for Mango, but comes to 3905 EGP/ ton for Grapes. The share of marketing margin in price which paid by consumer is 35.16%, 39.68% for Mango and Grapes respectively. While Table 7 shows, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 28%, 38% and 56% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 32%, 47% and 55% respectively.

**Table 7:** Marketing efficiency of mango and grapes in marketing channel C

		Marketing efficiency	Mango	Grapes
Producer to Retailer	Production costs (EGP/ ton)		4789	3987
	Producer price (EGP/ ton) (1)		8987	6089
	Retailer price (EGP/ ton) (2)		10917	7969
	Product losses Kg/ Ton		56	63
	Conversion factor per Ton (3)		1.059	1.067
	Producer price after converting it (EGP/ ton) (4) = (1) * (3)		9517	6498
	Absolute marketing margin (EGP) (5) = (2 -4)		1400	1471
	Intermediaries' share in retailer price % (6) = (5/2) 100		13	18
	Producer's share in retailer price % = (100 - 6) = (5/2) 100		87	82
	The rate of price increase % = (5 /4) 100		15	23
	Marketing efficiency %		77	73
Retailer to Consumer	Retailer price (EGP/ ton) (7)		10917	7769
	Consumer price (EGP/ ton) (8)		13861	10035
	Product losses Kg/ Ton		49	50
	Conversion factor per Ton (9)		1.052	1.053
	Retailer price after converting it (EGP/ ton) (10) = (7) * (9)		11485	8391
	Absolute marketing margin (EGP) (11) = (8-10)		2376	1703
	Intermediaries' share in consumer price % (12) = (11/8) 100		17	17
	Retailer's share in consumer price % = (100-12) = (10/8) 100		83	83
	The rate of price increase % = (11 /10) 100		21	20
Marketing efficiency %		66	70	
Producer to Consumer	Producer price (EGP/ ton) (13)		8987	6089
	Consumer price (EGP/ ton) (14)		13861	10035
	Product losses Kg/ Ton		105	113
	Conversion factor per Ton (15)		1.117	1.127
	Producer price after converting it (EGP/ ton) (16) = (15)* (13)		10038	6862
	Absolute marketing margin (EGP) (17) = (14 - 16)		3823	3232
	Intermediaries' share in consumer price % (18)= (17/14) 100		28	32
	Producer's share in consumer price % = (100-18) = (16/14) 100		72	68
	The rate of price increase % = (17 /16) 100		38	47
Marketing efficiency %		56	55	

Source: Analysis of the study field data, 2019.

#### **Channel D (Producer- Wholesaler- Retailer- Consumer)**

In Channel D the producer (farmer) sells the crop before harvesting it (not full-maturity) to wholesaler after that retailer purchases the crop from wholesaler and he sells it to consumers. Some of the marketers (wholesalers) indicated that buy the crop before harvesting it from the farm and could be said to have potentials to yield greater profits than the others (retailers). In this channel, the wholesaler supervises on performing of the production services and the farmer's role disappears in performing of marketing services.

##### **- Wholesaler to Retailer**

When the wholesaler sells the crop to the retailer in channel D, Table 8 indicates, total marketing costs comes to 1195 EGP/ton for Mango and 1277 EGP/ton for Grapes, therefor the share of marketing costs in consumer's price is 9%, 13% for Mango and Grapes respectively. While Table 9 indicates, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 20.5%, 25.8% and 68% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 26%, 36% and 56% respectively.

**-Retailer to Consumer**

When the retailer sells the crop to consumers in channel D, Table 8 shows, total marketing costs comes to 1113 EGP/ton for Mango and 1060 EGP/ton for Grapes, therefor the share of marketing costs in consumer's price is 8%, 11% for Mango and Grapes respectively. Table 9 shows, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 13%, 15% and 63% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 16%, 19% and 69% respectively.

**-Wholesaler to Consumer directly**

When the Wholesaler sells the crop to consumers directly in channel D, Table 8 indicates, total marketing costs comes to 2308 EGP/ton for Mango and 2337 EGP/ton for Grapes, therefor the share of marketing costs in consumer's price is 17.5%, 24% for Mango and Grapes respectively. It indicates also, marketing margin comes to 5090 EGP/ ton for Mango, but comes to 4492 EGP/ ton for Grapes. The share of marketing margin in price which paid by consumer is 38.5%, 45.8% for Mango and Grapes respectively. While Table 9 shows, Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Mango are 31%, 44% and 64% respectively. It indicates also that Intermediaries' share in consumer's price, the rate of price increase and the marketing efficiency for Grapes are 38%, 56% and 52% respectively.

