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## Israel

## Tomatoes and Products

## Annual

## 2002

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### Report Highlights:

Israel's tomato processing industry is experiencing a serious decline from levels of more than 300,000 mt in the recent past, to 145,800 mt in MY2001. Tomato product exports which were \$33 million in CY1995, dropped to \$14 million in 1999 and \$8 million in 2000. The number of active processing plants has been cut in half in ten years. Fresh tomato exports - mainly cherry tomatoes - totaled 18,000 mt in CY2001. Israel's chronic water shortage and the continuously rising price of irrigation water may force more tomato producers to search for more profitable crops.

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## **Executive Summary**

Total tomato production in MY2001 (July 2001-June 2002) is estimated at 348,300 mt, comprised of 338,300 mt from Israeli farms and 10,000 mt produced by Palestinian farmers. Out of the total, 166,000 mt were for fresh consumption, 18,000 mt for export and 146,000 mt were delivered to processing plants instead of the planned 174,000 mt.. Another 17,000 mt were removed from the market by the Vegetable Production and Marketing Board as surplus. This is considered one of the worst years ever for tomato growers. The basic contract price on processing tomatoes was reduced by \$2.50/mt. Tomato product exports are estimated to have been cut in half relative to MY2000, after shrinking 55 percent relative to MY1999. On the brighter side, fresh exports have been improving due to increased sales of cherry tomatoes and clusters. Cherry tomatoes' share in fresh exports has reached 70 percent of the total.

## **Outlook for MY2002**

No significant changes are anticipated in the fresh tomato industry. Lack of manpower during the growing period and at harvest is becoming an increasingly serious problem. Restrictions on the number of foreign agricultural laborers licensed for work in the country have prevented full replacement of the absent Palestinian laborers. Contracts have been signed for 170,000 mt of processing tomatoes but ultimately only 160-165 tmt may be delivered. In the course of 2002 the price of water is to be raised almost by 40 percent. If industry fails to develop new markets or sophisticated products which can command a high price, it may not be able to raise the farm gate price for its raw material and the planted area can be expected to continue to shrink in the coming years. **End Executive Summary**

PSD Table						
Country: Israel						
Commodity : Fresh Tomatoes (ha, metric tons)						
Marketing Year		2000		2001		2002
Beginning		7/2000		7/2001		7/2002
	Old	New	Old	New	Old	New
Plant for Fresh Consumption	1,260	1,260	1,350	1,230	0	1,180
Plant for Processing	2,200	2,200	1,740	1,740	0	1,700
TOTAL Area Planted	3,410	3,410	3,090	2,970	0	2,880
Harvest of Fresh Market	1,150	1,150	1,250	1,220	0	1,170
Harvest for Processing	2,150	2,150	1,700	1,650	0	1,650
TOTAL Area Harvested	3,300	3,300	2,950	2,870	0	2,820
Production - fresh	179,120	182,650	177,000	192,300	0	187,000
Production- processing	222,795	222,795	174,000	146,000	0	165,000
TOTAL Production	401,915	405,445	351,000	338,300	0	352,000
Supply from the PA	0	15,000	0	10,000	0	15,000
TOTAL SUPPLY	401,915	420,445	351,000	348,300		367,000

Source: Ministry of Agriculture (MOA), Vegetable Growers Organization (VGO);  
Vegetable Production and Marketing Board of Israel (VPMBI).

## Fresh Table Tomatoes

### Production

**Table 1. End Use of Fresh Tomatoes - 1,000 mt**

Marketing Year	1998	1999	2000	2001	2002*
Total Supply	425	485	420	348	367
Fresh Consumption	133	140	163	166	166
Surplus Removal	15	18	21	17	20
Processing	267	307	223	146	165
Direct Export	9	19	12	18	15
Intermediate Products	1	1	1	1	1

Source: Based on CBS figures, Agricultural Statistics Quarterly, No. 4, 1998, 1999, 2000 and 2001.

\*Forecast.

### Planted Area

Total area planted to table tomatoes in 2001 was 1,230 ha, 2.3 percent less than in 2000. The main reduction in planted area was of open field varieties (-10%) which have been shrinking steadily in recent years as a result of increasing infection by the Tomato Leaf Curl Virus, spread by the white fly, *Bemisia tabaci*. In 2002, total planted area is expected to fall by another four percent, all open field varieties. The gap between the reduced planted area and forecast consumption will be covered by the higher average yield obtainable from greenhouse and net-covered crops. Areas under netting have continued to grow as this method enables producers to use greenhouse techniques with a lower investment cost. In the long term, expanded greenhouse plantings can be expected to displace the open fields, providing higher yields, convenient working conditions, lower insecticide application against the white fly and a more even use of manpower for harvest throughout the year. According to the industry, greenhouse area can be expected to grow by another 25-30 ha, while open field plantings will shrink accordingly.

