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Approved by:

Thomas Pomeroy

U.S. Embassy

Prepared by:

Tully Friedgut

Report Highlights:

In MY 2000 Israel's citrus industry suffered its worst season since World War II. Production fell to 664,000 mt. The critical factors affecting citrus's rapid decline are shortages of water and harvest labor. In the past three years between four and six thousand hectares of citrus groves have been abandoned or uprooted.

Includes PSD changes: Yes
Includes Trade Matrix: Yes
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Executive Summary

MY2000 is considered as one of the worst citrus seasons since World War Two. The reason lies in an unfavorable combination of political events, a third consecutive year of partial drought, and declining prices (in NS terms) for exported citrus. The drought caused a reduction of irrigation quotas and the GOI increased the price for water. Citrus production in marketing year (MY)2000 (October 2000 – September 2001) totaled 710 tmt of which only 664 tmt were picked and marketed. Of the total, 205 tmt was exported (19% less than in MY1999), 314 tmt were delivered to processors (15% less than in MY1999) and 145 tmt were consumed fresh (18% lower than in the previous year).

Israel's main competitors lacked fruit for the European market. Thus, the prices of Israeli citrus were 8 – 10 percent higher in local currency terms. An unfavorable ratio between European currencies, the USD and the Israeli Sheqel, mainly during the first weeks and in the second half of the export season, caused a decline of 20 percent in CIF income, compared to the previous year. This translated into a sixty percent drop in farm gate prices. The losses from exports were partially compensated by higher income from the domestic fresh market (for oranges and tangerines) and from processors (for grapefruit). Considering all factors, total income per hectare was 10 percent lower than in MY1999. Aging orchards and the acute water shortage are the key factors which are causing the accelerated uprooting of Israel's citrus orchards: in the past season 4,180 hectares were uprooted, of which 3,340 hectares were fruit bearing.

The Winter of 2000/01 was the third successive season with lower than long term average precipitation. The government cut irrigation quotas by 50 percent. The price for high quality water at the beginning of MY2001 is 42 percent higher than in 2000, which translates into a 10 percent increase in production costs.

Lack of citrus concentrates in international markets (mainly grapefruit) has increased demand by the processing industry which doubled its price to the grower over what was paid in 1998. While the profitability of other species will be only slightly affected, the grapefruit industry has become the most profitable branch of the citrus industry. Increased quantities of sweetie from maturing plantations put pressure upon the shippers, but despite concerted efforts in Europe and in other new markets to increase consumption of the sweetie, success is very small. While the export potential of the planted Sweetie area totals some 3 million boxes, only 1.67 million were exported in MY2000. Japanese customers imported the same quantity as in the previous year, but restricted their purchase to only two sizes which left the smaller sizes for industrial use or local fresh consumption.

Table 1: Summary Table of Citrus Production and Disposition: MY 1997 – MY 2001
Thousands of Metric Tons

Species	Market Year	Total Production	Total Exports	Delivery to Processing	Fresh Consumption
Oranges	1997	394	142	142	110
	1998	267	103	59	105
	1999	327	89	142	96
	2000	225	71	85	69
	*2001	220	77	73	70
Grapefruit	1997	303	107	184	12
	1998	283	103	160	20
	1999	259	98	141	20
	2000	251	72	159	20
	*2001	247	78	147	22
Easy Peelers	1997	118	47	41	30
	1998	82	29	18	35
	1999	120	35	45	40
	2000	86	30	26	30
	*2001	96	36	27	33
Lemons	1997	17	1	1	15
	1998	14	0	1	13
	1999	18	1	2	15
	2000	16	0	1	15
	*2001	17	0	2	15
Sweetie	1997	46	27	18	1
	1998	45	20	24	1
	1999	65	23	39	3
	2000	71	23	43	5
	*2001	73	20	48	5
Other	1997	12	10	0	2
	1998	10	9	0	1
	1999	11	8	0	3
	2000	15	9	0	6
	*2001	14	9	0	5
Total Citrus	1997	890	334	386	170
	1998	702	264	263	175
	1999	800	254	369	177
	2000	664	205	314	145
	*2001	667	220	297	150

Source: 1997,1998,1999, 2000: CPMBI annual publications.

* Forecast by Citrus Growers' Organization and CMBI.