**Marketing problems of mango and grapes**

Several marketing problems have been identified through interviews with marketers of Mango and Grapes in Fayoum, Egypt, with aim of exploring the possibility to solve and overcome them. The marketing problems were many, namely the high percentages of product losses (83%) of marketers, followed by high costs of marketing services (76%), and then the prices controlled by traders (73%). Lack of specialized marketing associations, The markets are far away from production places which leads to increase transportation costs, Increase the fees rate of commission merchant, Insufficient profits which earned by traders had the Percentages (66%) followed by 64%, 56% and 53% respectively. The markets

**Table 8: Average marketing costs and margins of mango and grapes in marketing channel D**

Purchase price components		Mango			Grapes		
		EGP /ton	% from total margins	Distribution of consumer's price	EGP /ton	% from total margins	Distribution of consumer's price
Wholesaler to Retailer	Producer price	8121	---	61.47	5322	---	54.22
	Harvesting costs	366	7.19	2.77	344	7.65	3.5
	Sorting & grading costs	159	3.12	1.2	173	3.85	1.76
	Packing costs	111	2.18	0.84	123	2.73	1.25
	Packing packages	123	2.41	0.93	147	3.27	1.49
	Transportation cost to wholesaler	178	3.49	1.34	258	5.74	2.62
	Scale fees	33	0.64	0.24	33	0.73	0.33
	Road-tolling	25	0.49	0.18	25	0.55	0.25
	Wholesale market entry fees	35	0.68	0.26	35	0.77	0.35
	Shop's rent	55	1.08	0.41	44	0.97	0.44
	Water, electricity and phone	66	1.29	0.49	59	1.31	0.6
	Food, guarding....., etc.	44	0.86	0.33	36	0.8	0.36
	Marketing cost (Wholesaler)(1)	1195	23.47	9.04	1277	28.42	13.01
	Marketing profit (Wholesaler)(2)	1596	31.35	12.08	1178	26.22	12
	Retailer to Consumer	Retailer price	10912	--	82.59	7777	--
Transportation cost to consumer		199	3.9	1.5	199	4.43	2.02
Road-tolling		33	0.64	0.24	30	0.66	0.3
Loading and unloading costs		198	3.88	1.49	258	5.74	2.62
Distribution costs		266	5.22	2.01	231	5.14	2.35
Plastic bags		159	3.12	1.2	111	2.47	1.13
Other fees		258	5.06	1.95	231	5.14	2.35
Marketing cost (Retailer) (3)		1113	21.86	8.42	1060	23.59	10.8

Marketing profit (retailer) (4)	1186	23.3	8.97	977	21.74	9.95
<b>Marketing costs (1+3)</b>	2308	45.34	17.47	2337	52.02	23.81
<b>Marketing profit (2+4)</b>	2782	54.65	21.05	2155	47.97	21.95
<b>Marketing margin</b>	5090	100	38.52	4492	100	45.77
<b>Consumer price</b>	13211	--	100	9814	---	100

Source: Analysis of the study field data, 2019.

**Table 9:** Marketing efficiency of mango and grapes in marketing channel D

Marketing efficiency		Mango	Grapes
Wholesaler to Retailer	Production costs (EGP/ ton)	4789	3987
	Wholesaler price (EGP/ ton) (1)	8121	5322
	Retailer price (EGP/ ton) (2)	10912	7777
	Product losses Kg/ Ton	62	70
	Conversion factor per Ton (3)	1.066	1.075
	Wholesaler price after converting it (EGP/ ton) (4) = (1) * (3)	8657	5721
	Absolute marketing margin (EGP) (5) = (2 -4)	2237	2056
	Intermediaries' share in retailer price % (6) = (5/2) 100	20.5	26.4
	Wholesaler 's share in retailer price % = (100 - 6) = (4/2) 100	79.5	73.6
	The rate of price increase % = (5 /4) 100	25.8	36
	Marketing efficiency %	68	56
Retailer to Consumer	Retailer price (EGP/ ton) (7)	10912	7777
	Consumer price (EGP/ ton) (8)	13211	9814
	Product losses Kg / Ton	49	55
	Conversion factor per Ton (9)	1.052	1.058
	Retailer price after converting it (EGP/ ton) (10) = (7) (9)	11479	8228
	Absolute marketing margin (EGP) (11) = (8 -10)	1732	1586
	Intermediaries' share in consumer price % (12) = (11/8) *100	13.11	16.16
	Retailer 's share in consumer price % = (100 - 12) = (10/8) *100	76.89	73.84
	The rate of price increase % = (11/10) *100	15	19
	Marketing efficiency %	63	69
Wholesaler to Consumer	Wholesaler price (EGP/ ton) (13)	8121	5322
	Consumer price (EGP/ ton) (14)	13211	9814
	Product losses Kg / Ton	111	125
	Conversion factor per Ton (15)	1.125	1.143
	Wholesaler price after converting it (EGP/ ton) (16) = (15) (13)	9136	6083
	Absolute marketing margin (EGP) (17) = (14 -16)	4075	3731
	Intermediaries' share in consumer price % (18) = (17/14) 100	30.85	38
	Wholesaler's share in consumer price % = (100-18) = (16/14) 100	69.15	62
	The rate of price increase % = (17/16) 100	44	56
Marketing efficiency %	64	52	

Source: Analysis of the study field data, 2019.

are not equipped to perform marketing services (49%), the labors which performing the marketing services is not specialized (49%) and The Price fluctuation of Mango and Grapes (49%). The marketing problems of Mango and Grapes are given below in Table 10.

