

## CHAPTER XII

### AGRICULTURE

#### 1. MAIN DEVELOPMENTS

In 1978/79 the net agricultural product increased by 1.4 percent at producer prices, compared to a period average of 7 percent for the four preceding years. The slower rate of growth during the year reviewed reflects a decline in the output of most agricultural branches (see Table XII-6).

Between 1974/75 and 1977/78 Israel's crop farming branches expanded at a rapid rate of some 7 percent annually due to a large export market, and the livestock branches' growth—intended to substitute for imports and to satisfy growing domestic demand—reached 5 percent annually. In 1978/79 the expansion of the crop family branches dropped to only 3 percent, while the output of the livestock branches fell by 1 percent, after having shown no growth in the preceding year.

The main reason for the slowdown in the crop branches was the drought of recent years, which led to a reduction in the area of grains and cotton under cultivation in the southern part of the country, and damaged unirrigated crops elsewhere; the olive harvest was especially hard hit. Drought damage to field crops and olives in 1977/78 destroyed 1.5 percent of the year's agricultural output and, owing to the high added value in the branches affected, the agricultural product decreased by 2.5 percent. The decline in the output of the livestock branches reflects the excess production capacity in these branches, which required increasingly large subsidies in order to be able to sell their products. In 1978/79, the subsidy rate for milk and eggs was raised somewhat, but the subsidy on broilers was reduced from 30 percent to about 17 percent of producer prices.<sup>1</sup> The reduction of the subsidy, along with the excess production capacity, caused serious problems in the poultry branch, where there was an unprecedented accumulation of unsold stocks and declining profitability. If the subsidy rate paid in 1977/78 had been maintained in 1978/79, the income of poultry farmers branch would have been more than 30 percent higher than they actually were.

<sup>1</sup> At the beginning of 1979/80 the subsidies on milk and eggs were abolished, but the subsidy on broilers remained.

The volume of agricultural exports increased 12 percent in 1978/79—appreciably more than the average annual rise in recent years. However, the dollar prices of agricultural exports rose by only 7.5 percent, whereas world market prices jumped 15 percent. In other words, the relative price of Israel's agricultural exports declined. A number of branches suffered from this phenomenon, greatly reducing the motivation for the continued expansion of exports. Producer prices of flowers—which rose only 7 percent in terms of IL—were most affected, causing exporters to suffer losses.

In 1978/79, liquidity difficulties began to appear in the agricultural sector. These difficulties worsened over the course of the year, reaching a peak at the beginning of 1980. They were caused by the fact that the farmers' investments exceeded the amount of long-term credit allocated to them from the government's development budget and the Jewish Agency. They covered the gap with short-term credit. With the implementation of a tight monetary policy by the government, farmers found it difficult to maintain the real volume of their short-term credit, and were unable to convert it into long-term credit.

The return on the farm owners' labor and equity in 1978/79 grew by 65 percent in nominal terms similar to the rise in the consumer price index for the same period (64 percent). In other words, there was no drop in the farmers' real incomes, despite the above-mentioned problems faced by the sector. This was owing to the subsidies farmers received in the form of export credit whose element continued to grow as inflation accelerated. Had the subsidy rate on export credits remained at a fixed level, the farmers' real incomes would have decreased approximately 6 percent. However, the rapid pace of inflation actually raised farmers' real incomes somewhat.

## 2. EXPORTS

In 1978/79, direct agricultural exports expanded 12.4 percent similar to the 1977/78 rate, and faster than the average annual rate of 7 percent for the period 1972/73-1976/77. Though export growth in most branches slowed compared to the preceding year, the overall growth rate was maintained, chiefly owing to a 7 percent increase in citrus exports following a 4 percent drop in 1977/78. There was a substantial decrease in vegetable exports, primarily due to the contraction of dry onion exports by 40 percent and a decline in potato exports. Exports of both these items are subject to sharp fluctuations in accordance with world market prices which are very unstable.

Exports of the livestock branches contracted, mainly because fewer eggs and chicks were exported as a result of the closing of the Iranian market.