PSD Table						
Country:	Israel					
Commodity:	Oranges					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Area Planted	9400	9400	7000	7000	0	6000
Area Harvested	9150	9150	6950	6950	0	5900
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
TOTAL No. Of Trees	0	0	0	0	0	0
Production	327	327	241	225	0	220
Imports	10	10	0	0	0	0
TOTAL SUPPLY	337	337	241	225	0	220
Exports	89	89	56	71	0	77
Fresh Dom. Consumption	96	96	75	69	0	70
Processing	152	152	110	85	0	73
TOTAL DISTRIBUTION	337	337	241	225	0	220

PSD Table						
Country:	Israel					
Commodity:	Fresh Grapefruit					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Area Planted	8700	8700	8110	8110	0	5900
Area Harvested	7900	7900	7310	7310	0	5700
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
TOTAL No. Of Trees	0	0	0	0	0	0
Production	324	324	310	322	0	320
Imports	5	5	5	0	0	0
TOTAL SUPPLY	329	329	315	322	0	320
Exports	121	121	114	95	0	98
Fresh Dom. Consumption	28	23	15	25	0	27
Processing	180	185	186	202	0	195
TOTAL DISTRIBUTION	329	329	315	322	0	320

PSD Table						
Country:	Israel					
Commodity:	Fresh Tangerines					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Area Planted	5640	5640	5932	5932	0	5000
Area Harvested	4400	4400	5132	5132	0	4900
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
TOTAL No. Of Trees	0	0	0	0	0	0
Production	120	120	85	86	0	96
Imports	0	0	0	0	0	0
TOTAL SUPPLY	120	120	85	86	0	96
Exports	35	35	35	30	0	36
Fresh Dom. Consumption	45	40	20	30	0	33
Processing	40	45	30	26	0	27
TOTAL DISTRIBUTION	120	120	85	86	0	96

PSD Table						
Country:	Israel					
Commodity:	Fresh Lemons					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Area Planted	1200	1200	1150	1150	0	1700
Area Harvested	1150	1150	1100	1100	0	1250
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
TOTAL No. Of Trees	0	0	0	0	0	0
Production	18	18	12	16	0	17
Imports	0	0	0	0	0	0
TOTAL SUPPLY	18	18	12	16	0	17
Exports	1	1	0	0	0	0
Fresh Dom. Consumption	15	15	10	15	0	15
Processing	2	2	2	1	0	2
TOTAL DISTRIBUTION	18	18	12	16	0	17

PSD Table						
Country:	Israel					
Commodity:	Fresh Citrus,Other					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Area Planted	1700	1700	1720	1420	0	830
Area Harvested	1300	1300	1520	1300	0	700
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
TOTAL No. Of Trees	0	0	0	0	0	0
Production	11	11	10	15	0	14
Imports	0	0	0	0	0	0
TOTAL SUPPLY	11	11	10	15	0	14
Exports	8	8	8	9	0	9
Fresh Dom. Consumption	3	3	1	6	0	5
Processing	0	0	1	0	0	0
TOTAL DISTRIBUTION	11	11	10	15	0	14

Production

Production totaled 710 tmt in MY2000 compared to 800 tmt in MY1999 and 700 tmt in MY1998, which was considered exceptionally low. Out of the total produced in MY2000 only 664 tmt were picked due to lack of manpower for harvesting. In the past, most of the harvesting was by Palestinian workers, who stopped coming from September 2000 due to political unrest. The forecast for MY2001 is for a total harvest of 670 tmt. The continuous decline in total production is a result of the aging and uprooting of fruit bearing groves.

Total Planted Area

Total planted area was 23,610 hectares, of which 21,790 were fruit bearing. Most of the non bearing area consists of sweetie, lemons and easy peelers. During the late spring and summer of 2001, almost 4,200 hectares were uprooted and MY2001 started with a total area of 19,430 hectares, of which 18,450 are fruit bearing. Most of the uprooted groves were of old Shamouti and Valencia oranges, mainly in the family farm sector. According to the trade, this area is close to the critical mass below which it will be very difficult to maintain all supporting systems, such as packing houses, transportation systems, processing plants, etc. Below this critical mass deterioration of the planted area will probably accelerate. If profitability does not improve dramatically (as the result of the opening of new markets east of Israel, for example) the planted area may continue to shrink until it is adequate only to cover domestic consumption.

Planted Area by Region

Governmental encouragement for expanding planted area in the Negev in the last 10 to 15 years was found successful: in the early 80's only 17% of the total area was in southern parts of Israel, while by 1999 it's share has risen to 33 percent.

Table 2: Total Citrus Area by Region

Region	1980		1993		1999	
	hectare	%	hectare	%	hectare	%
North and Mountains	1,620	3.9	2,200	6.9	2,530	10.0
Inner Valleys	3,240	7.9	2,360	7.4	2,030	8.0
Central Israel	29,250	71.1	20,700	64.6	12,410	49.0
South	7,020	17.1	6,790	21.1	8,360	33.0
Total Area	41,130	100.0	32,050	100.0	25,330	100.0

Source: Based on CBS AND MOA figures.