**Table 2. Table Tomatoes: Planted Area by Cultivation Method - ha**

Marketing Year	1998	1999	2000	2001	2002
Open Fields	400	400	550	500	450
Greenhouses	500	500	560	550	550
Net Covers	100	100	150	180	180
<b>Total</b>	1,000	1,000	1,260	1,230	1,180

Source: Vegetable Growers Association (VGA)

**Table 3. Tomatoes: Area Planted in MY 2001 by Type and Region - ha**

Region	Cherry Tomatoes	Other Varieties		
	Greenhouse	Greenhouse	Net Covers	Open Field
Galilee and Golan	0	40	0	200
Center	20	150	20	150
Besor and Arava	130	210	160	150
<b>Total</b>	<b>150</b>	<b>400</b>	<b>180</b>	<b>500</b>

Source: Vegetable Production and Marketing Board of Israel (VPMBI)

### Annual Production

Annual fresh tomato production in recent years has been 180-190 tmt. Almost 80 percent is produced year 'round in greenhouses and under netting. Only some 20 percent is grown in open fields, usually in spring and summer. Crop year 2001 witnessed a five percent production increase over the previous year as a result of improved average yields. This compensated to some degree for the reduced deliveries from the Palestinian Authority (PA). The average yields for all growing methods in MY2001 was 156 mt/ha, 8.5 percent higher than in 2000. The main contribution to the improved yield was from open field tomatoes.

**Table 4. Table Tomatoes: Production and Domestic Sales mt**

Year (CY)	Supply	Sales*	Surplus
1992	132,440	128,331	4,109
1993	145,101	136,287	8,814
1994	142,102	132,537	9,565
1995	134,191	104,754	29,437
1996	152,692	126,004	26,688
1997	152,751	138,389	14,362
1998	151,175	137,296	13,879
1999	149,166	135,496	13,670
2000	168,685	148,539	20,146
2001	177,780	165,780	12,000

Source: (VPMBI), Marketing and Industry Division.

\* Sales do not include exports.

As the open field area shrinks, marginal land and the less efficient farmers are removed from production. Most open field crops are now planted on fertile land previously planted to citrus and avocado. Lack of Palestinian laborers during MY2000, caused by the continuing political unrest, was partially alleviated during MY2001 by more efficient utilization of existing manpower. Grower organizations learned to mobilize foreign laborers and shift them from crop to crop as the seasons advanced. Greenhouse yields were slightly higher than the long term average due mainly to mild temperatures during the growing, flowering and harvest periods.

CY 2001 supply grew by 5.4 percent over the previous year, while sales (excluding exports) grew by more than 11 percent. The difference is explained by the significant drop in surpluses removed from the market.

### **Production Problems in Crop Year 2001**

A relatively comfortable summer in 2001 and mild temperatures during the winter at the end of 2001 and beginning of 2002 provided good growing conditions and a smooth supply of fresh tomatoes to the markets all year 'round. The political unrest which began in late September 2000, caused a manpower shortage, mainly in the Besor area in the south, which had been totally dependent on Palestinian labor from the Gaza Strip. The 2000 autumn yield was affected seriously by the labor shortage and large quantities were left to rot on the vines. The problem found a partial solution in 2001 but by April, 2001 entrance of all Palestinian laborers was completely prohibited. Producers had to rely on scarce foreign laborers, mainly from Thailand. The various grower organizations collaborated to rotate them as harvest seasons shifted between citrus, flowers, vegetables and other crops. Israel's agriculture still lacks some 6,000 foreign laborers in addition to the 22,000 already employed. The government approved entry permits for a total of 28,000 workers but interministerial strife has delayed the arrival of the missing 6,000. According to officials of the VPMBI, the damage to vegetable growers caused by the political unrest between Israel and the PA totals an estimated NS200 million (\$40 million), of which the tomatoes' share is some NS 40 million. The growers demand compensation from the government but it is hard to believe that any money will be paid them in the foreseeable future, due to the serious budget crisis the country is undergoing.

### **Water Problems**

Israel's critical water shortage may not affect the size of the fresh tomato industry in terms of water availability, but it may increase the cost of water, thus changing profitability considerations. The main growing regions benefit from a sufficient supply of special sources of water: the Besor area has plenty of recycled water at its disposal. Trials are under way there in an effort to raise tomatoes on detached beds which are supposed to save 40 to 50 percent of irrigation requirements. The Arava region in Israel's far south is rich in deposits of water containing varying levels of salinity which can be utilized by tomatoes. The Negev Heights, north of the Arava, are also rich in water with high salinity levels. Growers mix the saline with sweet water to obtain optimal levels for tomato cultivation.

