CHAPTER XI

AGRICULTURE

1. Main Developments

Real agricultural product rose in 1966/67[1] by an appreciable 22 percent, while producer prices fell by only 1.2 percent. This reversed the downtrend which began in 1956/57,[2] and contrasts with a decline of 1–2 percent in the real agricultural product in the two preceding years and a decrease in the real product of most other sectors in 1967.

The rise in real product reflects a 13 percent increase in agricultural output (which excludes intermediate goods) and a moderate rise of 5 percent in the purchased input. The slight decline in product prices is attributable to the stable prices received by farmers and a small rise of about 1 percent in the price of the purchased input.

The main reason for the accelerated growth of output was the especially favorable weather conditions prevailing in 1966/67. A provisional estimate shows that over half the real increase in total output (which includes intermediate goods) can be credited to this factor. Output of agricultural intermediates, which in 1965/66 had suffered from the drought, expanded faster than that of other agricultural output in the year reviewed—approximately 15 percent as against 13 percent.

Both marketed output and output retained on the farm grew at about the same rate in 1966/67—by 13 and 14 percent respectively. The quantity sold for direct consumption rose by about 6 percent, and that for industry and export by 23 and 20 percent respectively.

Both market and producer prices of total output and agricultural output remained stable in 1966/67 despite the big physical increase. This can be ascribed to three main factors:

First, a change in the economic destination of output. Whereas in 1965/66 direct domestic consumption and industry accounted for approximately 37 and 24 percent respectively of the increase in real marketed output, in the year reviewed only some 20 percent of the increment was sold for direct domestic consumption and 47 percent went to industry; the share of exports in the increment declined from about 39 percent in 1965/66 to 33 percent.

[1] This chapter refers to agricultural years, beginning in October and ending in September.

[2] See Bank of Israel Annual Report for 1966, Chapter XI.

Table XI–1

CURRENT ACCOUNT OF AGRICULTURE, 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Value	Quantity	Price
1. Total agricultural output at producer prices	1,483,8	1,687.0	13.7	13.6	0.1
2. Less: Agricultural raw materials	131.0	153.3	17.0	14.9	1.8
3. Agricultural output at producer prices	1,352.8	1,533.7	13.4	13.4	0.0
4. Less: Subsidies on output	93.0	105.0	12.9	12.4[c]	0.4[c]
5. Agricultural output at market prices	1,259.8	1,428.7	13.4	13.5	–0.1
6. Less: Purchased input	540.2	571.7	5.8	4.5	1.3
7. Gross agricultural product at market prices	719.6	857.0	19.1	20.3	–1.0
8. Less: Depreciation	103.4	109.8	6.2	3.4	2.7
9. Net agricultural product at market prices	616.2	747.2	21.3	23.1	–1.5
10. Plus: Subsidies on output	93.0	105.0	12.9	12.4[c]	0.4[c]
11. Net agricultural product at producer prices	709.2	852.2	20.2	21.7	–1.2
12. Plus: Drought compensation etc.	13.8	2.5	–81.9	—	—
13. Total income from agriculture	723.0	854.7	18.2	—	—
14. Less: Wages of hired labor	200.8	200.2	–0.3	—	—
15. Less: Interest and rent	48.0	52.5	9.4	—	—
16. Income of farm owners from agriculture	474.2	602.0	27.0	—	—

[a] Revised figures.
[b] Rates of change were calculated from unrounded figures.
[c] The increase in quantity represents the expansion of output in subsidized branches; the price increase reflects the rise in the average subsidy rate per unit of subsidized output.

SOURCE: Lines 1 and 2—Table XI–2; 4 and 12—Table XI–10; 6—Table XI–7; 8, 14, 15—Central Bureau of Statistics.

Second, 68 percent of the additional output for direct domestic consumption consisted of products for which demand is fairly elastic—whether owing to the nature of the commodity, marketing arrangements, or guaranteed prices to the farmer, or because of infinitely elastic Government demand. Where these conditions did not apply, such as fruit farming (other than citrus), output prices declined fairly steeply.

Third, the additional output diverted to industry also consisted largely of products with a fairly high demand elasticity: about 42 percent of the increment was in wheat, for which there is an infinitely elastic Government demand;[1] 14 percent consisted of beef and poultry, which also have a relatively high elasticity of demand; another 14 percent was in cow's milk, the marketing of which is organized and subsidized. Marketing arrangements and price supports tend to moderate the effect of a physical growth on prices, at least in the short run.