Note: CBS and MOA figures are usually higher than the data gathered in the CMBI 1999 census.

Planted Area - by Variety

The total area is both shrinking and changing its varietal composition. While in the past most of the area consisted of oranges and white grapefruit, in recent years, in response to market demand, most of the plantings consist of tangerines (easy peelers), pink and red grapefruit, sweetie, lemons and other exotic varieties:

Table 3: Variety Share - Out of Total Citrus Area
% of planted area

Variety	the 70's	Dec. 2000
Shamouti	38	20
Valencia	17	10
Navels	-	4
Total Oranges	55	34
White Grapefruit	22	10
Oranges and White Grapefruit	77	44
Other Varieties	23	56

Source: CMBI census and CBS

According to the last area census which was executed by the CMBI in June 2001, total planted area is 19,430 hectares, of which 6,000 are oranges (31%), 6,000 are various types of grapefruit (31%), 5,000 hectares are tangerines (25.9%), 1,700 hectares are lemons (8.8%) and 730 hectares are other types of citrus (3.3%). Due to expanded demand by processors for white grapefruit MOA and CMBI sources think that the area planted to white grapefruit has bottomed out and uprooting of this variety will stop, at least for the coming two or three years.

Production Problems

A shortage of water has been the key limiting production factor in recent years. Continuous partial drought throughout the Middle East exacerbated Israel's already critical water shortage. The water quota for agricultural use was cut administratively by 50 percent. The GOI has announced that water prices will be raised over the next few years by 40%. A second serious problem is the age of groves, as described in the annex to this report. Average yield per hectare for the old Shamouti and Valencia groves is only 40 mt which significantly reduces profitability, especially with the recent years' farm gate prices. The third critical problem is lack of manpower for picking. Due to serious political unrest beginning in September 2000, the Palestinians, who in the past provided the majority of manpower for picking, stopped reporting for work. MY2001 has also started without Palestinian workers. The MOA, CMBI and the Citrus Growers' Organization (CGO), are trying to import Thai pickers to replace the Palestinians.

R&D

Despite the efforts of many years, the Israeli R&D has failed to supply local producers with competitive, profitable new varieties. The only variety which shows any success is "OR" a type of easy peeler. There are many varieties in research, but it is a matter of many years until any of them will become commercial.

Profitability

MY2000 is considered one of the worst, if not the worst year for the industry, since the Second World War. The reasons include:

- a. Despite the fact that prices in local currencies in Europe were 8 to 10 percent higher than in MY1999, the rate of exchange with the new sheqel reduced CIF income by twenty percent. This translates into a sixty percent drop in farm gate terms. The overall average farm gate price for exports, in NS terms, was 25 percent lower than in the previous year. Higher income from the local fresh market and from the processors mainly for grapefruit, partially compensated for the export losses. Total income in MY2000 was some 10 to 15 percent lower than in MY1999.
- b. Close to 50,000 mt of fruit remained on the trees due to lack of workers for picking. Delay in picking in many cases impaired fruit quality, different varieties being affected to different degrees.
- c. Israeli growers pay a very high price for irrigation water. Expenditure on water constitutes one-third of total production costs. During MY2000 the price of water increased by 19 percent and is due to increase by another 40 percent over the next two or three years. During crop year 2000 total production cost increased by 6 percent, as a result of the combination of the water price increase and expanded water demand, the result of the drought in the winter of 2000/01.

Table 4: Comparison of Break Even Revenue and Realized Price MY2000
\$/packed MT

Variety	Yield	Price needed	Price received
	mt/ha	\$/mt	\$/mt
Shamouti	40	135	90
Valencia	45	124	90
White Grapefruit	60	97	100
Red Grapefruit	50	110	110
Sweetie	50	110	110
Mineola	44	138	85

Source: CMBI

Low profitability is also shown in a survey executed by the Production Economics Division of the Ministry of Agriculture's Extension Services for Crop Year 2000, in which all varieties are shown to have lost money, except the "Or":

Table 5: Normative Profitability Calculations for Main Citrus Varieties
new sheqalim

Item	Shamouti	Valencia	White Grape.	Red Grape.	Sweetie	Or Tangerine
Yield - mt/ha	55	60	70	70	60	40
Total income	30,110	31,200	25,900	33,600	27,420	63,000
Variable cost	25,860	28,160	28,420	29,400	29,880	29,170
Capital recovery	6,360	5,850	6,140	4,760	6,050	300
Residual for own labor	-2,110	-2,810	-8,660	-560	-8,510	33,530

