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AGRICULTURAL DEVELOPMENT SYSTEMS
EGYPT PROJECT

UNIVERSITY OF CALIFORNIA, DAVIS

PRELIMINARY RESULTS OF THE CITRUS PRODUCTION
SURVEY IN EGYPT, 1980-81


by

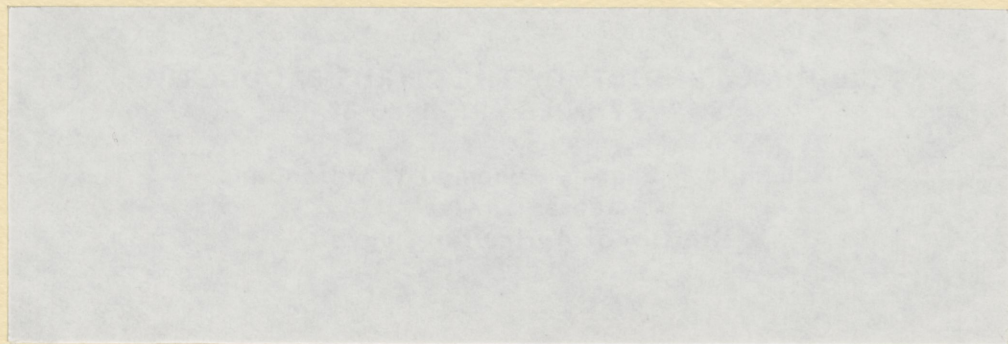
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Mahran S. Aita
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Preliminary Results Of The Citrus Production

Survey In Egypt

Introduction

(1)

Statistical information published on citrus in Egypt are not enough to realize opinions and Attitudes of citrus producers about the various problems and constraints facing them either in production or in marketing of the produce. Therefore, a questionnaire was designed specially for this purpose and filled in for the agricultural season 1980/1981.

This paper handles the sample methodology and areas of study in addition to some preliminary results which concern the opinions of producers towards production and marketing of orange. At the same time, all the data collected are being processed by the computer to get some descriptive and quantitative analyses for orange production and marketing .

The important results mentioned in this paper are related to the following subjects :

1. The decision maker, his educational status and his off-farm occupation if any.
2. Tenure system, experience gained and reasons for producing oranges . .

(1) Specially orange the production of which amounted to some 84.8 % of the average total citrus production during the period 1975 - 1978, and its value was about 85.1 % of the total value of citrus during the same period .

3. Sources of seedlings and yield of oranges .
4. Problems facing the establishment of new orange orchards.
5. Difficulties encountered in orange production .
6. Method of estimating production .
7. State of production in the year of study (1980/1981)
8. Insects and diseases which affect production .
9. Methods of selling the produce .
10. Reasons for following a certain method in marketing the produce .
11. Sources of financing .
12. Channels for selling the produce .
13. Method of determining the selling price .
14. Sources of information available on selling price.

First: Method Of Selecting The Sample And Areas Of Study.

It was decided to study the Egyptian Citrus Industry by sampling. Sampling procedure selected is the random sampling one. The population considered as a sample frame is the areas of citrus concentration, i.e areas where citrus cultivation is greatest in terms of area and production. These are the areas where farmers are specialized in citrus farming and production. The sample of farmers to be interviewed is selected on four consecutive stages as follows:

1- Selection of Governorates :

All governorates of the Republic were studied to determine the relative importance of each in citrus production. As indicated in ^{appendix 1,} El Beheira Governorate is the most important Governorate in orange production, as planting 22% of the total orange area in the country and producing about 27% of the national orange production. El Kalyoubia Governorate comes second in order as it contains about 19% of the orange area and produces over 23% of the national orange production. El Sharqia Governorate comes the third and El Menoufia the fourth in order of priority as the first Governorate is planting about 14.4% and produces some 12.2% while the second Governorate contains 12.5% and produces 11.2% of the total national orange area and production respectively. The four selected governorates are located in the Delta Region, where 90.7% of the total orange production is produced.

Therefore these four governorates were selected for studying the Egyptian Citrus Industry since they are considered areas of citrus concentration and consequently they are well representing the citrus population. (Appendix 1.

* Orange is considered a good indicator to citrus as it represents the bulk of citrus production.

* 1980 figures

2- Selection Of Districts :

The administrative districts (Markaz) of the four selected governorates were rated according to the area planted to oranges and the three largest districts were selected for study (APPENDICES 2 - 5) .

Accordingly 12 districts were selected as follows :

Districts of Kafr Eldawar, Hosh Eisa and Eldelengat from ElBeheira .

Districts of Tokh, Kafr Shokr and Banha from Elkalyoubia,

Districts of Menia Elkamh, Fakkous and Belbais from El-Sharkia .