**Table XII-1**  
**CURRENT ACCOUNT OF AGRICULTURE, 1977/78 AND 1978/79**  
 (IL million)

	Value at current prices		Percent annual increase				
			Quantity			Price	
	1977/78 <sup>a</sup>	1978/79	Average	1977/78	1978/79	1977/78	1978/79
			1972/73- 1976/77				
1. Total output at producer prices	23,815.4	39,889.2	4.7	4.1	1.6	43.1	64.8
2. Intermediate inputs (exclusive of waste destroyed)	1,568.8	2,826.2	0.3	-1.3	-3.1	36.2	84.9
3. Agricultural output at producer prices (1—2)	22,246.6	37,063.0	5.1	4.5	1.9	43.6	63.5
4. Purchased inputs	10,148.2	16,144.2	3.6	2.6	2.7	46.0	54.9
5. Agricultural product at producer prices (3—4)	12,098.4	20,918.8		6.1	1.4	39.2	70.5
6. Depreciation	1,829.3	3,139.0	5.3	2.3	1.5	58.4	69.0
7. Net agricultural product at producer prices (5—6)	10,269.1	17,779.8	6.6	6.8	1.4	36.1	70.7
8. Net agricultural product at producer prices	10,269.1	17,779.8	Percent increase in value				
			1976/77	1977/78			
9. Drought and war compensation	98.5	101.5	45.4	73.1			
10. Total income from agriculture (8+9)	10,367.6	17,881.3	45.8	72.5			
11. Interest and rent	1,298.9	2,710.8	74.9	108.7			
12. Wages of hired labor	2,446.9	4,217.1	65.4	72.3			
13. Income of farm owners from agriculture (10—11—12)	6,621.8	10,953.4	35.4	65.4			

<sup>a</sup> Revised data.

Source: Central Bureau of Statistics.

Table XII-2

**DIRECT AGRICULTURAL EXPORT<sup>a</sup>, 1977/78 AND 1978/79**  
(IL million, at current producer prices)

	Value		Percent annual increase				
			Quantity		Price		
	1977/78 <sup>b</sup>	1978/79	Average 1972/77	1977/78 <sup>b</sup>	1978/79	1977/78 <sup>b</sup>	1978/79
Field and industrial crops	1,829.5	3,776.8	18.9	25.4	12.0	45.9	84.4
Vegetables, potatoes and melons	591.6	926.9	7.0	12.9	-5.8	39.1	66.3
Fruit (excl. citrus)	523.2	1,040.1	15.8	5.9	30.5	64.4	52.4
Flowers, seedlings, ornamental plants, vegetable seeds, etc.	777.3	1,219.7	29.4	71.4	46.9	30.8	6.8
Total crops, excl. citrus	<b>3,721.6</b>	<b>6,963.5</b>	<b>17.6</b>	<b>28.0</b>	<b>19.0</b>	<b>43.6</b>	<b>57.2</b>
Citrus	2,901.8	5,225.5	1.7	-3.8	7.1	28.5	68.1
Total crops	<b>6,623.4</b>	<b>12,189.0</b>	<b>9.2</b>	<b>12.3</b>	<b>13.8</b>	<b>47.5</b>	<b>61.7</b>
Eggs and chicks	238.8	272.8	5.6	19.2	-28.1	13.5	58.9
Meat	132.8	307.1	36.4	15.7	37.8	48.0	67.8
Fish	37.4	43.2	11.4	43.5	-30.7	40.1	66.8
Misc. livestock products	59.2	68.0	4.7	-7.9	-16.0	37.0	
Total livestock branches	<b>468.2</b>	<b>691.1</b>	<b>11.9</b>	<b>15.8</b>	<b>-8.1</b>	<b>26.6</b>	<b>60.6</b>
Total agricultural exports	<b>7,091.6</b>	<b>12,880.1</b>	<b>7.3</b>	<b>12.6</b>	<b>12.4</b>	<b>45.9</b>	<b>61.6</b>

<sup>a</sup> Includes exports to administered areas.

<sup>b</sup> Revised data.

Source: Central Bureau of Statistics.