Source: Ministry of Agriculture Extension Service

Exchange rate: USD1=NS4.10

Production Policy

In order to reduce water consumption for agricultural uses, the government offers compensation to those growers who stop irrigating fields and orchards. The compensation is paid for each cubic meter of water saved and depends on the crop. Deciduous orchards are entitled to the highest payment. Growers are encouraged by the MOA to uproot old and unprofitable citrus groves, which offers NS7,000 per uprooted hectare. Part of the grant is earmarked for financing replanting of more profitable, less water-intensive crops e.g. (olives, wine grapes) and establishing recycled water systems. In order to slow down the accelerated pace of uprooting, the MOA and the CMBI initiated two years ago a renewal program for 10,000 hectares of old orchards, mainly in central Israel. The main condition to have governmental grants for replanting is that the replanted groves must be irrigated by recycled water. Budgets and plans for water recycling systems were approved, but to date growers have been loathe to take the risk and invest in an industry whose future is shrouded in uncertainty.

Consumption

Local Fresh Market

Statistics on local consumption of fresh citrus differ depending on the source. Sales to the local fresh market, in recent years are estimated at 170-200 tmt. This quantity includes 20 tmt for the Palestinian Authority. Average deliveries to the domestic fresh market in previous years were estimated to be as shown in Table 6 below.

Table 6: Estimated Domestic Consumption of Fresh Citrus

Variety	000' mt
Oranges	90
Grapefruit	20
Easy Peelers	35
Sweeties	3
Lemons	15
Pomelo, Kumquats, others	3
Total	166

In MY 2000 a shortage of citrus was felt in the local market due to the failure to pick all the fruit. Total consumption of fresh citrus in MY2000 is estimated at 145 tmt and is expected to grow to 200 tmt within 5 to 7 years.

PSD Table						
Country:					Degrees Brix	
Commodity: Orange Juice						
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin						
Deliv. To Processors	152	152	110	85	0	73
Beginning Stocks	0	0	1	1	1	9
Production	74	74	56	43	0	38
Imports	15	15	30	35	0	35
TOTAL SUPPLY	89	89	87	79	1	82
Exports	62	62	60	50	0	50
Domestic Consumption	26	26	26	20	0	27
Ending Stocks	1	1	1	9	1	5
TOTAL DISTRIBUTION	89	89	87	79	1	82

PSD Table						
Country:	Israel				Degrees Brix - Single Strength	
Commodity:	Grapefruit Juice					
		1999		2000		2001
	Old	New	Old	New	Old	New
Market Year Begin		10/1999		10/2000		10/2001
Deliv. To Processors	180	180	168	119	0	102
Beginning Stocks	2	2	0	0	0	11
Production	73	73	74	52	0	46
Imports	40	40	40	45	0	40
TOTAL SUPPLY	115	115	114	97	0	97
Exports	105	105	100	68	0	75
Domestic Consumption	10	10	14	18	0	18
Ending Stocks	0	0	0	11	0	4
TOTAL DISTRIBUTION	115	115	114	97	0	97

The Processing Industry

Consumption by the processing industry generally accounts for about 40 percent of annual production. The shortage of fruit in MY2000 also affected the processing plants which received 314 tmt, compared to more than 370 tmt in MY1999 and 386 tmt in MY1997. The quantity delivered to the processors mainly depends on the export results. Even in recent years when total quantities are in decline, when prices paid by the exporters are too low the processors enjoy larger deliveries often directly from the growers. In contrast, when demand increased in markets with low quality demands, like those in Eastern Europe, the processing industry lost out to those markets.

Ten years ago, 10 plants processed citrus during the winter and tomatoes during the summer time. Now only 3 are left, of which two only process citrus and the third handles both. Their processing capacity is almost 60 percent greater than the actual quantity they receive. Consequently, serious competition has developed among the processors for the shrinking quantity of citrus. In addition, there are two more smaller plants which process 16 tmt of citrus, mainly grapefruit, along with a broad selection of other fruits.

The processors produce mainly concentrates, juice, comminutes, essential oils and flavors for the food industry. Seventy percent of their product is exported. In recent years, demand for fresh juice, marketed chilled or in aseptic packaging, is growing. Domestic consumption of fresh

juice, in the next 5 to 7 years is estimated at 15,000 mt per annum. These are high profit products and the processors intend to expand their production.

Prices Paid by Processors

Shortage of raw material, mainly white grapefruit in MY2000, caused the processors to pay higher prices for fruit than in the past. Their share of annual production rose to more than fifty percent. In many groves, the high price for processing fruit, coupled with high yields, helped grapefruit to become the most profitable of the citrus crops. In the past two marketing years processors have paid \$90/mt for grapefruit, while the price paid for oranges dropped from \$70/mt in MY1999 to \$50/mt in MY2000.