Districts of Quesna, Ashmoun and Elbagour from ElMenoufia

3- Selection Of Villages :

Two villages from each markaz were selected on the basis of the area planted and production of oranges .

Accordingly 24 villages were selected for study as follows:

<u>District (Markaz)</u>	<u>Villages</u>	<u>District (Markaz)</u>	<u>Villages</u>
Kafr El dawar	El Tarh	Menia Elkamh	Banadf
	C.Abou Keir		Alwalaga
Hosh Eisa	Hosh Eisa	Fakkous	El Salhia
	Elrobomia		El Khattar
Eldelengat	Albostan	Belbais	El Tahawia
	Zawiat Hamour		El Kateiba
Tokh	Aghour ELKobra	Quesna	Shoubra-Bkhoun.
	Meit Kenana		Begern
Kafr Shokr	Kafr Shokr	Ashmoun	Sarawah
	Asneit		Elbaraniah
Banha	Degwi	Elbagour	Manawahla
	Menshat Banha		Bay Elarab

These villages represent the most important orange producing units in the four selected governorates .

4- Selection Of Farmers :

It was decided to randomly select 10 farmers from each village plus at least three farmers as a reserve to replace any of the principal farmers. In addition, four other farmers were purposively selected to represent various cases which are considered important to the study as follows :

- 1 big commercial orange grower (of not less than 10 feddans of oranges) .
- 1 farmer dealing with El-Wadi public co. for export.
- 1 farmer supplying oranges to processing factories, and
- 1 farmer who has a newly established orchard (5 years old or less) .

Methodology of selecting the farmers was as follows :

In each Agricultural Directorate, there are files for fruit farmers in each village .

- a) Numbering of orange farmers only after excluding other fruit farmers and also excluding orchards established after 1976.
- b) Using Random Figures tables, 10 orange farmers are selected in addition to another 3 farmers as reserves.

Second : Some Preliminary Results On Opinions Of Producers
Towards Orange Production

1. The decision maker, his educational status and his
off-farm occupation if any .

(a) The decision maker .

Table 1. indicates that there are 178 owners who operate their farms by themselves . This figure represents about 74.2 % of the total number of observations amounting to 240 producers.⁽¹⁾ On the other hand, there are 58 managers or 24.2 % who operate the farms for the owners (whether those owners are absent or present on their farms) . The third group of decision makers is the tenants who are renting the orchards and whose number was only 4 representing about 1.6 % of the total number of observations.

Despite the dominance of owner-operated orchards in the sample as a whole, the relative importance of this phenomenon varies within governorates. In Qalubua governorate for example, 88.3 % of all decision makers are owners of their orchards, While this percentage is 80 % in Behera, 76.7 % in Sharkyia and 51.7 % in Menoufyia .

(1) Total number of observations in the sample is 305 producers. In this paper 65 producers are excluded; namely 24 large producers, 24 producers of newly established orchards and 17 producers dealing with export .

TABLE 1. The Decision Maker, His Education And Occupation
outside The Farm.
Citrus Survey Sample 1980/1981

Governorate	The decision maker			Educational Level						Occupation outside the farm					
	Owner	Farm Manager	Tenant	Illiterate	Writes	Reads &	Student	Intermediate education	University education	Merchant	employee	Self employed	Farmer	Student In the house (for women)	
Behera	No.	48	10	2	21	35	2	1	1	2	1	1	3	1	-
	%	80	16.67	3.33	35	58.33	3.33	1.67	1.67	25	12.5	12.5	37.50	12.50	-
Kalubya	No.	53	7	-	32	15	-	7	6	3	16	2	3	6	-
	%	88.33	11.67	-	53.33	25.00	-	11.67	10.00	10.00	53.33	6.67	10.00	20.00	-
Sharkya	No.	46	13	1	10	42	-	2	6	9	9	9	1	3	-
	%	76.67	21.67	1.66	16.67	70.00	-	3.33	10.00	29.03	29.03	29.03	3.23	9.68	-
Menofya	No.	31	28	1	13	27	1	14	5	3	16	6	-	9	1
	%	51.67	46.67	1.66	21.67	45	1.67	23.33	8.33	8.57	45.71	17.14	-	25.71	2.86
Total of Sample	No.	178	58	4	76	119	3	24	18	17	42	18	7	19	-
	%	74.17	24.17	1.66	31.67	49.58	1.25	10.00	7.50	16.35	40.38	17.31	6.73	18.27	0.96

Source : Calculated from original data collected by the questionnaire 1980/1981 .

On the other hand the number of farm managers of orange orchards in the sample was highest in Menoufyia governorate, followed by Sharkyia then Behera and Qalubya .