**Table 10:** Marketing problems of Mango and Grapes in Fayoum

No.	Marketing problems	Frequency	Percentage (%)
1	High percentages of marketing losses	112	83
2	High costs of marketing services	101	76
3	The prices controlled by traders	99	73
4	Lack of specialized marketing associations	89	66
5	The markets are far away from production places	87	64
6	Increase the fees rate of commission merchant	76	56
7	Insufficient profits which earned by traders	71	53
8	Markets are not equipped to perform marketing services	66	49



9	The labors which performing the marketing services is not specialized	66	49
10	The Price fluctuation of Mango and Grapes.	66	49

**Source:** Analysis of the study field data, 2019.

### Suggestions to overcome the marketing problems

As shown in Table 11, (66%) of the marketers were pointed to the necessity of reducing the marketing losses through specialization and select the suitable marketing channel, the results further indicated that provide fixed sites to retailers, training of market intermediaries to improve their technical knowledge and skills to perform marketing services with high efficiently and establish stations for sorting, staging and packing had the percentages (65%) of the marketers followed by (63%) and (57%), respectively. While (46%) of the marketers were pointed to the necessity of providing market information to growers and traders, Work to open new markets and finally provide necessary resources to perform marketing services in markets.

**Table 11:** Suggestions to overcome the marketing problems of Mango and Grapes in Fayoum

No.	Suggested solutions for marketing problems	Frequency	Percentage (%)
1	Minimization of marketing losses through specialization and select the suitable marketing channel.	89	66
2	Provide fixed sites to retailers.	88	65
3	Training of market intermediaries to improve their technical knowledge and skills to perform marketing services with high efficiently.	85	63
4	Establish stations for sorting, staging and packing.	77	57
5	Provide market information to growers and traders.	62	46
6	Work to open new markets.	62	46
7	Provide necessary resources to perform marketing services in markets.	62	46

**Source:** Analysis of the study field data, 2019.

## IV. Conclusion and Recommendations

From the study, it was found that the marketing efficiency is generally low, this is due to the high marketing costs, marketing losses and the large number of intermediaries without providing suitable marketing services in exchange for that increase in marketing costs; this is one of the main problems which facing the marketing of horticultural crops in Egypt (Especially in Fayoum Governorate).

Channel **A** (Producer- consumer directly) has achieved the highest marketing efficiency for Mango and Grapes, this is due to the absence of intermediaries in this channel, this results in reducing Intermediaries' share, consumer price and the rate of price increase. But in this channel, marketing cost is high; this is due to the lack of specialization in the marketing process, which increases the marketing losses during the marketing process.

Channel **B** (Producer- Commission merchant- Consumer) has achieved high marketing efficiency for Grapes; this is consistent with the marketing nature of grapes (selling it fresh to consumers directly). In this channel, the producer (farmer) sells his crop through commission merchant; who had a positive effect on reducing marketing costs and increasing marketing efficiency, this is due to the incentive of commission merchant to achieve the highest marketing efficiency to get back a high commission. Also, channel **D** (Producer- Wholesaler- Retailer- Consumer) has achieved the best marketing efficiency for Mango and Grapes; this selling style (sells the crop before harvesting it) is consistent with the nature of Mango and Grapes.

Neither marketing channels (producer sells the crop as a wholesaler), nor (producer sells the crop to wholesaler then to retailer finally to consumers) has achieved any positive indicators; whether in marketing efficiency, Producer's share in consumer's price and the rate of price increase, because the producer is not specialized in marketing in the first channel and the large number of intermediaries in the second channel.

It is important to note however, that marketing of Mango and Grapes is one of the most rewarding but risky agribusinesses, due to their high perishability, price, yield variations, coupled with changing customers' demand which could lead to increased uncertainty encountered by the marketers.

Based on the previous results of the study, the following recommendations are given to be considered in the future intervention strategies aimed at promoting Mango and grapes marketing in study area.

- i. Reducing the marketing margins, by reducing the number of Intermediaries through the marketing channels of Mango and Grapes.
- ii. Following the marketing channel **A** (Producer as a Retailer- Consumer) and channel **B** (Producer- Commission merchant- Consumer) to reduce the marketing costs.
- iii. Establishing centers to collect Mango and Grapes in Fayoum, where provided all services and marketing functions to reduce the marketing losses, with a suitable cost.
- iv. . Reducing the monopoly of wholesalers, which evident appear in low purchase price and high selling price of Mango and Grapes, by creating rival among them and increasing their number.

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