Water problems of the Gaza Strip where seawater incursions are evident in several sections of the coastal aquifer, can be expected to affect the tomato supply from the PA to the Israeli market. In the short run it will reduce Palestinian tomato sales to Israel but eventually may lead to total abandonment of tomato production by Palestinian farmers in the Gaza Strip.

### Cherry Tomato Production

Cherry tomato deliveries to market in 2000 totaled 20,160 mt of which 9,000 were exported. As a response to increased demand in both the domestic and export markets, production in MY 2001 grew by 24.5 percent to 25,073 mt, of which 12,800 mt were for export.

**Table 5. Cherry Tomato Production - mt**

<b>Destination</b>	<b>MY 2000</b>	<b>MY 2001</b>	<b>% Change</b>
<b>Domestic Market</b>	<b>11,118</b>	<b>12,283</b>	<b>+ 10.5</b>
<b>Exports</b>	<b>9,043</b>	<b>12,790</b>	<b>+ 41.4</b>
<b>Total</b>	<b>20,161</b>	<b>25,073</b>	<b>+ 24.4</b>

**Source:** Central Bureau of Statistics and VPMBI Annual Report.

## Producer Prices

**Table 6. Fresh Table Tomatoes: Farm Gate Prices - NS/mt**

Month	1999	2000*	2001*	2002*
January	1941	2055	1243	1848
February	1566	1658	1172	1317
March	1356	1545	1155	1363
April	1190	1374	1952	
May	1085	1237	1883	
June	1163	1267	1594	
July	1033	1475	1591	
August	1375	1652	1640	
September	1472	1730	1987	
October	2128	1962	1902	
November	2445	1797	1812	
December	1913	1470	1848	

Source: CBS, Price Statistics Monthly. Contract terms: Average farm gate price for fresh table tomatoes (excluding cherry tomatoes).  
 Currency: New Sheqel (NS). Exchange rate Monthly average):  
 \$1.00 = 4.10(01/99), 4.20 (01/2000), 4.12 (01/2001), 4.53(01/2002).

In general, both farm gate and consumer prices have been relatively stable due to the high percentage of production in greenhouses where supply is relatively constant all year 'round. January and February 2002 saw prices decline due to a growing surplus caused mainly by reduced consumer demand. The last week in March and the first week in April 2002 witnessed very high consumer prices due to a combination of scarce harvest labor and peak demands for Passover.

## Production Policy

Production and marketing policy is formulated by the government and implemented by the VPMBI. It is designed to ensure a smooth flow of tomatoes to market at reasonably profitable prices to the growers.

The main policy tool is a guaranteed minimum price for growers who declare in advance the area they intend to plant and harvest. They are required to insure the declared area with the Natural Damages Insurance Company. The table below indicates that the Board guarantees the price only on 70 mt per hectare. The trigger price, which was NS2,250/mt in CY2000, was reduced in CY2001 to NS1,810/mt. This improves the terms to the growers. Grants equal to 30 percent of total investment in greenhouse construction and equipment, are offered to growers in preferred regions.

**Table 7. Guaranteed Farm Gate Prices for Fresh Greenhouse Tomatoes - NS/mt**

Marketing Season	Ploughed Under	Picked	Trigger Price	Guaranteed Yield*
	NS/mt	NS/mt	NS/mt	Mt/ha
<b>January 1 - April 30</b>	610	650	1,810	70
<b>May 1 - June 30</b>	460	500	1,810	70
<b>July 1 - October 31</b>	310	350	1,810	70
<b>Nov. 1 - Dec. 31</b>	610	650	1,810	70

Source: VPMBI, Economic Dept.

Exchange rate in January 2002: \$1=NS4.53

Note: The sum paid to the farmers differs, depending on whether the farmer ploughs the crop under before the harvest or payment is made on a crop already picked.

\* - The "guaranteed yield" is the maximum yield in mt/ha for which the government offers a guaranteed price.

## Consumption

In recent years, annual consumption of fresh tomatoes has been relatively constant, totaling some 165,000 mt. This stability is somewhat surprising in light of the reduced demand of institutional market, mainly hotels and restaurants, as a result of the sharp drop in tourism to Israel. The demand is filled by domestic production and by shipments from the PA. In the past, annual shipments were as high as 29,000 mt but after September, 2000 the quantities tapered off as political tension rose. In 2002, shipments are about 10,000 mt in annual terms.

## Domestic Demand

According to Israel's Central Bureau of Statistics (CBS), in 2001 tomatoes constituted 14 percent of total direct consumption of fresh vegetables in the domestic market. Their share has been growing. According to the VPMBI, per capita consumption declined steadily between 1996 and 1999. In 2000 and 2001 the trend was reversed. The recent additional consumption is explained by the appearance of two relatively new products, cherry tomatoes and cluster tomatoes.