With regard to the tenants, we find that their percentage is 3.3 % of the sample observation in Behera, 1.7 % in each of Sharkyia and Menoufyia while no tenants are found in Qalubya .

(b) Educational status of the decision maker

The study indicates that 50% of the decision makers in the study sample read and write , about 32% of them are illiterate, 10 % have obtained intermediate education, 7% got university education while there is only 1 % students, table 1.

Considering each of the educational statuses of the decision maker, the situation varies among governorates. Illiteracy for example is found to be minimum in Sharkyia followed by Menoufyia then Behera and Qalubya respectively. Naturally, the status of reading and writing follows a logical path to the status of illiteracy, where we find its percentage is highest in Sharkyia followed by Behera then Menoufia and Qalubia .

With regard to the intermediate education, it was found that the highest percentage of decision makers obtaining that type of education in the sample was in Menoufyia governorate followed by Qalubya, Sharkya, and Behera respectively.

Concerning those decision makers in the study sample who acquired university education, we notice that the highest percentage of them was in both Qalubya and Sharkya followed by Menoufyia then Behera respectively.

(c) Off-farm occupation of the decision maker

Table 1. also shows the occupations practiced by the decision makers outside their farms. Since orange production does not require full time residence of the decision maker, it is noticed that 104 of the decision makers of the sample representing about 43.3 % of the sample are working outside their orchards. While there are 78 decision makers representing some 32.5 % do not have off-farm occupations. The balance of 58 decision makers represent about 24.2 % of the total are full-time managers.

Looking at the occupations practiced by those who work outside the farm and whose number totals 104, we find 42 of them are government employees,

18 are self-employed like an attorney, a physician or carpenter ... etc., 17 working in business, 7 in agriculture outside their farms, 19 women working at home and one student only.

As was expected, the percentage of decision makers working in various occupations outside the farm varies between governorates. For example, the highest percentage of those working in business is found in Sharkyia followed by Behera then Qalubya and Menoufyia respectively.

Coming to government employees, we find the highest percentage in Qalubya then Menoufia followed by Sharkyia then Behera .

With regard to the self employed decision makers, we find the highest percentage in Sharkyia then Menoufyia then Behera and Qalubya. While the highest percentage of decision makers working in agriculture outside their farms is found in Behera then Qalubya followed by Sharkyia. It is noticed that the sample of Menoufyia did not include any case in which the decision maker is working outside his farm in agriculture .

Looking at the women who are working outside the farms, it is clear that the highest percentage working at home is found in Menoufyia then Qalubya followed by Behera then Sharkyia which includes the lowest percentage.

It is notable that Menoufyia is the only governorate of the sample in which it was found one decision maker who works outside his orchard as a student.

2- Tenure system, experience gained and reasons for producing oranges.

(a) Tenure system

There are two tenure systems in holding of orange orchards : either owner operated or cash rented from the original owner. Table 2 indicates that the majority of the sample farms are owner-operated, while the cash rented orchards do not exceed 2 %. This phenomenon is common to all governorates of the sample without exception.

(b) Experience gained in orange production

Asking the decision maker about the years of experience gained in producing oranges, the study revealed that the general average of the sample is about 14 years. This figure varies among governorates. It is about 16.3 years in Qalubya, 15 years in Menoufyia, 13.7 years in Sharkya and 11.9 years in Behera .

TABLE 2. Tenure, Source Of Seedlings ,Yield, Expereince And
Reasons For Deciding To Grow Oranges
Citrus Survey Sample 1980/1981

Governorate	Tenure		Source of Seedlings		Yield Ton/ feddan	Exper ience in plant ing orange (years)	Reasons for deciding to Grow Oranges						
	Owner operated	Cash rented	Govern ment nursery	Private nursery			Profit able	Needs less labor	like my neigh- bours	have no time to manage Field crops	Do not plant Other oranges		
Behera	No.	58	2	4	58	6.39	11.9	36	18	17	5	7	-
	%	96.67	3.33	6.45	93.55	xxx	xxx	43.37	21.69	20.49	6.02	8.43	-
Kalubya	No.	60	1	-	60	7.62	16.3	33	21	13	9	4	7
	%	98.36	1.64	-	100	xxx	xxx	37.93	24.14	14.94	10.34	4.60	8.05
Sharkya	No.	59	2	-	60	7.18	13.7	25	17	19	8	4	4
	%	96.72	3.28	-	100	xxx	xxx	32.47	22.08	24.68	10.39	5.19	5.19
Menofya	No.	60	1	12	52	7.06	15	17	23	23	12	18	-
	%	98.36	1.64	18.75	81.25	xxx	xxx	18.28	24.73	24.73	12.90	19.35	-
Total of sample	No.	237	6	16	230	7.06	14.2	111	79	72	34	33	11
	%	97.53	2.47	6.50	93.50	xxx	xxx	32.65	23.23	21.18	10.00	9.71	3.23

Source : Producer questionnaire, Aricultural year 1980/1981.