As a result of these factors, producer prices of marketed output fell only very slightly—by 0.4 percent. Those of output sold for direct domestic consumption declined by 2 percent and of output sold to industry by 1 percent, while in the case of direct export there was a rise of 2 percent.

Various developments influencing the rest of the economy, such as the increased liquidity in the first half of 1967, the Six Day War and the administration of the new areas, and the devaluation of the Israeli pound in November, had virtually no effect on agriculture in 1966/67.

The harvesting of the winter crop was completed before the outbreak of fighting, and this, coupled with efficient organization of farm work and the maintenance of regular supplies to the markets resulted in the sector hardly being affected by the war. About the only damage suffered was the delayed harvesting of the sugar beet crop (which reduced the sugar content), the interruption of cotton irrigation, and a temporal shift in the demand for certain products.

The administered areas apparently had little effect on demand and supply in agriculture in the last three months of 1966/67. Farm output in Judea, Samaria, and the Gaza Strip was hardly affected by the war, thanks to prompt and effective action by the Ministry of Agriculture. The ban on the transport of farm products (except for a few items) to Israel and the fact that the Jordanian market remained open apparently prevented (at any rate in the first three months) any substantial supply of farm goods to the Israeli market. The purchases by Israelis visiting these areas have not as yet been estimated, but presumably they were not very large, consisting for the most part of perishables (chiefly fresh fruit and vegetables). Various indicators likewise fail to show that these areas supplied any appreciable amount of produce to the Israeli market.

[1] The Government, however, regulates stocks and imports of wheat and other cereals.

Nor is there any information attesting to a significant demand for Israeli produce during the initial period. In the months July to September (the final quarter of the agricultural year) vegetables were in ample supply, and there is no reason to believe that the inhabitants of the administered territories needed to buy from Israel.

Demand for livestock products was very light at first, but it rose somewhat at the beginning of 1967/68, chiefly because this branch suffered most from the war.

The devaluation of the Israeli pound in November 1967 occurred in the first quarter of 1967/68, and could not of course affect developments in 1966/67. Its influence on input prices at the beginning of 1967/68 was very small, owing to Government intervention to stabilize prices and to the existence of stocks.

Consumer prices of agricultural products rose by about 3 percent in 1966/67, compared with 7 percent the year before. The increase was due to the Government's policy of shifting some of the subsidization burden onto the consumer (as in the case of milk and eggs), the decline in the supply of vegetables and potatoes, and the monopolistic position enjoyed by the Citrus Marketing Board. Prices of milk and dairy produce advanced by 7 percent, eggs by 18 percent, vegetables and potatoes by 14 percent, and citrus by 7 percent. Prices of non-citrus fruit fell 12 percent.

The fact that, despite the rise in consumer prices of farm products, direct domestic consumption per capita was up 3 percent in physical terms strengthens the conclusion that the recession had little impact on the demand for most kinds of agricultural produce. The income elasticity of demand for all foodstuffs is comparatively low in Israel, and that for items from agriculture lower still. Moreover, consumer habits do not change very quickly, so that it is doubtful whether such a change occurred in the short period of the recession.[1] Where real per capita consumption remained stable or declined, it was apparently due to a marked rise in prices (as in the case of milk, dairy produce, and eggs).

Purchases of inputs from other sectors were 5 percent higher in 1966/67. This can be ascribed partly to the real expansion of output, which entailed a corresponding increase in inputs of packing materials, transportation, fuel, electricity, and services, and partly to the severe incidence of pests, which resulted in a greater use of pesticides.

The quantity of water consumed by agriculture declined in 1966/67 (see Table XI–8), and there was a notable growth in the domestic production of some types of fodder; this offset some of the increase in other inputs.

Overall productivity—i.e. total output per unit of total input (including capital and labor)—advanced nearly 12 percent; this compares with a rise of

[1] Real per capita consumption of food rose by 2.3 percent in 1966 and by 2.5 percent in 1967, while total real per capita consumption held steady in both years.