**Table 8. Per Capita Annual Consumption of Fresh Tomatoes - kg**

1995	24.2
1996	26.8
1997	26.2
1998	25.3
1999	22.1
2000	23.6
2001	24.5

Source: VMPBI

### Consumer Prices

Consumer prices show relative stability over time as most of the crop is produced in greenhouses and is unaffected by weather conditions. Some fluctuations are seen when open field tomatoes enter the market. In February and March 2002, consumption of many vegetables, including tomatoes, dropped significantly, mainly in open markets. This triggered a 30 percent decline in consumer prices. The last week of March and the first week of April (Passover), saw prices rise steeply to NS 8.00/kg, almost three times higher than the March average.

**Table 9. Retail Prices of Table Tomatoes - NS/kg on the 15th of each month**

Month	Regular Tomatoes	Cluster Tomatoes	Cherry Tomatoes	Cherry Clusters
December 2001	3.50	3.50	4.90	6.30
January 2002	3.50	3.70	5.00	6.70
February 2002	1.40	2.00	5.50	6.60
March 2002	2.50	2.80	4.50	5.90

<b>April 2002</b>	<b>8.30</b>	<b>7.00</b>	<b>5.50</b>	<b>6.90</b>
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Source: VPMBI. Marketing Division

Exchange rate: NS 4.12(01/2001), NS 4.53(01/2002)

**Table 10. Wholesale - Retail Markup on Fresh Tomatoes - NS/kg**

Calendar Year	Consumer Price	Wholesale Price	Difference - %
1996	3.15	1.55	103
1997	3.28	1.69	94
1998	3.85	2.44	58
1999	3.30	1.77	86
2000	3.53	1.84	92
2001	3.61	1.83	97

Source: VPMBI, Marketing Division, Annual average prices of tomatoes.

The markup - expressed as a percentage of the wholesale price, is calculated as the ratio of consumer price (Cp) to wholesale price (Wp) minus one:  $(Cp/Wp - 1) * 100$ .

## Marketing

Retail chains account for an estimated fifty percent of total retail tomato sales. The second most popular venue is the open markets. In order to increase per capita consumption of tomatoes, the VPMBI, in cooperation with the Vegetable Growers Organization (VGO) and the extension service of the Ministry of Agriculture (MOA), are encouraging the introduction of new products such as varieties of cherry tomatoes and tomato clusters. They have also prepared an official quality standard for tomatoes and five other fresh vegetables in which cultivation methods, pesticide application and residues, packaging, storage conditions, delivery to market and the legal enforcement system are all defined. Despite the fact that the standard was approved by the Finance Committee of the Knesset, Israel's parliament, more than a year ago, it has not been signed into law by the ministers concerned. The Board is also financing a sales promotion campaign every few months in order to stimulate vegetable consumption. It emphasizes the health advantages of consuming fresh vegetables.

## Trade

### General Trends

After many unsuccessful attempts to break the 10,000 mt export barrier, it appears that the goal has finally been achieved. In MY2001 exports totaled 18,500 mt, 5,665 mt were regular varieties (of which 90 % are exported in clusters), and 12,790 mt were cherry tomatoes, regular and in clusters. In recent years Israeli exporters have been meeting increasing competition from cherry tomatoes from Africa - mainly Senegal. Shippers expect this competition to capture a growing share of the market and, unless the Israeli tomatoes find new outlets, annual exports can be expected to drop to their previous levels below 10,000 mt.

Israel's main export markets in recent years have been Britain and Holland, followed by Germany, the U.S. and France. Export season 2001 saw an increased demand for cluster tomatoes in the U.S. market. This was partially due to a temporary lack of produce from Spain which is an important supplier of tomatoes to the U.S.

**Table 11. Trade Matrix - Fresh Tomato Exports**

Year CY	Value \$1,000				Quantity (mt)			
	1998	1999	2000	2001	1998	1999	2000	2001
U.S.	3,043	2,679	2,028	NA	2,024	1,234	1,445	NA
EU	20,565	17,182	21,488	NA	9,405	8,491	10,840	NA
Others	3,362	2,848	1,873	NA	1,435	303	1,112	NA
<b>Total</b>	<b>26,970</b>	<b>22,709</b>	<b>25,389</b>	<b>33,210</b>	<b>12,864</b>	<b>10,028</b>	<b>13,397</b>	<b>18,450</b>
<b>Of which: Cherry</b>	<b>21,221</b>	<b>19,444</b>	<b>18,413</b>	<b>25,580</b>	<b>9,385</b>	<b>7,815</b>	<b>9,043</b>	<b>12,790</b>

Source: CBS, Foreign Trade Annuals. 2001 - based on information received from VPMBI, VGO and Agrexco.

\*Excluding trade with Gaza Strip and West Bank.