The expansion of flower exports slowed, due to a serious crisis in the branch, the first signs of which were already apparent in 1977/78: in 1977/78, producer prices of exported flowers rose only 31 percent, while producer prices of total agricultural output increased 43 percent. In 1978/79, the situation deteriorated further: producer prices of flowers rose only 7 percent, compared to 55 percent for total agricultural output. The influence of several factors was responsible for this blow to flower exports:

(a) The branch expanded too rapidly: output in 1978/79 was four times larger than that of 1976/77. The flooding of the export markets caused a steep decline in prices. It should be noted that Israel has a virtual monopoly in the European flower market during the winter months, so that the market's prices are closely linked (in inverse ratio) to the quantities supplied.

(b) The marketing structure, both in Israel and abroad, did not adjust itself to the rapid expansion of exports. Problems arose not only at the packing houses in Israel but also with regard to the timing of flights and at reception terminals abroad. The result was that flowers arrived in poor condition. Even the timing of flower destruction was not always optimal.

(c) Europe was struck by a severe frost, which led to partial paralysis in the markets. This seems to have been the single most important cause of the drop in flower prices.

The interaction of these three factors exacerbated the individual effects of each with regard to the contraction of exports. From preliminary data for 1979/80, however, it would appear that the situation has improved, both as regards the organizational side and also the demand for flowers abroad.

Exports of fruit other than citrus increased considerably in quantitative terms—by some 30 percent in 1978/79 compared to an average of 6 percent during the period 1972/73-1977/78. However, this expansion was accompanied by a comparatively small increase of 50 percent in producer prices. The reason for this is that avocado exports increased 50 percent in quantitative terms but only 39 percent in terms of producer prices. Very large areas have been planted with avocados in Israel which are still not bearing fruit, or have not yet reached peak output. The incentive to plant avocados was in the high profitability of their export. The decrease in the real price of avocados during the year under review and the extraordinarily large increase in the quantities exported (after an insignificant increase of 6 percent in 1977/78) may indicate the beginning of saturation in the European market for this product. Indeed, it might be wise to suspend additional development in this branch until it becomes clear how the additional output is absorbed in Europe during the coming years.

Table XII-3

**PRICES OF EXPORT COMPARED TO AGRICULTURAL INPUT IN IL,  
1977/78 AND 1978/79**

	Increase in 1978/79 compared to 1977/78			
	Increase from corresponding quarter in 1977/78 <sup>a</sup>			Annual average
	I	II	III	
1. Prices of agricultural input (%)	48.5	51.9	58.2	53.3
2. Exchange rate (%)	35.9	22.0	37.6	31.7
3. Prices abroad in dollars <sup>b</sup> (%)	12.9	13.6	17.1	14.5
4. Prices of other agricultural exports (%)	9.5	5.5	8.2	7.5
5. Export-input price ratio (2x3/1)	3.3	-8.8	1.9	-1.6
6. Export-input price ratio (2x4/1)	0.2	-15.3	-5.9	-7.6

<sup>a</sup> Agricultural products are exported primarily during the first three quarters of the agricultural year, in similar proportions each quarter.

<sup>b</sup> Prices of imported inputs other than fuel and diamonds were used as an indicator of prices abroad.

Concerning the effect of the exchange rate on agricultural exports, it is interesting to examine the often heard claim that the temporary upward revaluation of the IL towards the end of 1978 (i.e. during the first quarter of the agricultural years 1978/79<sup>2</sup>) was a serious blow to Israeli agriculture, owing to the continued rise in the prices of agricultural inputs. Comparing the rise in exporters' prices in IL with the rise in the prices of agricultural input<sup>3</sup> by quarters (each quarter compared to the corresponding quarter of the previous year) it becomes apparent that damage to exports from a too slow adjustment of the exchange rate occurred only during the second quarter of 1978/79 (i.e. January-March 1979), and that on a yearly basis, there was very little damage at all. It should be recalled that agricultural produce is exported during three quarters of the year, in equal proportions each quarter. The only exception is flowers which are primarily exported in the second quarter.

A similar comparison made concerning the prices of agricultural exports indicates a worsening in their terms of trade—i.e. a drop in the profitability of

<sup>2</sup> The reference in this chapter is to agricultural years starting on October 1 and ending on September 30.