Table 7: Prices Paid by the Processors for Citrus (US\$/MT)

	MY1999	MY2000
Grapefruit	90	90
Oranges	70	50

Trade

A. Fresh Citrus Export

Table 8: Fresh Citrus Exports by Main Groups – MY1998 - MY2000
Thousand of Boxes

				% change	% change
Variety	MY 2000	MY1999	MY1998	2000/1999	2000/1998
Oranges:					
Shamouti	2,908	3,422	4,940	-15	-41
Valencia Lates	1,523	949	1,559	60	-2
Navels, Trovita	104	197	251	-47	-59
Total Oranges	4,535	4,568	6,750	-1	-33
Grapefruit					
White	878	1,600	1,900	-45	-54
Red Blush	0	35	46	-100	-131
Sunrise	3,569	4,498	4,857	-21	-27
Ray Ruby	40	33	46	21	-13
Sweetie	1,672	1,649	1,426	1	17
Total Grapefruit	6,159	7,815	8,275	-21	-26
Easy Peelers	2,116	2,643	2,219	-20	-5
Lemons	3	43	29	-99	-90
Others	812	729	740	11	10
Total	13,625	15,798	18,013	-14	-24

Source: Citrus Marketing Board of Israel.

Spain, Israel's largest competitor, lacked citrus in MY2000, leaving the European market more interested in Israeli fruit. Prices in local currencies were 10 - 11 percent higher than in the previous year. Thus, there were good reasons for a better export season than in MY1999. Actually, MY2000 exports were 14 percent lower than in the previous year and 24 percent lower than in MY1998. The reasons for the drop in export sales include:

- a. Total production dropped by 100 tmt from season to season, as result of accelerated uprooting of citrus groves, aging groves and a combination of insufficient rainfall and GOI cuts in irrigation quotas.
- b. The opening of the export season was delayed by 3 to 4 weeks due to unfavorable rates of exchange between the European currencies and the Israeli sheqel. Translation into domestic currency produced a farm gate price that was lower than picking costs.
- c. Lack of harvest labor and refusal of the government to approve importation of foreign workers. Estimates of the fruit left on trees range between 45 and 100 tmt.

Developments in Main Markets

The combination of reduced export volume and an unfavorable exchange rate between European currencies and the sheqel, caused total income from exports to shrink by 45 percent in USD terms. Western Europe's share in total Israeli citrus exports for many years had been as high as 70 percent of the total but has been steadily deteriorating. It was 52 percent in MY1999, but bounced back to 59 percent in MY2000. Japan, Eastern and Central Europe and the Former Soviet Union accounted for the rest. Shifting from the Western European markets was in accordance with the Israeli exporters' desire to avoid increasing competition from Spain and Morocco by developing new markets, especially in the Far and Middle East. During MY 2000, Israeli exporters faced new competition from Spain in Russia and Central Europe. Concerted marketing efforts by Israeli exporters to expand Sweetie exports to Japan yielded no results, perhaps due to Japan's economic slump. Stiff restrictions on size set by Japanese importers and the low prices offered also had an effect. Efforts made in the South Korean market to open it to Sweetie imports failed totally due to Korean administrative restrictions on importation of new varieties. Export of yellow Sweetie to Europe increased in MY2000 by one-third from 300,000 to 400,000 boxes.

Medium Term Prospects for New Markets

The Gulf States, close neighbors to Israel, represent a potentially important market for Israeli citrus. They are known as citrus consumers and a potential market for 900 tmt of fresh fruit. Due to the political situation in the region export to these countries appear now farther removed than a few years ago. As result of the political unrest, 20,000 metric tons that were exported annually to the Palestinian Authority were not exported at MY2000. This market can be expected to reopen as more peaceful relations between the two sides are restored.

Table 9: Exports of Israeli Fresh Citrus by Type and Destination in CY1999
Thousands of Dollars

Type Destination	Shamouti	Valencia Lates	Easy Peelers	Lemons	Grapefruit	Sweetie +Pomello	Others	Total
Eu	38,214	10,978	16,982	722	35,197	2,975	1,654	106,722
US	95			6	233	50	1,296	1,680
Argentina	194		24	0	729		6	953
Other S. America					23	18	5	46
Turkey					0			
Sweden	5,860	831	486		261			7,438
FSU	5,914	3,663	5,089	533	2,181	96		17,476
S. Africa	137		630	2	101		5	875
Japan					11,388	12,523		23,911
Other S. E. Asia	261	263	18	230	2,731			3,503
Others	1,416	1,220	368	116	3,590	94	112	3,078
Grand Total	52,091	16,955	23,597	1,609	56,434	15,756	3,078	169,520

Source: CBS, Foreign Trade Statistics Annuals.