Note: CBS claims higher exports than shown by VPMBI, Agrexco and MOA figures. Apparently the CBS figures include exports from the Palestinian Authority which mainly are shipped through Israeli ports.

### Import Policy

According to the Paris Accords between Israel and the Palestinian Authority (PA), the two entities constitute a single customs union. Beginning in 1998, Israel permitted unlimited shipments of agricultural products from the PA into its markets. At their high, 29,000 mt of Palestinian tomatoes from the Gaza Strip reached Israeli consumers. Lately quantities have dropped significantly due to the political situation in the region. Imports from other countries are not limited but pay a duty which makes them uncompetitive in the market place.

**Table12. Tariffs on Fresh Tomato Imports in 2001 and 2002**

Import Period	HS Code	MFN Tariff	Not to Exceed	Discount on U.S. fruit
June- October	0702.0010	NS0.82/kg	289.4%	10%
November-May	0702.0090	NS1.10/kg	289.4%	10%

Source: Ministry of Finance, Israel Customs Tariff.

Note: Under the U.S-Israel 1996 Agreement on Trade in Agricultural Products, U.S. tomatoes enjoyed a duty free tariff rate quota (TRQ) of 147 mt in 2001. This has been enlarged to 157mt for 2002 and 2003. In practice it is unlikely that U.S. growers can compete with lower cost producers in neighboring countries, even on the duty-free quota.

### **Implications for U.S. Trade**

Israel and the Palestinian Authority are totally self sufficient in tomatoes. As a matter of fact, there is sufficient greenhouse area in Gaza to supply all of the PA and Israel with fresh tomatoes all year long. In the event of an acute shortage, which becomes less likely as the greenhouse area grows, limited imports of fresh, duty-free vegetables may be permitted. It is unlikely that U.S. producers of fresh tomatoes will be able to compete with the low cost exporters of Spain, Turkey, Greece and the Canary islands, whose supply lines are much shorter than from the U.S. Israeli producers of table tomatoes consider Europe to be the natural market for their products. Expanded shipments to the U.S. may occur only when growing competition in Europe changes its status as Israel's natural market and in the event of special opportunities, when other exporters to the U.S. fail to fill the demand in the market, as was the case with Spain in MY2001. In any case, potential shipments from Israel or the PA are insignificant relative to the size of the U.S. market.

### **Processing Tomatoes**

#### **Production**

MY2001 is considered one of the worst years for Israel's tomato processing industry. The total area planted to processing tomatoes is dictated by the quantities the processors are willing to accept. In the pre-season negotiations between the growers' representatives and the processors, the factories signed contracts for delivery of 174 tmt in crop year 2001. Ultimately, only an area sufficient for 160 tmt was planted. Shmita, Israel's biblical seventh - or fallow- year and low precipitation during the winter were the main factors causing reduced planting. Low soil moisture forced the growers in the Golan Heights and the Eastern Valleys (Eastern Jezreel and Beit Shean) to begin irrigating earlier than usual. In the Western Galilee producers planted only single rows instead of double. Relatively high temperatures at the beginning of the season damaged the late plantings by reducing the rooting percentage. A heat wave

at the end of May 2001 caused flowering problems in the Western Galilee and accelerated the ripening in the Eastern Valleys, lowering the quality of the harvested fruit. Many fields were infested with mildew which forced an earlier than planned harvest. Later, during the season, the processing plants lacked tomatoes. In some cases they shut down production temporarily. Towards the end of the season the harvest was renewed and processing continued. A combination of all the problems mentioned above reduced deliveries from the expected 174 tmt to 146 tmt. This compares with 223 tmt in 2000 and 307 tmt in MY1999. Due to quality problems, only 138 tmt were actually processed. The average yield was 88 mt/ha, 15 percent below the MY2000 level.

### **Planted Area**

In 2001, 1,650 ha were planted, compared to 2,150 ha in crop year 2000. In 2002, planted area will remain almost the same; perhaps it may total 50 ha less. The Golan Heights, previously an important growing area, mainly for the late ripening varieties, has almost abandoned tomato production due to the water shortage. Farms there have shifted almost all of their reduced irrigation quotas to their fruit orchards.

Economies of size are a key factor in the production of tomatoes for the processing industry. They have caused most small holders to abandon the industry to large cooperative farms (kibbutzim) or private companies. Between 85 and 90 percent of all processing tomatoes are produced on large holdings of 50 to 150 ha.

### **Production Trends**

The planted area in Israel is mainly determined by the price offered the growers by the processors. In recent years this has been deteriorating steadily in real terms, partly due to the pressure of world market prices on the processors. The total area in the future will also be affected by the significant increase in the price of water. The combination of the two may turn processing tomatoes into an unprofitable crop for all but the most efficient growers. According to the trade, it is unlikely that production in Israel will return to the 300 tmt levels of recent years. The planted area may remain at its current level or may grow slightly if the processors succeed in developing new, sophisticated products which can command higher prices in the market and enable the manufacturers to offer the growers better prices.