<sup>3</sup> This examination assumes that the quantity of exports in a specific year is fixed independently of the prices of exports and input during that year. The examination is not intended to investigate the profitability of agricultural exports, but to examine whether farmers were seriously hurt by the increase in the exchange rate towards the end of 1978 or whether their problem was due to other factors.

agricultural exports for the economy. This type of damage cannot be remedied by altering the exchange rate policy.

It should be noted that the figures presented in Table XII-5 do not take into consideration the growth in export subsidies as a result of directed credit. In order to demonstrate the scale of this component, suffice it to say that the subsidy per dollar of exports in the flowers branch which was IL1.26 in 1977/78, rose to IL4.38 in 1978/79—an increase of 250 percent. This subsidy certainly moderates the worsening in terms of trade for the farmer, without, of course, improving the position of the agricultural sector from the viewpoint of the economy as a whole.

There are various signs that the general public considered the exchange rate's stability to be temporary, but even had the farmers foreseen the rise to come, they would have had to convert the foreign currency return from their exports into Israel pounds, owing to the liquidity problems in the sector.

### 3. THE CREDIT PROBLEM

The agricultural sector was beset by a feeling of credit shortage in 1977/78, which reached a peak towards the end of 1978/79. At the beginning of 1979/80, a committee was appointed to examine the subject.<sup>4</sup> It found that the sources of short-term credit available to the agricultural sector were more than sufficient to meet its working capital requirements. The committee further found that the expansion of investments in the agricultural branch in particular, and in the rural sector in general,<sup>5</sup> was greater than the increase in the development budget (including that of the Jewish Agency), which is the main source of long-term credit. To finance their investments, the farmers used short-term credit to bridge the gap between the long-term credit supply and the investments' costs. It should be noted that a considerable proportion of this short-term credit was directed and subsidized. The committee estimated the size of the total credit gap in the rural sector at between IL1.2-1.5 billion at the end of 1977/78.

The significant real reduction in the volume of directed credit for working capital for the domestic market by the Bank of Israel (from IL800 million in 1976/77 to only some IL1 billion—despite inflation—in 1978/79), as well as the tight monetary policy, made it difficult for farmers to renew their short-term credit in the free market. Since long-term credit on the open market is restricted, the farmers were unable to convert short-term credit to long-term credit on a sufficient scale. Hence, a credit shortage was created.

It is important to note that, in addition to the reasons mentioned above, the in-

<sup>4</sup> "Report of the Inter-ministerial Committee to the Financing of Israeli Agriculture", January 1979.

<sup>5</sup> In cooperative settlements (kibbutzim and moshavim) it is difficult to distinguish between investments in agriculture and other investments.

stitutional structure of credit allocation to moshavim (cooperative smallholders' villages) encourages debt accumulation in general, but particularly so during periods of credit shortage. The cooperative receives the credit in most cases and then allocates it among its members. The individual members have no personal liability towards the lenders. Debt collection usually takes the form of deductions from the farmer's income from his output, which is marketed through the cooperative. When an individual farmer encounters financial difficulties, his inclination to prefer marketing other than through the cooperative grows. The cooperative association has no convenient way of collecting debts when this happens, and its own financing problems—as well as those of other members—become graver. This in turn creates pressures to leave the organized marketing framework, and a vicious circle begins. The creation of a direct link between credit recipients and lenders might prevent such debt accumulation in the future.

At the beginning of 1979/80, a slow institutional process of converting farmers' short-term credit into long-term credit finally started. The scale of such conversions was, in the first stage, similar to the nominal financing deficiency in 1978 and to half of this deficiency at the end of 1979. The credit granted was only partly linked, and given the present rates of inflation contained a big subsidy component. The existence of this subsidy greatly stimulated the demand for credit; its abolition by instituting complete linkage of the loans would not only reduce this demand but also weaken the impression that there is a credit shortage. The transition to linked loans and repayment terms would enable farmers to convert their present credits into long-term loans, which carry a reasonable repayment burden.