2 percent in 1965/66 and a decline of 3 percent in 1964/65.[1] Since productivity is greatly affected by changes in weather conditions, more importance should be attached to the trend rather than to annual changes. In previous years overall productivity rose by an average of 6–7 percent per annum.

The increase in the year reviewed was the result of a 14 percent growth in total output and a moderate rise of 2 percent in total input (the decline in the labor input offset much of the increase in the purchased input and in intermediate farm products). Factor productivity has shown a trend similar to that of overall productivity: it declined by 6 percent in 1964/65, moved up by about 4 percent in 1965/66, and by a substantial 22 percent in 1966/67.

These changes in factor productivity can be attributed to the smaller percentage annual rise in the agricultural capital stock and the continued decrease in the labor input.[2] In addition to the latter factor, the structure of the agricultural labor force changed in the year reviewed: the input of hired labor declined to a smaller extent than that of nonhired labor—by approximately 1 and 3 percent respectively. This development was apparently due mainly to the Six Day War, which made it necessary to take on hired hands to replace farm owners and family members called up.

Total farm income advanced 18 percent, compared with 2 percent in 1965/66 and 6 percent in 1964/65. The accelerated growth stemmed chiefly from a 22 percent rise in real agricultural product, while product prices fell by only some 1.2 percent; drought compensation and similar payments were down 82 percent, so that total income from agriculture grew by about 3 percent less than the net product.

Income of farm owners from agriculture was about 27 percent larger in 1966/67, mainly because the wage bill remained stable (for the second year running). Net income per nonhired worker went up even more, as their numbers declined by 3 percent on an average. Since the labor input per nonhired worker held steady in 1966/67, hourly earnings rose at the same rate as total income per nonhired worker.

Direct farm subsidies were stepped up by 4 percent in 1966/67, compared with 3 percent the year before. Most of the rise was in subsidies on output, which had declined the year before. Factor subsidies increased relatively less than in 1965/66, while drought compensation and similar payments were considerably lower. Whereas output subsidies rose mainly because of the expansion of production, factor subsidies rose mainly because the rate was increased for fodder.

Real investment in agriculture and irrigation showed a 2 percent rise in

[1] These data differ from those published in the Bank of Israel Annual Report for 1966, owing to changes in the method of estimation. Details of the changes can be found in the appendix to this Report (in Hebrew only).

[2] The 1964/65 decline in factor productivity was due to an increase in labor input, which has not yet been explained; it may have been partly due to manpower survey limitations.

1966/67, compared with a decrease of 5 percent in the previous year. This interruption of the long-run declining trend, which had persisted since the end of the fifties, does not indicate any change in the profitability of agricultural investments or in producers' expectations. Real outlay on water projects was off 12 percent, since the accent in irrigation has shifted from the development of new water resources to water-economizing investments. Real investment in agriculture alone was up 10 percent, but most of the increase was in relief work (afforestation), over which the farmer has no say. In this connection it should be pointed out that the net stock of capital assets in this sector rose by less than 1 percent in real terms during the year reviewed.

At the end of 1967 the outstanding balance of bank credit to agriculture stood at IL 328.4 million, or 28 percent more than at the end of 1966. Credit provided under the agricultural production financing program declined by 1.4 percent (the volume of direct credit by the Bank of Israel fell by 2.6 percent), while credit granted by the banks from their own resources rose by 72 percent, bringing the outstanding balance up to IL 178 million at the end of 1967. The weight of controlled credit in 1966/67 thus declined, and that of other bank credit moved up from 40 percent in 1965/66 to 54 percent. This increase apparently reflects the highly liquid state of the economy in the first half of 1967, as well as a change in the sources of credit, the share of direct bank credit rising and that of bill brokerage credit falling.

The balance of directed farm credit declined by IL 2.2 million, or 1.4 percent, to stand at IL 150.7 million. The biggest increase was in outstanding credit for livestock, livestock products, and fodder, the bulk of it connected with the growth of butter, cheese, and egg stocks (in the main due to the exceeding of production quotas). The next biggest rise was in credit for unspecified purposes; its weight in the outstanding balance has been rising steadily in recent years—from 27 percent at the end of 1961 to 38 percent at the end of 1967—and it is now the largest single category of controlled credit, exceeding that for field crops and vegetables. Credit for field crops and vegetables was reduced in 1967, chiefly because of the earlier sale of cotton fibers and a delay in field crop cultivation.