### **Production Techniques**

Ninety percent of the area is transplanted from nurseries, of which 90 percent is mechanically planted and ten percent is planted by hand. Ten percent of the total area is mechanically sown. Combines harvest 95 percent of the crop. Hand picking is used only on small marginal fields. Most of the harvest is conducted by a few large contractors who own a complete line of machinery and usually are also growers.

**Table 13. Varieties: Actual Share of Total Area - %**

Variety	1999	2000	2001	2002
<b>Total Area - ha</b>	3100	2200	1740	1700
<b>Brigade</b>	24.9	20.0	10.0	5.0
<b>H8892</b>	6.0	20.0	20.0	20.0
<b>XPH5811</b>	16.2	20.0	30.0	35.0
<b>EPTX127</b>	3.5	10.0	10.0	10.0
<b>BOS3155</b>	6.9	10.0	15.0	10.0
<b>951</b>	6.3	0.0	0.0	5.0
<b>Giant</b>	1.5	5.0	5.0	5.0
<b>Others - (experimental)</b>	20.2	5.0	10.0	10.0
<b>Total</b>	100.0	100.0	100.0	100.0

Source: MOA, Extension services.

2002 figures represent recommendations.

### **The Water Problem**

Processing tomatoes are still the most profitable of all annual summer crops with which they compete for Israel's expensive water. However, the announced 39 percent hike in water charges scheduled to be implemented in the course of 2002, combined with a declining product price being offered by the processors, may cause many farmers to abandon the industry.

### **Grower Prices**

The basic price to growers was set at \$60/mt, \$2.50 lower than in MY2000. Premiums for higher Brix

values and penalties for below average levels were handled differently by different plants. Some paid or penalized \$1.25/mt for each Brix unit respectively above or below the basic level. Others paid or penalized \$2.50/mt per two Brix levels above or below the basic contract Brix level. Average price to growers for the season worked out to be 8.5 percent lower than in 2000, due to an average Brix level which was 2.6 degrees below the previous year's average.

**Table 14. Average Price for Industrial Tomatoes - \$/mt**

<b>Year</b>	<b>Base Price</b>	<b>Brix</b>	<b>Average Paid</b>
<b>Average 2001</b>	60.0	4.96	60.0
<b>Average 2000</b>	62.5	5.09	65.6
<b>Average 1999</b>	64.5	4.95	65.3
<b>Average 1998</b>	64.5	5.08	70.7
<b>Average 1997</b>	64.5	4.96	68.7
<b>Average 1996</b>	64.5	4.97	68.9

Source: VPMBI Statistical Annual, MY2001

### **Deliveries to Processors**

Contracts for production of 174 tmt were signed at the beginning of 2001. Actual deliveries were 16 percent lower, totaling 146 tmt. Because of low quality of the delivered fruit, only 138,000 mt were actually processed. Deliveries to the processing plants were as shown in the table below.

**Table 15. My 2001 Deliveries to Processors**

mt	
<b>Month</b>	<b>Quantity</b>
June	32,991
July	53,899
August	54,753

September	4,130
<b>Total</b>	<b>145,773</b>

Source: VPMBI. Vegetable Processing Division,  
Unpublished worksheets.

May deliveries - mainly from the eastern valleys, which were common in previous years, disappeared in MY 2001 at the processors' behest. In MY 2001, 75 percent of the crop was delivered during the months of July and August. In earlier years, these two months accounted for only 60-65 percent of the total.

### The Processing Plants

Five processing plants are active, out of 13 which competed for raw material ten years ago. Even these five are operating at half capacity. That is why the plants contracted to shorten the delivery season to the three months of June, July and August. In the past, when the processors had attempted to extend the growing and delivery season to May at the early end and September at the late end, regions with slightly more extreme climates grew processing tomatoes. At present, the Golan Heights which specialized in late ripening varieties, have almost completely abandoned this crop. All the processing plants are in the center and the north of the country.

**Table 16. Deliveries to Processors - mt**

Processing Plant	Delivered in 2001	Planned for 2002	% change
Pri Nir	50,130	48,800	- 2.6
Cham	26,968	43,200	60.0
Miloz	18,805	25,750	36.9
Gan Shmuel	8,534	21,300	149.5
Licored	33,091	15,000	- 54.6
Zan Lakol	8,242	14,200	72.2
<b>Total</b>	<b>145,770</b>	<b>168,250</b>	<b>15.4</b>

Source: The processing plants and the Industrial Crop Division of VPMBI.