#### 4. MAIN BRANCHES

##### (a) Livestock

The problems that arose in the livestock branches during 1978/79 were fundamental problems, unlike those in the crop branches which were of a temporary nature. The livestock branches' major problem is excess production capacity relative to domestic demand, and the slim hope of developing profitable exports. The intensive development of these branches was part of a deliberate policy of expansion, particularly with regard to broilers, which followed the world "food crisis" during the early 1970s. The poultry branch is elastic and can be expanded rapidly, since it does not require large tracts of land and the returns on investments are immediate. Consequently, this branch served as a central means of creating a source of livelihood for new agricultural settlements and settlements in mountainous areas. During 1974/75 and 1975/76, signs of a surplus in the livestock branches, particularly in broilers, began to appear. In an attempt to solve this problem, unprofitable exports were started, while the subsidy rates on output were constantly raised. By 1977/78, subsidies accounted on average for 12 percent of the



Table XII-4

**TOTAL AGRICULTURAL OUTPUT BY ECONOMIC DESTINATION,  
1977/78 AND 1978/79**  
(IL million, at current producer prices)

	Value		Percent annual increase				
			Quantity			Price	
	1977/78 <sup>a</sup>	1978/79	Average 1972/73- 1976/77	1977/78	1978/79	1977/78	1978/79
1. Direct domestic consumption	7,223.5	11,445.6	2.1	3.1	-2.2	42.8	62.0
2. Industry	6,705.9	10,416.8	8.1	-0.6	-7.0	41.3	67.0
3. Direct exports	7,091.6	12,880.1	7.3	12.6	12.4	45.9	61.6
4. Total output marketed	21,021.0	34,742.5	5.5	4.8	1.2	43.3	63.3
5. On-farm consumption	650.8	1,073.0	1.8	-0.8	-0.3	42.9	65.4
6. Capital goods	515.4	1,157.4	3.5	0.3	36.1	55.8	65.0
7. Intermediate goods (including output destroyed)	1,628.2	2,916.3	0.3	-1.3	-3.1	36.2	84.9
8. Total output (4+5+6+7)	23,815.4	39,889.2	4.7	4.1	1.6	43.1	64.8

<sup>a</sup> Revised figures.

Source: Central Bureau of Statistics.

total value of output at producer prices in the livestock branches, and for as much as 43 percent in the dairy farming branch.

The granting of subsidies was accompanied by the fixing of annual production quotas. It was difficult to supervise quotas with regard to eggs and broilers, and farmers found various ways of exceeding their quotas, without its affecting their subsidies. The annual drop in egg and broiler production in winter causes the market price for fresh poultry to exceed the official price. As a consequence, there is much unorganized marketing with does not show up as deviations from official quotas. These and other subterfuges to evade control increased the profitability of production, causing the branch to expand even beyond the limits planned by the Ministry of Agriculture, whose policy was to encourage its expansion anyway.

It is reasonable to assume that the prices of livestock products are fairly in-elastic, which provides a certain degree of protection against price fluctuations caused by changes in subsidy rates. However, there is a fundamental difference between branches producing meat and other livestock branches. Milk and eggs are protected administratively against imports, and therefore producers' prices are fixed. On the other hand, meat is imported into Israel (indeed during part of 1978/79 such imports were subsidized), so that the demand for the domestic product is relatively elastic, owing to the existence of substitutes while the supply of

domestically produced meat (and in particular broilers) is very elastic, for the following reasons:

(a) The physical equipment involved in production enables a level of output far exceeding present demand.

(b) The labor force employed in raising broilers in moshavim often has no alternative employment in the farm or does this work in addition to outside work.

(c) An inventory of livestock can be adjusted relatively quickly—within three months if necessary.

The combination of an elastic supply with an elastic demand creates very sharp fluctuations in quantities produced whenever there is a change in consumer prices, in subsidies, in prices of frozen meat, or in prices of poultry-feed. Farmers—and especially family farms—respond to changes in prices by drastically increasing or decreasing production, but their reaction comes after a time lag, since the timing of price changes is decided by the various institutions. The farmer does not know whether the price ratios between his inputs and his output on the day when he makes his decision concerning the next growing cycle will still be in force at the end of the cycle. Consequently, his decision is not based on up-to-date information but is a reaction to losses.