2. Output

(a) *Value of output*

The total farm value of agricultural output, at current producer prices, grew by about 14 percent in 1966/67, compared with 3 percent the year before. As average producer prices held steady, the value of total output also went up about 14 percent, compared with a rise of approximately 5 percent in 1965/66, when producer prices rose by about 2 percent.

The main reason for the increase in output was the favorable weather conditions, following a year of drought (see Table XI–8). However, the abundant

precipitation was not the only climatic feature to single out 1966/67; it also had a hot autumn, cold winter, and late spring. The ample rainfall made it possible to extend the unirrigated crop area and raised the field crop yield per dunam. The hot autumn and high rainfall helped to increase the average citrus yield, while the cold winter resulted in a greater proportion of low-grade citrus. At the same time, the cold winter also resulted in a larger yield of most deciduous fruit, and together with the late spring, disrupted the normal vegetable and potato season. The olive crop (most of which is not grown under irrigation) generally fluctuates markedly, a good year following a bad one; 1966/67 was a good year, further enhanced by the plentiful rainfall. An unfavorable natural factor was the recurring incidence of pests, which seriously damaged the cotton crop.

(b) *Destination of output*

Following the steep rise in real agricultural output in 1966/67, the volume of marketed output also expanded at an accelerated rate—14 percent compared with 5 percent the year before. The weight of marketed output in total output therefore remained at 82 percent in real terms. Output retained on the farm grew slightly less, by 13 percent, in contrast to an 11 percent decline in 1965/66.

The destination of marketed output changed conspicuously in 1966/67: the amount sold for direct domestic consumption rose by nearly 6 percent (approximately 4 percent in 1965/66), that supplied to industry was up 23 percent (4 percent in 1965/66), and that directly sold abroad rose by 20 percent (8 percent in 1965/66). These divergent growth rates resulted in a considerable change in the destination of the 1966/67 increment. Whereas in 1965/66, 37 percent of the real increase in marketed output was sold locally for direct consumption, in the year reviewed the proportion was only about 20 percent; the percentage supplied to industry soared from 24 to 47 percent; while the weight of direct export fell from 39 to 33 percent. As a result of these changes in the destination of the increment, the share of direct domestic marketing in total marketed output moved down from 49 percent in 1965/66 to 45 percent, that of sales to industry rose from 28 to 31 percent, while the weight of direct export held steady. At constant prices, marketed output expanded by about IL 168 million; of this, approximately IL 33 million worth was used for direct domestic consumption, IL 79 million went to industry, and IL 65 million to direct export.

The growth of nearly 6 percent in the quantity supplied for direct consumption in the year reviewed was accompanied by a drop of about 2 percent in the price received by the farmer. Within this category, the real output of noncitrus fruit rose by 10 percent, while producer prices dropped to the same extent. The price of fish fell by 9 percent, despite a 10 percent decrease in the quantity marketed. The supply of meat was up 9 percent, accompanied by a 2 percent drop in the producer price. Both the quantity and price of eggs rose, by 8 and

Table XI–2

TOTAL AGRICULTURAL OUTPUT, BY ECONOMIC DESTINATION, 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Value	Quantity	Price
Output marketed					
Direct local consumption[c]	592.7	614.3	3.6	5.6	–1.8
Industry	345.3	421.8	22.2	22.9	–0.6
Direct export	279.1	342.9	22.9	20.1	2.3
Total	1,217.1	1,379.0	13.3	13.8	–0.4
Output retained on farms					
Own consumption	76.9	77.7	1.0	1.7	–0.7
Capital goods	58.7	77.0	31.2	24.4	5.5
Agricultural raw materials	131.1	153.3	17.0	14.9	1.8
Total	266.7	308.0	15.5	13.2	2.1
Grand total	1,483.8	1,687.0	13.7	13.6	0.1

[a] Revised figures.
[b] Rates of change were calculated from unrounded figures.
[c] Includes the value of output destroyed: IL 6.2 million and IL 6.0 million in 1965/66 and 1966/67 respectively.
SOURCE Central Bureau of Statistics.