(c) Reasons for producing oranges

Inquiring the reasons for producing oranges in particular, responses are listed below in order of importance :

1. profitable
2. Does not require much labor
3. As neighbours and following the dominant agricultural pattern in the area .
4. No time available to the farmer to spent in planting field crops and vegetables which need more management and supervision than oranges.

In addition some farmers mentioned that there are reasons other ^{than} those previously mentioned. Also, there is a very small percentage of the farmers who informed that they did not cultivate the oranges themselves, that is they have either bought the orchards already cultivated, or they have inherited the orchards or they are tenants only.

3- Sources of seedlings and yield of oranges

(a) Sources of seedlings

Farmers' responses revealed that their majority provide its requirements of seedlings from private nurseries.

Only 7 % of the sample's farms are depending on government nurseries in getting their seedlings. It is notable that farmers of the sample in both Qalubya and Sharkya governorates are providing their entire requirements of seedlings through

private nurseries and no one of them has ever resorted to a government nursery.

(b) Yield of oranges

Average yield of oranges at the level of the sample as a whole is 7.06 tons. The highest yield is in Qalubya of 7.62 tons and the lowest in Behera of 6.39 while Sharkyia is 7.18 tons and Menoufia 7.06 tons .

4- Problems facing the establishment of new orange orchards

One of the objectives of the study was to inquire about the problems which face the farmer when establishing new orange orchards. Preliminary results (table 3) indicated that the most important problem in this regard is the lack of agricultural land. Shortage of labor required for the purpose comes second in order of importance. Then other problems appear to be of less importance as the unavailability of government seedlings comes third in weight, followed by high costs of establishment, lack of capital required, difficulty of getting a license for establishing the orchard, lack of credit, lack of experience in orange production and then lack of good private seedlings. Shortage of water was one of the least important reasons indicated. The importance of these reasons indicated varies from one governorate to another but it is apparent that shortage

TABLE 3. Difficulties Facing The Establishment Of Orange Orchards
Citrus Survey Sample 1980/1981

Governorate	Difficulties in establishing orange orchards											
	Difficulty of getting a license	Unavailability of government seedlings	Unavailability of private seedlings	Increasing establishment costs	Lack of capital required	Shortage of land	Lack of credit	Lack of experience in orange Production	Shortage of labor	Other	Lack of water	
Behera	No.	10	15	1	16	9	30	8	3	1	5	2
	%	10.00	15.00	1.00	16.00	9.00	30.00	8.00	3.00	1.00	5.00	2.00
Kalubyia	No.	1	32	2	14	17	35	5	3	17	2	1
	%	0.78	24.81	1.55	10.85	13.18	27.13	3.87	2.32	13.18	1.55	0.78
Sharkyia	No.	-	3	2	17	5	29	1	3	26	5	3
	%	-	3.19	2.13	18.09	5.32	30.85	1.06	3.19	27.66	5.32	3.19
Menofyia	No.	6	5	2	6	7	14	-	-	21	6	-
	%	8.96	7.46	2.98	8.96	10.45	20.89	-	-	31.34	8.96	-
Total of Sample	No.	17	55	7	53	38	108	14	9	65	18	6
	%	4.36	14.10	1.79	13.59	9.74	27.69	3.59	2.31	16.67	4.62	1.54

Source : Producer questionnaire, agricultural year 1980/1981.

of land is an important reason which takes priority in all governorates as indicated by farmers. Shortage of labor comes next in priority in all governorates except Behera.

5- Difficulties encountered in orange production

The study was also concerned with exploring the difficulties which face the orange producers. Therefore a question was designed for this purpose and the result is indicated in table 4. Responses reveal that the most important problem faced by orange producers is the shortage of human labor. The second most important problem is the high cost of pesticides and then followed in order of less importance by the problem of government pricing, defects of soils and/or high water table or both, unfavorable weather conditions, lack of pesticides and then comes last the problems of marketing and selling of the produce.

6- Methods of estimating production

Farmers of the sample informed that "eye estimation" is the most widely used method in estimating production. The second important one is the method of estimation based on yields of previous years. The method of estimating by weighing is the least employed one as clear from table 4.

7- State of production in the year of filling the questionnaire 80/81.

Growers of the sample were different when expressing their

TABLE 4. Difficulties encountered in Orange production, and Methods of estimating Production.