## Quality

After several years during which the Brix level had been steadily on the rise, in MY 2001 it dropped by 2.6 percent and stood on an average of 4.96, compared to 5.09 in the previous year. The factors causing the reduced quality were discussed above.

## Main Products

The main products of the processing plants are: paste, puree, juice, peeled tomatoes (whole and diced), ketchup, pizza sauces, and lycopen, an organically based natural edible red colorant.

## Forecast for 2002

For crop year 2002, the processors reduced their orders from the growers due to expectations of continued world tomato product surpluses. The price remains as it was for MY2001. Production contracts with the growers totaled 165,000 mt at a base price of \$60.00/mt. The processors had planned to process 168,000 mt in MY2002 but forecasts place the harvest at approximately 160-165 tmt.

## Consumption

Domestic consumption of tomato products accounts for a steadily increasing share of total production. For years, it was considered to constitute about 35 percent of production. In MY 2001, with significantly lower exports and smaller production runs, local consumption represents as much as fifty percent or more of total supply of tomato products. Processors have begun to pay increasing attention to the needs of the domestic market. Most consumption is of paste and pizza sauces. American fast food chains have brought American eating habits to the population and as a result the demand for both of these has increased. In addition to domestic production, some of the local demand is satisfied by imports, especially of ketchup.

## Trade

Exports have declined steadily in recent years from a level of \$33 million in CY1995, to \$13.9 million in 1999 and only \$8 million in 2000. The steep decline is a result of surpluses in the world market and the failure of Israeli producers to compete with low-cost producers such as China.

**Table 17. Tomato Products: Total Exports - mt**

Year	Paste	Peeled	Sauce	Juice	Total
1995	18,452	24,123	12,115	2,054	56,744
1996	17,725	11,055	8,951	1,854	39,585
1997	10,355	13,980	6,250	3,065	33,650
1998	17,000	13,850	5,445	2,750	39,045

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<b>1999</b>	14,500	7,768	2,832	1,570	26,670
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<b>2000</b>	5,070	2,969	1,099	1,437	10,575
<b>2001</b>	4,095	2,400	850	1,155	8,500

Source: Based on CBS Foreign Trade Statistics Annuals.

2001 - unpublished CBS worksheets.

**Table 18. Tomato Products: Total Exports - \$ '000**

<b>Year</b>	<b>Paste</b>	<b>Peeled</b>	<b>Sauce</b>	<b>Juice</b>	<b>Total</b>
<b>1995</b>	12,363	13,509	6,712	1,407	33,991
<b>1996</b>	11,876	6,191	4,959	1,270	24,296
<b>1997</b>	9,678	7,010	2,273	1,203	20,164
<b>1998</b>	9,632	10,075	2,173	637	22,507
<b>1999</b>	7,396	5,049	1,076	346	13,867
<b>2000</b>	4,474	2,019	713	750	7,956

Source: CBS Foreign Trade Statistics Annuals.

**Table 19. Tomato Products: Exports to U.S.A.\*\* - mt**

<b>Year</b>	<b>Paste</b>	<b>Peeled</b>	<b>Sauces*</b>	<b>Total</b>
<b>CY 1995</b>	4,373	19,223	1,620	25,216
<b>CY 1996</b>	4,809	5,720	482	11,011
<b>CY 1997</b>	2,131	7,567	33	9,731
<b>CY 1998</b>	3,000	9,410	140	12,550

<b>CY 1999</b>	12,388	3,400	230	16,018
<b>CY 2000</b>	2,392	395	842	3,629

Source: CBS Foreign Trade Statistics Annuals.

\* - Includes tomato juice

\*\* - Includes Canada.

**Table 20. Tomato Products: Exports to U.S.A.\* - \$ '000**

<b>Year</b>	<b>Paste</b>	<b>Peeled</b>	<b>Sauces**</b>	<b>Total</b>
<b>CY1996</b>	3,222	3,203	270	6,695
<b>CY1997</b>	1,890	4,108	180	6,178
<b>CY1998</b>	3,848	6,459	432	10,739
<b>CY1999</b>	6,318	2,210	51	8,579
<b>CY2000</b>	2,292	237	444	2,973

Source: CBS Foreign Trade Statistics Annuals.