4 percent respectively. Milk supplies were 2 percent larger, with virtually no change in the price. The quantity of cereals and pulses was up 112 percent, with prices holding firm. In industrial crops, a 6 percent physical decline was accompanied by a 9 percent rise in the price. The quantity of vegetables and potatoes fell 0.4 percent, while prices rose by 8 percent. Citrus remained unchanged in physical terms, but prices went up 7 percent.

The causes of the above-mentioned developments varied from branch to branch and will be discussed separately.

Output sold for industrial processing was 23 percent larger in 1966/67. The biggest increases were in wheat (up 145 percent), cotton (13 percent), dairy produce (14 percent), meat (10 percent), citrus (43 percent), and other fruit (48 percent).

Average producer prices of output sold to industry edged down 1 percent: prices of industrial crops, noncitrus fruit, and milk remained stable, those of cereals and pulses fell by 2 percent, and those of meat by 4 percent; prices of vegetables and potatoes rose by 18 percent, and citrus prices by 4 percent.

Despite the accelerated increase in real output diverted to direct export, from

8 percent in 1965/66 to 20 percent, the weight of this destination in total marketed output did not increase, owing to the aforementioned decline in the share of incremental output sold abroad.

Over the last nine years the weight of direct export in total agricultural output has fluctuated, rising from 16 percent in 1957/58 to 24 percent in 1962/63, declining to 17 percent in 1963/64, and thereafter rising again to 21 percent, at which level it remained in 1966/67. The leading export item is citrus, whose weight has ranged from 62 to 85 percent of total agricultural exports. Fluctuations in this item are therefore responsible for changes in the proportion of farm output sold abroad; in 1963/64, for example, the steep decline in this proportion was due almost entirely to an absolute decrease in citrus shipments. Another item which formerly was relatively important is eggs, which averaged about 12 percent of all farm exports. In 1965/66 it was decided to restrict overseas sales owing to their low profitability, and they dropped to 5 percent of the total. In the year reviewed the figure went up to 8 percent, following the expansion of export by 107 percent in order to dispose of the egg surplus.

From 1957/58 to 1966/67 the proportion of the incremental agricultural output directly marketed abroad averaged 28 percent per annum; excluding 1963/64, when agricultural exports contracted in absolute terms, the figure is 43 percent. If the assumption is correct that the supply of agricultural products is apparently outstripping domestic demand to such an extent as to make it difficult for the factors of production to earn a comparable return, it follows that the development of agriculture and expansion of output depends on whether foreign outlets can be found for most of the increment. The fact that for almost a decade direct export has accounted for an average of only some 43 percent of the annual output increment suggests that such export still does not provide a solution.

The major contributions to export growth in 1966/67 were made by eggs, which advanced 107 percent in real terms and accounted for 24 percent of the total increment; citrus—up 14 percent to account for 56 percent of the increment; and cotton fibers—24 and 6 percent respectively. Flowers, seeds, and vegetables gained 40 percent, but because of their small weight they contributed only some 3 percent to the growth. Bananas were down about 25 percent, groundnuts by 10 percent, and potatoes by 53 percent.

Prices received by growers for output marketed directly abroad were 2 percent higher in 1966/67, compared with a 3 percent rise the year before. Prices of citrus moved up 2 percent, industrial crops (cotton and groundnuts) by 1 percent, bananas by 5 percent, vegetables and potatoes by 51 percent. Prices of eggs and subtropical fruit declined by 1 and 27 percent respectively.

Real output retained on the farm was up 14 percent in 1966/67, after contracting in the two preceding years. The most rapid growth was in capital goods (see Table XI–6), and was the outcome of a tenfold increase in livestock

inventories. There was also a substantial rise in afforestation, due chiefly to the expansion of unemployment relief work.

The amount diverted to own consumption was 2 percent larger in 1966/67, compared with 4 percent in the previous year, while the output of agricultural raw materials expanded by 15 percent, compared with a decline of 17 percent in 1965/66.

The prices of output retained on the farm edged up 1 percent approximately; all of the rise was in capital goods, in particular orchards (8 percent) and afforestation (6 percent).

(c) *Output, by type of farming*

1. Livestock

Real output of livestock and livestock products rose three times faster in 1966/67 than in the preceding year—9.6 percent as against 3.2 percent. This is attributable to the big increase in poultry farming.