Citrus Survey Sample 1980/1981

Governorate	Difficulties of Orange production								Methods of estimating Production			
	Defects in soil and/or high water-table	Unfavourable weather conditions	Unavailability of pesticides	High prices of pesticides	Lack of labour	Marketing or selling of the produce	Govt. pricing	Other	Eye estimate	Weighing	Based on Previous years	
Behera	No.	51	1	10	49	20	8	31	17	27	16	15
	%	27.27	0.53	5.35	26.20	10.70	4.28	16.58	9.09	46.55	27.59	25.86
Kalubyia	NO.	3	25	13	38	44	2	25	5	38	22	19
	%	1.93	16.13	8.39	24.52	28.39	1.29	16.13	3.22	48.10	27.85	24.05
Sharkyia	No.	3	20	2	9	47	10	10	9	46	6	14
	%	2.73	18.18	1.82	8.18	42.73	9.09	9.09	8.18	69.70	9.09	21.21
Menofyia	No.	5	13	6	24	35	4	15	10	52	3	14
	%	4.46	11.61	5.36	21.43	31.25	3.57	13.39	8.93	75.36	4.35	20.29
Total of Sample	No.	62	59	31	120	146	24	81	41	163	47	62
	%	10.99	10.46	5.50	21.28	25.89	4.25	14.36	7.27	59.93	17.28	22.79

opinions as to the state of production at the year of undertaking the questionnaire. About 40% of the growers indicated that production has increased than the preceding years, while 33% of them asserted the equivalence of production to the foregoing years and 26% mentioned that production had decreased than before, table 5. There was a small percentage of less than 1% of the sample growers which referred to a continual decline in production. This case has appeared in Behera governorate only.

8- Insects and diseases which affect production

Growers' responses indicate that about 21% of them reported on Scale Insects, 21% on Aphids, 18% on Gummosis, 14% on Lichens, 14% on Fruit Fly and 12% reported on Mites.

It is noteworthy that scale Insects was the highest among other insects and diseases in both Behera and Qalubya Governorates, while Aphids was highest in Sharkyia and Mites was highest in Menoufyia as shown in table 5.

Table (5): State Of Production In The Year Of Study,
And Insects ~~At~~ Diseases Which Affect Production
Citrus Survey Sample 1980/1981

Governorate	State of production in the year of study				Insects & diseases which effect production					
	More than previous years	Less than previous years	Like previous years	Gradually declining	Gummosis	Lichens	Mites	Aphids	Scale Insects	Fruit fly
El-Beheira	No. 9	10	37	2	41	28	44	52	53	18
	% 15.52	17.24	63.79	3.45	17.34	11.86	18.64	22.03	22.46	7.63
El-Kalubia	No. 18	20	22	-	25	35	15	35	49	40
	% 30.00	33.33	36.67	-	12.56	12.56	7.54	17.59	24.62	20.10
El-Sharkia	No. 32	18	10	-	45	32	18	48	39	41
	% 53.33	30.00	16.67	-	20.18	14.35	8.07	21.52	17.48	18.38
El-Monofia	No. 36	13	10	-	43	25	23	38	34	19
	% 61.02	22.03	16.95	-	23.62	13.74	12.64	20.88	18.68	10.44
Total of Sample	No. 95	61	79	2	154	120	100	173	175	118
	% 40.08	25.75	33.33	0.85	18.33	14.28	11.91	20.60	20.83	14.05

Source : Producer questionnaire, agricultural year 1980/1981 .

Third : Some Preliminary Results On Growers' Opinions and Attitudes Towards Orange Marketing.

This section includes some important indicators like the method of selling the produce and reasons for following a certain method in marketing, source of financing production, the most important channels for marketing the produce, method of setting the selling price and sources of information available to the grower on selling prices .

9- Methods of selling the produce

Table 6. indicates that about 53% of the sample's growers prefer selling on trees while 47% prefer picking and selling on their own. In general however, there is no pattern prevailing in all governorates . Qalubya and Menoufyia governorates for example are characterized by the tendency to sell on trees while the sample's growers of Behera governorate prefer ^{to} pick and sell on their own . On the other hand, the growers of the sample in Sharkyia governorate are almost equal in their preference for the method of selling .

10- Reasons for following a certain method in marketing the produce.

Inquiring about the reasons for preferring the method of selling on trees, responses of growers were as follows in order of percentage of answers :

- | | |
|--|-------|
| a) a source of financing during the marketing season | 35.5% |
| b) trying a new method of selling | 12.7% |
| c) to guarantee a certain revenue from the beginning of the season | 12.7% |
| d) realizes better price | 11.2% |
| e) easier in marketing | 10.7% |
| f) other reasons | 10.7% |
| g) according to the prevailing traditions | 3.0% |
| h) grower is not residing on the farm | 2.5% |
| i) to avoid the government's ceiling price | 1.0% |

It should be noted that reasons for preference varies among governorates as clear from table 6.