Table 10: Exports of Israeli Fresh Citrus by Type and Destination in CY2000
Thousands of Dollars

Type Destination	Oranges	Easy Peelers	Lemons	Grapefruit	Sweetie +Pomello	Others	Total
Eu	18,375	10,538	34	17,509	1,990	2,329	50,775
US	523	319			30	1,864	2,736
Argentina	758	35		2,305		5	3,103
Other S. America	99	11		127	11	10	258
Sweden	2,825	1,146	4	2,740		8	6,723
Norway	1,657	67		52			1,776
FSU	344	2,088	22	177	86	56	2,773
Poland	373	206	29	530			1,138
S. Africa	47	176	2	133		4	362
Other Africa	148	27		23			198
Japan				11,629	7,942		19,571
Other S. E. Asia	430	267	224	1,051	150		2,122
Others	1,021	182		3,100		122	4,425
Grand Total	26,600	15,062	315	39,376	10,209	4,398	95,960

Source: CBS, Foreign Trade Statistics Annuals.

Table 11: Citrus Exports to the European Union by Variety – MY2000
Metric Tons

Variety	Total Exports	Of which: to EU	% of Variety	
			in 2000	in 1999
Oranges	71,000	54,832	77	78
Grapefruit				
White	12,285	6,838	56	45
Red	59,000	34,186	58	49
Sweetie	23,000	6,194	27	28
Total	94,285	47,218	50	46
Easy Peelers	30,000	16,600	55	56
Lemons	0	0	-	-
Others	9,000	2,230	25	-
Total	204,285	120,880	59	52

Source: Citrus Marketing Board of Israel.

B. Citrus Product Exports

As with fresh citrus, Israel's exports of citrus products to the European Union have declined although with respect to grapefruit Israel still is a dominant player. Due to reduced exports of fresh fruit, and better processing prices, total processed production has grown and total export value has increased over CY1999 by 7.4 percent.

Table 12: Exports of Israeli Citrus Products by Type and Destination in CY1999
Thousands of Dollars

Type Destination	Orange Concent.	Grapefruit Concent.	Grapefruit Segments	Orange Juice	Grapefruit Juice	Other Products	Total
Eu	4,488	1,034	8,897	13,004	23,867	620	51,910
US		11	3,881			265	4,157
Argentina					1,112		1,112
Other S. America					327		327
Turkey				1,883	239		2,122
Norway					58		58
Sweden			49		42		91
FSU				2,011	1,891	157	4,059
Japan		264	438		1,602	149	2,453
Other S. E. Asia				1,578	578	9	2,165
Ukraine					283		283
Slovenia				234			234
Kenia				74			74
Others	222	135	32	1,423	1,339	59	3,210
Grand Total	4,710	1,444	13,297	20,207	31,338	1,259	72,255

Source: CBS, Foreign Trade Statistics Annuals.

Table 13: Exports of Israeli Citrus Products by Type and Destination in CY2000
Thousands of Dollars

Destination	Orange Products				Grapefruit Products				Other	Total
	Conc.	Puree	Juice	Slices	Conc.	Puree	Juice	Slices		
EU	17,498	4,417	52	1,093	24,703	1,040	486	8,620	704	58,613
US			13	1,202	102	43	39	4,098	201	5,698
Argentina									35	35
Other S. America									12	12
Turkey									95	95
Sweden				11		44		27		82
Norway		41	12							53
FSU	132	46	50	119	82	15			27	471
Poland	644	21			7,763	906			183	9,517
S. Africa			3							3
Other Africa		30								30
Japan		67	6			393		159	22	647
Other S. E. Asia		59	33		136	39				267
Others	679	305	51	127	861		14		49	2,086
Grand Total	18,953	4,986	220	2,552	33,647	2,480	539	12,904	1,328	77,609

Source: CBS, Foreign Trade Statistics 2000.

C. Citrus Product Imports

The diminishing quantities of fresh fruits delivered to the processing plants enforce the plants to import increased quantities of frozen concentrates to supply their demands: Citrus products are often bought and sold through brokers, thus Israel's import statistics which are compiled on the basis of country of purchase rather than of origin may not be accurate.