(i) Cattle farming

The real output of cattle farming rose by 9 percent, compared with 2 percent in 1965/66. Milk production increased at almost the same rate in both years—by 9 and 8 percent respectively. Beef production, which declined by 8 percent in 1965/66, was up 8 percent in the year reviewed.

Average producer prices dipped about 2 percent, the price of cow's milk declining by 0.4 percent and that of beef by approximately 4 percent.

The developments in cattle farming were the direct outcome of planning decisions of previous years and the manner of their implementation. The gap between the demand for milk and dairy products and the supply of raw milk widened steadily between 1962/63 and 1964/65, with the consequence that the consumption of milk powder was increased to the equivalent of 32 million liters of milk in 1964/65.[1] The inability to fully supply the demand was due primarily to the failure to meet the production quotas on farms where the dairy herd was too small to be profitable (compared with the wages that could be earned for a day's labor in nonfarm employment). On the other hand, in the kibbutzim, where the size of the herd and the average yield per cow rendered dairy farming more profitable, the quotas were exceeded by about 10 percent in 1965/66. In the 1966/67 planning year[2] the quotas were set for 1970/71, and farmers were permitted to meet them at their own pace.

This decision allowed for the shortfall in the quotas of previous years and assumed that producers would step up output gradually. The latter were informed that in two years' time the allocation of milk quotas would be re-

[1] The proportion of milk powder in the total milk supply (in terms of equivalent value) rose from 6 percent in 1962/63 to about 10 percent in 1964/65.

[2] This covers the second half of the agricultural year 1966/67 and the first half of the agricultural year 1967/68.

Table XI-3

CURRENT AGRICULTURAL OUTPUT,[a] BY TYPE OF FARMING, 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[c]		
	1965/66[b]	1966/67	Value	Quantity	Price
Livestock					
Poultry	289.5	327.3	13.1	11.6	1.3
Cattle	223.6	239.1	6.9	8.7	–1.6
Other	98.9	100.8	1.9	5.6	–3.5
Total	612.0	667.2	9.0	9.6	–0.5
Crops					
Citrus	268.6	317.2	18.1	14.7	3.0
Other fruit	166.2	174.1	4.7	15.2	–9.1
Vegetables and potatoes	132.6	139.1	4.9	–2.1	7.2
Field crops and misc.	245.7	311.9	26.9	27.2	–0.2
Total	812.8	942.3	15.9	15.9	0.0
Total current output	1,424.8	1,609.5	13.0	13.2	–0.2

[a] Marketing, on-farm consumption, and intermediate goods (agricultural raw materials).
[b] Revised figures.
[c] Rates of change were calculated from unrounded figures.
SOURCE: Central Bureau of Statistics.

examined, and those for farms that fell well below the volume set would be abolished or reduced, while those for farms that actively engaged in milk production would probably be enlarged.[1]

The experience of previous years (especially 1962/63) led producers to believe that the quotas would be revised shortly, the more so as the planners proposed to re-examine the question after two years. Dairy farmers were thus encouraged to produce milk at almost any price in order to establish their right to future quotas. In addition to producers' expectations arising from this decision, there were various objective factors encouraging the accelerated expansion of dairy farming. The opportunity of upping production at one stroke meant that even small farmers could achieve economies of scale, and this slowed the abandonment of cattle farming. Conditions in the nonagricultural labor market deteriorated, with a similar effect.

The Planning Authority was aware of this situation: in the summer of 1965

[1] "The Five-Year Plan for Israel's Agriculture, 1966/67–1970/71", Part B, Detailed Regional Plan, Ministry of Agriculture, August 1967, p. 31 (in Hebrew only).

a survey revealed that were it not for the quotas dairy farmers intended to produce about 500 million liters of milk by 1970/71 instead of the 385 million liters planned. However, it was felt that the increase in the number of milch cows required to supply the quantity of milk planned for 1970/71—13.2 percent over 18 months—could not be realized. But data for previous years suggest that this is by no means so. During the years 1955/56 to 1961/62 the dairy herd grew at an average annual rate of 11 percent, and in 1957/58 alone by 25 percent. From the end of 1964/65 to the end of 1966/67 the herd grew by 12 percent, with the yield per cow rising by 6 percent, so that effective production capacity went up 19 percent.