The lowering of subsidies in 1978/79 increased the average market price of broilers by over 90 percent while producer prices rose by only 60 percent. Accordingly, large surpluses of broilers accumulated and stocks in cold storage reached 8,000 tons, three times more than the highest level in 1977/78. The farmers reacted by limiting output, and by April 1980, there was a shortage of broilers in the markets.

The influence of subsidies is reflected by the economic destination of output from the livestock branches. Direct domestic consumption of produce from these branches contracted in 1978/79 by 7 percent, while sales to industry increased by 5 percent. This change was due to the decrease in consumption of fresh poultry by the general public and the consequent increase in sales to slaughter houses for cold storage, where stocks accumulated.

#### **(b) Crops**

The most important development in crop farming in recent years has been the continuous expansion of exports. However, in 1978/79 exports encountered serious difficulties, as already mentioned. In addition to these problems, industrial sales fell off significantly, by 23 percent; cotton sales declined by 13 percent, olives by 5 percent due to lower yields and drought, and various grains by 2 percent, also due to the drought. The sale of cotton fibre to industry contracted because the spinning plants and Cotton Marketing Board could not agree on the price. As a result, more

**Table XII-5**  
**MARKETED AGRICULTURAL OUTPUT BY ECONOMIC DESTINATION,**  
**1977/78 AND 1978/79**  
(IL million, at current producer prices)

	Value		Percent annual increase			
			Quantity		Price	
	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79
<b>Crops</b>						
1. Direct domestic consumption	3,580.3	5,953.6	6.4	2.6	46.0	62.1
2. Industry	2,820.5	3,701.0	1.1	-23.1	45.6	70.7
3. Direct export	6,623.4	12,189.0	12.3	13.8	47.5	61.7
4. Total output marketed (1+2+3)	<b>13,024.2</b>	<b>21,843.6</b>	<b>8.0</b>	<b>2.7</b>	<b>46.7</b>	<b>63.3</b>
<b>Livestock</b>						
5. Direct domestic consumption	3,643.2	5,492.0	0.7	-6.9	39.7	61.9
6. Industry	3,885.4	6,715.8	-1.8	4.7	38.3	65.1
7. Direct export	468.2	691.1	15.8	-8.1	26.6	60.6
8. Total output marketed (5+6+7)	<b>7,996.8</b>	<b>12,898.9</b>	<b>0.3</b>	<b>-1.3</b>	<b>38.2</b>	<b>63.5</b>
9. Total agricultural output marketed (4+8)	<b>21,021.0</b>	<b>34,742.5</b>	<b>4.8</b>	<b>1.2</b>	<b>43.4</b>	<b>63.3</b>

<sup>a</sup> Revised figures.

Source: Central Bureau of Statistics.

**Table XII-6**  
**CURRENT AGRICULTURAL OUTPUT BY BRANCHES, 1977/78 AND 1978/79**  
(IL million at current producer prices)

	Value		Percent annual increase			
			Quantity		Price	
	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79
<b>Crops</b>						
Field crops	4,471.3	7,785.3	2.9	-7.2	43.9	87.6
Vegetables, potatoes and melons	2,428.6	3,829.3	11.9	-7.4	35.0	70.2
Citrus	3,561.0	6,222.8	-3.8	6.8	55.8	63.6
Other fruits	2,927.8	4,768.7	12.6	3.6	51.8	57.2
Flowers, ornamental plants & misc.	1,002.4	1,594.4	52.7	40.9	33.3	12.9
<b>Livestock and their products</b>						
Meat	4,234.9	6,742.5	-1.5	-1.8	48.4	62.2
Milk	2,362.9	4,164.2	-0.5	2.2	26.9	72.5
Eggs and chicks	1,648.7	2,586.3	4.3	-1.0	26.8	58.4
Fish	430.0	655.6	0.3	-0.3	51.1	52.9
Miscellaneous	232.4	382.7	-1.9	-8.1	43.2	79.2
Total	<b>23,300.0</b>	<b>38,731.8</b>	<b>4.2</b>	<b>0.8</b>	<b>42.8</b>	<b>64.8</b>

<sup>a</sup> Revised figures.

Source: Central Bureau of Statistics.