On the other hand, growers who prefer to pick the fruits and sell on their own, had their reasons for preferring this method of marketing. Justifications for this preference were as follows rated in order of percentage of answers :

- | | |
|--|-------|
| a) easier in marketing | 36.6% |
| b) to guarantee a certain revenue from the beginning of the season | 24.4% |
| c) a source of continuing finance | 19.1% |
| d) other reasons | 7.7% |
| e) trying a new method of marketing | 6.2% |
| f) to get the best price | 1.5% |

Table (6) : Methods Of Selling The Produce And The Reasons for Prefering The Method Of Selling On Trees .

Citrus Survey Sample 1980/1981

Governorate	Methods of Selling Production		Reasons for Prefering selling on trees									
	On trees	Pick and sell on his own	Gives the best price	Easier in marketing the season	A Source of credit during the season	Tradition	Secured revenue	Trying a new method	Avoid selling in the market at falling price	Not resid-ing in the farm	Other	
E -Behera	No.	18	42	3	1	8	2	5	5	-	1	1
	%	30	70	11.53	3.85	30.77	7.69	19.23	19.23	-	3.85	3.85
E -Kalubia	NO.	34	26	4	13	27	1	10	16	1	3	2
	%	56.67	43.33	5.19	16.88	35.06	1.30	12.99	20.78	1.30	3.90	2.6
E -Sharkia	No.	30	30	7	5	16	2	3	1	-	-	3
	%	50.00	50.00	18.92	13.51	43.24	5.41	8.11	2.70	-	-	8.1
E -Monofia	No.	46	15	8	2	19	1	7	3	1	1	15
	%	75.41	24.59	14.04	3.51	33.33	1.75	12.28	5.26	1.75	1.75	26
Total Sample	No.	128	113	22	21	70	6	25	25	2	5	21
	%	53.11	46.89	11.17	10.66	35.53	3.05	12.69	12.69	1.01	2.54	10

Source : Producer questionnaire, agricultural year 1980/1981.

- g) according to the prevailing traditions 1.5%
- h) grower is not residing on the farm . 1.5%
- i) to avoid the government's ceiling price 1.5%

It should be noted however that the last two reasons are not logical as they contradict with this second method of marketing, table 7.

11. Sources of financing

Sources of financing production are considered of utmost importance when discussing the problems facing agricultural production in general. Therefore, it was necessary to conceive the sources of financing available to citrus growers.

It was realized that citrus growers depend on their own sources in financing their production. Answers indicate that 84.6% of the growers in the sample depend on self-financing, while 3.9% of the sample observations obtain financing from the packing houses, 2.9% of ^{them} the acquire loans from banks. The remainder of the sample who represent some 8.6% are getting their finance requirements from other undetermined sources of finance as shown in table 8.

Table (7) : Reasons for Preferring of Marketing On
Farmer's Own (Pick and sell)
Citrus Survey Sample 1980/1981

Governorate		Gives the best price	Easier in marketing	A source of credit during the season	Tradition	Secured revenue	Trying new method	Avoid selling in the market at cgling price	Not resid- ing in the farm	Other
El-Behera	No.	1	17	9	1	15	5	-	-	1
	%	2.04	34.69	18.37	2.04	30.61	10.21	-	-	2.04
El-Kalubia	No.	-	8	7	1	13	2	1	1	3
	%	-	22.22	19.44	2.78	36.11	5.56	2.78	2.78	8.33
El-Sharkia	No.	1	18	3	-	3	1	1	1	5
	%	3.03	54.55	9.09	-	9.09	3.03	3.03	3.03	15.15
El-Monofia	No.	-	5	6	-	1	-	-	-	1
	%	-	38.46	46.15	-	7.69	-	-	-	7.69
Total Sample	No.	2	48	25	2	32	8	2	2	10
	%	1.53	36.63	19.08	1.53	24.43	6.11	1.53	1.53	7.63

Source : Producer questionnaire , agricultural year 1980/1981.

12. Channels for selling the produce

Answers of the sample growers indicate that the most important buyer for their production of oranges is the wholesaler. The retailer comes second in order of importance, followed by contracting with export companies, then the agents for export companies. The fifth channel in order of importance is the agent who assemble for a group of retailers, followed by the agent who assemble for a group of wholesalers and eventually there are some undetermined answers.

Percentages representing the aforementioned channels are respectively :

55.2 , 26.2 , 6.0 , 5.5 , 2.7 , 2.2 , 2.2 . The relative importance of the different channels varies among governorates, but the predominating trait is the importance of the wholesaler as he usually contracts on the highest percentage of the crop as clear from table 8 .