Table 14: Citrus Product Imports by Type of Product and Source – CY1999
Thousands of Dollars

Origin	Frozen Orange Juice	Other Orange Juice	Frozen Grapefruit Juice	Other Grapefruit Juice	Other Citrus Juice	Total
EU	1,983		153	71	404	2,611
US and Canada	896		172			1,068
Argentina	504			1,716	27	2,247
Brazil	173					173
Other S. America	877	446		819		2,142
Turkey			84			84
South Africa	93	554	677			1,324
Others			325			325
Total	4,526	1,000	1,411	2,606	431	9,974

Source: CBS, Foreign Trade Statistics, 1999

Table 15: Citrus Product Imports by Type of Product and Source – CY2000
Thousands of Dollars

Origin	Frozen Orange Juice	Other Orange Juice	Frozen Grapefruit Juice	Other Grapefruit Juice	Other Citrus Juice	Total
US and Canada	5,073	204	394		65	5,736
Other: EU	2,527	104	70	29	610	3,340
Argentina	495		97		970	1,562
Brazil	652	82				734
Other S. America	754		64		645	1,363
Switzerland	537	32		19		588
South Africa	1,065	15	1,533			2,613
Others			673			673
Total	11,103	437	2,831	48	2,190	16,609

Source: CBS, Foreign Trade Statistics, 2000

Policy

In recent years, political and economic leaders have declared the citrus industry to be a public enemy. They blame the industry for inefficient consumption of expensive water and utilization of expensive land, for using imported workers and for low profitability which needs recurrent economic assistance and costly subsidies. This change in attitude affects the quality of government response to the industry's needs. The citrus industry suffered losses in most of the years of the past decade, whether because of natural disasters or economic problems. Various plans were developed to deal with the many problems facing the sector. The main plan concerned the replanting of 10,000 hectares of citrus over a five year period with assistance from government grants. Recently, due to budget problems and lack of grower interest, the Ministry of Finance canceled a NS 50 million budget earmarked for the plantings. During MY2000, the government compensated the growers with \$3 per exported metric ton for losses incurred in MY1999. It looks now, that under pressure from the agricultural lobby the GOI will again compensate exporters for losses that were caused by exchange rate problems at the beginning of the recent export season. In general, it appears that the government has retreated from attempts at basic long-term solutions to the very problems of the sector, to palliatives and first aid measures for less critical short term difficulties.

Marketing Policy

The main problem of the Israeli citrus industry is marketing. Unlike the water shortage or the low yields of ageing groves, which can be solved domestically, marketing problems mainly are related to external factors over which Israeli exporters have little control and must learn to adjust their practices. The main marketing problem of Israel's citrus industry is the steadily increasing competition from Spain and Morocco. It has become a fact of life that wherever Spanish fruit shows up, it drives out the Israeli product. Recently, Spain has penetrated new markets in Central and Eastern Europe which were developed by Israel. Last August "Mehadrin" and "Tnuport", the two largest of Israel's three main exporters, merged into one exporting company. This was done ostensibly to take advantage of economies of size and other externalities but probably at least some of the benefits to be reaped are at the expense of the growers.

Sweetie Marketing

The export potential of the area planted to Sweetie is 3 million boxes but only 1.6 million were exported in MY2000. The large area planted to Sweetie was based on hopes for a large market in Japan which it was hoped could absorb the entire Israel crop. A market survey that was executed for the Israeli exporters during the recent export season indicates that the exports to Japan cannot maintain present price levels, beyond 800 to 900 thousand boxes. Soon, when all of the planted area matures, annual production will total 100 tmt. If the planted area is not reduced, most of the Sweetie will find it's way to the processing industry despite current refusal of the processors to buy significant quantities. They may buy it at a very low price, if at all. If the price sinks low enough it will become uneconomical to pick and transport the Sweetie to the processors and groves will be abandoned.

ANNEX

The Future of Israel's Citrus Sector in the Medium Term

The Composition of Israel's Groves

In recent years the citrus Marketing Board of Israel has conducted a number of censuses. Table A-1 shows the rapid response Israeli growers have been showing to the rapid decline in income from citrus.

Table A-1: CMBI Citrus Census by Species
‘000 hectares

Species	1997		2000 (12/00)		6/2001
	Total	Bearing	Total	Bearing	Bearing
Oranges	10.99	10.25	7.72	7.1	6.0
Shamouti	7.0	6.75	4.61	4.2	3.5
Valencia	3.2	2.9	2.16	2.0	1.7
Tabouri	0.8	0.6	0.92	0.9	0.8
Grapefruit	8.4	7.9	7.26	6.7	6.2
Pomello and Sweetie	1.8	1.3	2.2	2.0	1.7
Peelers	6.26	4.51	5.61	5.2	5.4
Lemons	1.7	1.2	1.56	1.6	1.6
Exotics	0.43	0.36	0.52	0.6	0.5
Total	27.69	24.22	22.97	21.7	19.7

Source: CMBI citrus census

Orchard Age

Average age of Israel's citrus orchards is very high by any standard. In December 2000, 68 percent of all orange groves were older than 35 years. This adversely affects fruit quality and reduces average yields. Growers who want to remain in the industry will have to replant a considerable proportion of the existing groves. When income in markets is so low, it is hard to believe that many growers will decide to invest. Observation indicates they are doing the opposite.