Table XII-7

**SUBSIDIES ON AGRICULTURAL OUTPUT, 1976/77 AND 1978/79**  
(IL million, at current prices)

	Value		Subsidies as percent of producer prices <sup>a</sup>			
			Average			
	1977/78 <sup>b</sup>	1978/79	1970/71- 1975/76	1976/77	1977/78	1978/79
Eggs	327	530	15.5	22.1	25.9	35.0
Poultry	558	550	9.6	25.2	30.4	17.0
Milk	1,024	2,170	31.4	40.8	43.3	55.5
Total livestock <sup>c</sup>	<b>1,909</b>	<b>3,351</b>	<b>14.1</b>	<b>24.1</b>	<b>21.4</b>	<b>23.1</b>
Total crops	150	180	1.2	1.1	1.0	0.7
Total subsidies on output	<b>2,059</b>	<b>3,531</b>	<b>6.7</b>	<b>10.6</b>	<b>8.8</b>	<b>9.1</b>

<sup>a</sup> Obtained by dividing the value of the subsidy by the total output of the branch.

<sup>b</sup> Revised figures.

<sup>c</sup> Includes miscellaneous livestock products.

Source: Ministry of Agriculture.

cotton was channelled to exports and so cotton exports expanded despite the smaller cotton crop, and the spinning plants bought cotton fibres abroad. It is likely that both sides actually benefited from the superfluous transporting of cotton to and from Israel, owing to the subsidy element in export credits and in that for financing imports-for-export production.

#### 5. PRODUCTION FACTORS

The labor input in agriculture contracted by some 1.5 percent, returning to the downward trend characteristic of the 1970s as a whole. Even so, this decrease does not offset the unexplained increase of 5.4 percent in 1977/78.

The capital stock of the agricultural sector grew by 4 percent, 1 percent less than in the previous year. On the other hand, the gross agricultural product at producer prices increased by only 1.5 percent. These data reflect a decline in productivity, following a rise of less than 1 percent in 1977/78. The productivity gain for the period 1971/72-1976/77 averaged nearly 7 percent annually. There are at least two possible explanations for the decline in productivity:

a) Israeli agriculture is undergoing a structural change intended to increase the weight of the crop branches. Consequently, there was a decrease in measured productivity during the process of adjustment.

b) Many investments in the crop farming branches have not yet begun to yield

Table XII-8

**INPUT OF MATERIALS AND SERVICES IN AGRICULTURE, 1977/78 AND 1978/79**  
(IL million, at current prices)

	Value		Percent annual increase			
			Quantity		Price	
	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79	1977/78 <sup>a</sup>	1978/79
Feed	4,253.4	6,692.5	0.0	3.7	40.9	52.7
Water	904.9	1,413.6	3.2	-1.5	58.5	58.6
Packing materials	818.5	1,150.2	4.6	4.0	32.8	35.2
Fertilizers	400.2	651.0	4.9	7.9	46.6	50.7
Transportation	730.9	1,180.1	0.1	3.0	62.9	56.8
Spare parts, repairs, tools	392.8	656.7	-2.1	-3.6	55.7	78.4
Fuel, lubricants, electricity	600.2	977.4	10.5	5.0	55.3	55.1
Pesticides and veterinary preparations	1,116.9	1,753.2	13.4	0.5	62.6	56.1
Insurance and government services	577.1	967.1	0.8	2.0	45.6	64.3
Miscellaneous	353.3	702.4	3.7	12.2	23.1	77.2
Total purchases from other sectors	<b>10,148.2</b>	<b>16,144.2</b>	<b>2.6</b>	<b>2.7</b>	<b>46.0</b>	<b>54.9</b>
Wages of hired labor	2,446.9	4,217.1				
Interest and rent	1,298.9	2,710.8				
Intermediate goods	1,628.8	2,916.3	-0.9	-3.1	37.0	84.9
Depreciation	1,829.3	3,139.0	2.3	1.5	58.5	69.0
Grand total	<b>17,351.5</b>	<b>29,127.4</b>				

<sup>a</sup> Revised figures.

Source: Central Bureau of Statistics, revised figures.

any produce, or have not yet reached peak output but nonetheless require an input of labor, such that measured labor partly relates to future output and measured productivity is presently low.