13. Method of determining the selling price

The grower's questionnaire has included an inquiry about the method of determining the selling price of the produce in case the grower is following the second method of marketing the produce, namely; pick and sell on grower's own. The eight methods practiced in setting

the price can be rated in a descending order according to their importance with regard ^{to} answers of the sample growers:

a) The highest price offered by buyers	28.3%
b) sellers request on bases of prevailing prices and bargaining .	25.7%
c) other methods (undetermined)	12.4%
d) grower's request on the basis of the prevailing prices	10.6%
e) through auction	10.6%
f) buyer's offer	9.7%
g) compute the costs plus the profits and bargain for them	1.8%
h) compute the costs plus the profits and accepts less than total	0.9%

As expected , the importance of these methods differ among governorates. While the second method for example is the most important in Behera governorate, the first method is ranking the first in importance in both Kalubia and Menofia governorates. The first and fifth methods - on the other hand - are almost equal in importance in Sharkia governorate as shown in table 9.

Table (8) : Source Of Credit, and The Purchaser of Production .

Citrus Survey Sample 1980/1981

Governorate	Source of Credit				The purchaser of production							
	Self	packing house	Credit bank	Other	Wholesaler	Assembler for a group of whole-salers.	Assembler for a group of retailers	Retailer	Contract with export company	Agent for export	Other	
El-Behera	No.	22	4	1	6	42	3	-	4	-	-	1
	%	66.67	12.12	3.03	18.18	84.00	6.00	-	8.00	-	-	2.00
El-Kalubia	No.	25	-	2	2	19	-	-	8	2	-	1
	%	86.20	-	6.90	6.90	63.33	-	-	26.67	6.67	-	3.33
El-Sharkia	No.	30	-	-	-	18	1	-	15	5	10	2
	%	100	-	-	-	35.29	1.96	-	29.41	9.80	19.6	3.92
El-Monofia	No.	11	-	-	1	22	-	5	21	4	-	-
	%	81.67	-	-	8.33	42.31	-	9.62	40.38	7.69	-	-
Total Sample	No.	88	4	3	9	101	4	5	48	11	10	4
	%	84.62	3.85	2.88	8.65	55.19	2.19	2.73	26.23	6.01	5.46	2.19

Source : producer questionnaire , agricultural year 1980/1981.

Table (9) : Methods Of Determining The Selling Price

Citrus Survey Sample 1980/1981 .

Governorate	Buyer's offer	Seller's request on basis of prevailing prices	Seller's request on basis of prevailing prices and bargaining	Highest price offered by buyers	calculate the costs and profit and bargain for them	calculate the cost and profit and accept less	Auction	Other	Total	
El-Behera	No.	9	4	12	6	1	-	1	10	43
	%	20.93	9.30	27.90	13.95	2.33	-	2.33	23.26	100
El-Kalubia	No.	-	5	6	12	1	1	-	-	25
	%	-	20.00	24.00	48.00	4.00	4.00	-	-	100.0
El-Sharkia	No.	-	1	8	9	-	-	9	4	31
	%	-	3.23	25.81	29.03	-	-	29.03	12.90	100
El-Monofia	No.	2	2	3	5	-	-	2	-	14
	%	14.29	14.29	21.42	35.71	-	-	14.29	-	100
Total Sample	No.	11	12	29	32	2	1	12	14	113
	%	9.74	10.62	25.66	28.32	1.77	0.88	10.62	12.39	100

Source : producer questionnaire , agricultural year 1980/1981.

14. Sources of information available on selling price

When asking the growers about the sources of information available to them on prices of selling oranges, answers of the sample observations showed that the following sources are essential for price information. They are ranked in a *descending* order in terms of their importance from their own points of views (table 10) :

a) government ceiling prices	24.2%
b) market price	18.1%
c) grower's own observations in the village	12.8%
d) grower's own observations in the market	11.4%
e) neighbours	10.7%
f) consult with other growers	7.4%
g) the buyer himself	6.7%
h) broker or merchant in the village	4.7%
i) other sources	3.4%
j) the first buyer	0.6%

Table (10) : Sources Of Information On Selling Prices

Citrus Survey Sample 1980/1981

Governorate		The first buyer	Neighbours	Consult with other growers	Broker or merchant in the village	Government ceiling price	Producer's observations in the market	The buyer himself	The market price	Producer's observations in the village	Other
El-Behera	No.	-	6	4	3	14	5	5	15	8	1
	%	-	9.84	6.56	4.92	22.95	8.20	8.20	24.59	13.11	1.64
El-Kalubia	No.	1	15	5	2	13	2	1	2	3	-
	%	2.27	34.09	11.36	4.55	29.54	4.55	2.27	4.55	6.82	-
El-Sherkia	No.	-	4	2	2	5	5	4	7	6	2
	%	-	10.81	5.41	5.41	13.51	13.51	10.81	18.92	16.21	5.41
El-Monofia	No.	-	1	-	-	4	5	-	3	2	2
	%	-	5.88	-	-	23.53	29.41	-	17.65	11.76	11.76
Total Sample	No.	1	16	11	7	36	17	10	27	19	5
	%	0.67	10.74	7.38	4.70	24.16	11.41	6.71	18.12	12.75	3.36

Source : producer questionnaire, Agricultural ^{year} 1980/1981.