Table A-2: Citrus Planted Area by Age

Age - Years	% of Total Area
0 - 5	17
6 - 34	46
35 - 60	37

Source: CMBI census.

Most of the old groves are located in the central part of Israel which is actually the best area for citrus but is also under competition from real estate.

Table A-3: Annual Citrus Plantings
dunams

Species	2000	1999	1998	1997	1996
Oranges	114.7	165.0	659.8	1,724.2	1,208.8
Grapefruit	-	52.0	600.0	1,332.0	4,544.0
Peelers	280.3	1,409.2	3,328.0	2,769.4	1,735.2
Lemons	105.9	1,176.6	2,748.6	1,751.6	1,172.0
Other	72.4	178.5	443.3	534.6	375.2
Total	573.3	2,981.2	7,779.2	8,111.3	9,035.5

Source: CMBI census

Note: 10 dunams = 1 ha

Table A-3 clearly shows the declining interest in citrus in Israel. While the abandonment/uprooting rate exceeds 1,000 ha per year in recent years, plantings have dropped from 900 ha in 1996 to 57 ha in 2000. The irrigated land thus cleared can be expected to be planted to crops whose irrigation requirements are significantly lower than the 8-10 thousand cubic meters per hectare demanded by citrus. Some of these might be almonds, olives or wine grapes, depending on the soil and the climate.

The key to these trends lies in the total lack of profitability which is evident across the board from the production cost and return calculations provided by the Extension Service's Production Economics Division for key species and varieties grown in Israel. These appear in Table A-4.

Table A-4: Normative Production Costs of Key Citrus Crops
NS/Dunam

Item	Oranges		Grapefruits			Peelers
	Shamouti	Valencia	White	Red	Sweetie	Orr
Average yield tons/dunam	5.5	6.0	7.0	7.0	6.0	4.0
Total income NS/duman	3,011	3,120	2,590	3,360	2,742	6,300
Operating costs	2,586	2,816	2,842	2,940	2,988	2,917
Residual for capital and own labor	424	304	-252	420	-246	3,383
Capital recovery - young grove	636	585	614	476	605	30
Residual for own labor	-211	-281	-866	-56	-851	3,353

Source: Ministry of Agriculture, Farm Economic Department.

Another approach that can be taken is to compare the required revenue per ton of fruit to the actual farm gate returns in order to break even. This is done in Table A-5 for the main species and varieties. In 1999/2000, only the grapefruit barely broke even.

A-5: Break-Even Revenue Required for Main Citrus Crops 1999/2000 Season
\$/mt

Species	Cultivation Cost \$/dunam	Picking Cost \$/mt	Yield mt/dunam	Total Cost \$/dunam	Required Revenue \$/mt	Actual Revenue \$/mt
Shamouti	400	35	4	540	135	90
Valencia	400	35	4.5	557.5	124	90
Mineola	450	35	4.4	604	138	85
Suntina	450	50	3	600	200	180
Sunrise	400	30	5	550	110	110
White Grapefruit	400	30	6	580	97	100
Sweetie	400	30	5	550	110	110

Source: Citrus Marketing Board of Israel

The Citrus Industry Future

The significant difference between actual production costs and average income from citrus, and the continuing losses in the traditional citrus varieties can be expected to induce many growers to leave the industry. The main factors that will affect their decision will include:

1. The grove age and the necessity to invest in replanting,
2. Real estate alternatives (mainly in central Israel),
3. Water price and availability of recycled water,
4. Availability of harvest workers.

According to the industry, two scenarios can be drawn for industry's future:

- A. A pessimistic scenario, according to which industry will fail to compete in the foreign markets, exports will grind to a halt and production will shrink to a volume only sufficient to satisfy fresh domestic consumption. This implies a total area of 7,000 hectares and total annual production of 320 tmt.
- B. A less pessimistic scenario, in which the sector will adjust to the new developments in foreign and local markets. Total production will decrease, but exports will continue and production will be based on new groves in areas that can benefit from an adequate supply of recycled water. According to this scenario planted area may reach 12,000 hectares. Total annual production in that case would stabilize at 550 tmt. A portion would be exported and a small share might remain for one or more processors.

In the next five to seven years the government may assist in maintaining the latter, more optimistic of the two scenarios.