\* - Includes Canada

\*\* - Includes tomato juice

**Table 21. Trade Matrix. Imports of Tomato Products - \$ '000**

<b>Country</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>U.S.</b>	12	577	683	851	903
<b>UK</b>	0	12	0	8	0
<b>Italy</b>	0	0	0	44	31
<b>Turkey</b>	296	310	215	198	247
<b>All others</b>	0	18	44	67	75
<b>Total</b>	308	917	942	1,168	1,256

Source: CBS, Foreign Trade Statistics. 2001 unpublished worksheets

**Table 22. Trade Matrix. Exports of Tomato Products - \$ '000**

<b>Calendar Year</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
<b>U.S.</b>	6,676	6,149	10,703	8,579	2,973
<b>France</b>	4,388	1,811	1,407	200	409
<b>Germany</b>	1,380	1,198	1,241	1,288	1,139

<b>UK</b>	1,795	1,923	1,789	1,039	787
<b>Other EU</b>	1,228	791	522	283	358
<b>Total EU</b>	8,791	5,723	4,959	2,810	2,693
<b>East Europe</b>	3,781	5,281	3,731	766	553
<b>Canada</b>	19	29	36	0	0
<b>Japan</b>	1,351	629	1,111	358	714
<b>Other Asia</b>	626	0	482	314	80
<b>Australia</b>	833	529	241	82	65
<b>All Others</b>	2,219	1,824	1,245	958	877
<b>Grand Total</b>	24,296	20,164	22,508	13,867	7,955

Source: Foreign Trade Statistics Annuals.

**Table 23. Duties on Imported Tomato Products in CY2002, Percent and NS/kg**

Product	DutyFree Quota	HS Code	MFN Rate	Duty on US Goods
Peeled	189 mt	2002.1090	14.6%+NS 0.49/kg BNM than 67.8%	13.14% + NS0.44 BNM than 51.48%
Powder		2002.9020	8%	Exempt
Paste: in containers > 100 kg	443 mt	2002.9010	12.9% + NS1.63/kg BNM than 64.3%	11.6%+NS1.47/kg BNM than 57.9%
Other paste	443 mt (included)	2002.9011	14.6% + NS1.63/kg BNM 57.2%	13.1% +NS1.47/kg BNM than 51.48%
Juice: in containers >100 kg	201 mt	2009.5091	13.2%+NS0.22/kg BNM than 69.1%	11.9% + NS 0.20/kg BNM than 62.2%
Other juice	201 mt (included) ...	2009.5099	20.7%+No0.22/kg BNM than 69.1%	18.6%+NS0.20/kg BNM than 62.2%
Sauce		2103.2000	12%	Exempt

Source: Ministry of Finance, Customs and VAT Authority.

\* - BNM - But not more

PSD Table						
Country: Israel						
Commodity : Tomato Paste, 28-30% TSS Basis						
		2000		2001		2002
	Old	<u>New</u>	<u>Old</u>	<u>New</u>	<u>Old</u>	<u>New</u>
Marketing Year		<u>07/2000</u>		<u>07/2001</u>		<u>07/2002</u>
Delivery to Processors	222,795	222,795	174,000	145,770	0	165,000
Beginning Stocks	9,420	9,420	4,849	7,787	0	3,847
Production	25,510	26,290	20,880	16,560	0	18,975
Imports	0	0	0	0	0	500
TOTAL SUPPLY	34,930	36,340	25,729	22,347	0	23,322
Exports	16,431	16,353	12,229	6,000	0	7,000
Domestic Consumption	13,650	14,200	12,000	12,500	0	12,500
Ending Stocks	4,849	5,787	1,500	3,847	0	3,822
TOTAL DISTRIBUTION	34,930	36,340	25,729	22,347	0	23,322

PSD Table						
Country: Israel						
Commodity : Tomato sauce						
		2000		2001		2002
	Old	New	Old	New	Old	New
Marketing Year		07/2000		07/2001		07/2002
Delivery to Processors	222,795	222,795	174,000	145,770	0	165,000
Beginning Stocks	4,928	4,928	1,648	1,378	0	548
Production	8,920	8,920	7,308	6,570	0	7,095
Imports	1,600	1,730	2,000	2,500	0	3,500
TOTAL SUPPLY	15,448	15,578	10,956	10,448	0	11,143
Exports	6,800	6,570	3,000	3,000	0	4,000
Domestic Consumption	7,000	7,630	7,200	6,900	0	7,000
Ending Stocks	1,648	1,378	756	548	0	143
TOTAL DISTRIBUTION	15,448	15,578	10,956	10,448	0	11,143

PSD Table						
Country: Israel						
Commodity : Canned Tomatoes						
		2000		2001		2002
	Old	New	Old	New	Old	New
Marketing Year begins 07		2000		2001		2002
Delivery to Processors	222,795	222,795	174,000	145,770	0	165,000
Beginning Stocks	8,105	8,105	3,809	6,011	0	2,011
Production	17,824	18,046	14,400	11,100	0	13,365
Imports	280	260	300	0	0	250
TOTAL SUPPLY	26,209	26,411	18,509	17,111	0	15,626
Exports	14,000	11,800	8,509	7,000	0	7,500
Domestic Consumption	8,400	8,600	8,500	8,100	0	7,500
Ending Stocks	3,809	6,011	1,500	2,011	0	626
TOTAL DISTRIBUTION	26,209	26,411	18,509	17,111	0	15,626