APPENDICES

APPENDIX 1.

Total Area And Production of Orange
In The Various Governorates of Egypt.
1980

Governorate	Area Feddan.	%	Production Ton.	%
Alexandria	1378	0.85	13898	1.51
Behera	35670	22.01	247431	26.87
Gharbia	10598	6.54	64601	7.02
Kafr El-Shaikh	3525	2.18	13754	1.49
Dakhlia	6855	4.23	46844	5.10
Damietta	169	0.10	1218	0.13
Sharkia	23346	14.40	112385	12.20
Esmailia	3651	2.25	12840	1.39
Suez	112	0.07	375	0.04
Monofia	20266	12.50	103544	11.24
Kalubia	30630	18.89	215686	23.42
Cairo	410	0.25	2747	0.30
Lower Egypt	136620	84.28	835323	90.71
Giza	6061	3.74	16635	1.80
Beni Swaif	2918	1.80	12714	1.38
Faium	2729	1.68	10272	1.12
Menia	1500	0.93	5224	0.57
Middle Egypt	13208	8.15	44845	4.87
Assiut	8301	5.12	25891	2.81
Sohag	2090	1.29	8168	0.89
Kena	1330	0.82	5673	0.62
Aswan	560	0.34	981	0.10
Upper Egypt	12281	7.57	40718	4.42
Total of Egypt	162109	100	920881	100

Source : Ministry of Agriculture, Agricultural Economics
Research Institute, Unpublished Data .

APPENDIX 2.

Total Area of Orange in The Various
Districts of Behera Governorate .
1980

No.	Districts	Area (Feddan)	%
1	Abou Homes	3493	9.79
2	Abou El-Matamer	795	2.23
3	Ety El-Barod	941	2.64
4	Hosh Esa	5483	15.37
5	El Delengat	4442	12.45
6	Damanhor	1165	3.27
7	Rashed	3459	9.70
8	Shobra Khet	1229	3.45
9	Kafir El-Dawar	8189	22.96
10	Koom Hamada	2684	7.52
11	El Mahmodia	927	2.60
12	El Rahmania	269	0.75
13	Ganaklez	2470	6.92
14	Edko	124	0.35
Total of Governorate		35670	100

Source : Ministry of Agriculture, Agricultural Economics
Research Institute, Unpublished Data .

APPENDIX 3.

Total Area of Orange in The Various
Districts of Kalubia Governorate

1980

No.	Districts	Area (Feddan)	%
1	Benha	5234	17.09
2	Kafr Shokr	6429	20.99
3	El Khanka	2179	7.11
4	Tokh	12715	41.51
5	Kalub	1054	3.44
6	Kanatr El-Khayria	1503	4.91
7	Shebin El-Kanatr	1516	4.95
Total of Governorate		30630	100

Source : Ministry of Agriculture, Agricultural Economics
Research Institute, Unpublished Data .

APPENDIX 4.

Total Area of Orange in The Various
Districts of Sharkia Governorate,

1980

No.	Districts	Area (Feddan)	%
1	Abou Hamad	2122	9.09
2	Abou Kebeer	778	3.33
3	Bellbes	4356	18.66
4	El-Husseinyia	2818	12.07
5	Diarb Hegm	115	0.49
6	Zagazig	688	2.95
7	Fakos	5619	24.05
8	Kafr Sakr	223	0.96
9	Awlad Sakr	11	0.05
10	Menia El Kamh	5846	25.04
11	Hehia	97	0.41
12	Mashtol	287	1.23
13	El Ebrahimia	94	0.40
14	El Kenayat	292	1.25
Total Area of Governorate 23346			100

Source : Ministry of Agriculture, Agricultural Economics
Research Institute, Unpublished Data . .

APPENDIX 5.

Total Area of Orange in The Various
Districts of Monofia Governorate,
1980

No.	Districts	Area (Feddan)	%
1	Ashmon	4109	20.28
2	El-Bagor	2684	13.24
3	Berkit El-Saba	935	4.61
4	Tala	1813	8.95
5	Shebin El-Koom	2178	10.75
6	El-Shohada	2143	10.57
7	Kewisna	4912	24.24
8	Monof	1492	7.36
Total of Governorate		20266	100

Source : Ministry of Agriculture, Agricultural Economics
Research Institute, Unpublished Data .