In view of the steep rise in milk output, it was decided to restore in the 1967/68 planning year the annual quotas laid down in the five-year plan. Any output in excess of the individual quotas[1] would receive the lowest prevailing market price. The effect of this decision was felt only in the latter part of 1966/67, when the expansion of milk production slowed down and a larger number of cows and heifers were slaughtered for meat.

Since 1964/65 the gap between the demand for milk and the supply has been narrowing, and by 1966/67 the amount of milk powder used had dropped by 76 percent. The stocks of locally produced milk powder grew by the equivalent of 7 million liters in 1965/66 and 10 million liters in 1966/67. Butter stocks reached 1,100 tons at the end of 1966/67, of which 930 tons accrued during the year. The minimum stock required is estimated at 250 tons, so that at the end of 1966/67 there was a surplus of 850 tons that could not be marketed at the prevailing price.

These surpluses arose not only from the expansion of production. It was the Government's policy, backed by the Milk Production and Marketing Board, to reduce the subsidy rate and in lieu of this to permit farmers to charge a higher price. At the beginning of 1965/66 the average consumer price of milk and dairy produce other than butter was raised by 6 percent. At the beginning of 1966/67 the price of drinking milk jumped about 20 percent, bringing up the average consumer price of milk and dairy produce by 7 percent. These increases, especially that in drinking milk, were the main reason why per capita demand for milk and dairy produce remained virtually unchanged in 1965/66 and 1966/67, after growing by 2–3 percent in each of the two preceding years. The recession had little if any effect on the demand for these items,[2] except indirectly

[1] In calculating subsidy payments in previous years, output falling below the individual quotas was offset against that in excess of the quotas; consequently, most farmers were not penalized for overproduction.

[2] Changes in per capita consumption in 1966/67 show no consistent pattern: sales of some of the more expensive products, such as cream, declined, while those of other expensive items, such as soft white fat cheeses and hard cheeses, increased; butter consumption remained stable. Changes in the consumption of cheaper products were also not uniform, the sale of soft nonfat cheese contracting, and that of fermented milk (yoghurt, *lebben*, etc.) rising.

Table XI-4

AGRICULTURAL OUTPUT, BY COMMODITY, 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Value	Quantity	Price
Current output					
Livestock					
Eggs	135.2	159.2	17.8	15.1	2.3
Meat	263.0	282.1	7.2	9.0	–1.6
Milk	150.1	163.7	9.1	8.8	0.2
Fish	41.5	39.5	–4.8	2.0	–6.5
Miscellaneous	22.0	23.1	5.4	0.6	6.0
Total	611.8	667.6	10.6	9.5	–0.4
Crops					
Citrus	268.6	317.2	18.1	14.7	3.0
Other fruit	166.2	174.1	4.8	15.2	–9.1
Vegetables	108.8	113.9	4.7	–0.3	5.1
Potatoes	23.8	25.1	5.4	–10.4	17.6
Cereals and pulses	40.7	88.3	116.7	114.9	0.8
Industrial crops	109.9	120.1	9.2	8.3	0.8
Miscellaneous	95.1	103.6	8.9	11.3	–2.2
Total	813.1	942.3	15.9	15.8	0.1
Total current output	1,424.9	1,609.9	13.0	13.1	–0.1
Output of capital goods	58.7	77.0	31.2	24.4	5.5
Total output	1,483.6	1,686.9	13.7	13.6	0.1

[a] Revised figures.
[b] Rates of change were calculated from unrounded figures.
SOURCE: Central Bureau of Statistics.

by deterring farmers from leaving the branch. Real expenditure per capita on all foodstuffs rose by an average of 2.4 percent per annum between 1965 and 1967, and this suggests some lag in the adjustment of consumption to changes in real income.

The decision of farmers to ensure maximum quotas by expanding their milch herds to the utmost caused real output of beef to fall by 8 percent in 1965/66. In 1966/67 output was up 8 percent, a result of the resumption of annual milk quotas, the more moderate increase in milch herds, the small expansion of beef-steer herds, and the lagged effect of the low profitability of overshooting the milk quotas.

In 1965/66 the 8 percent decline in beef production led to a rise of about 4 percent in the producer price and approximately 12 percent in the consumer price; in 1966/67 the 8 percent growth in output caused producer prices to dip by about 3 percent and consumer prices by only 1 percent. The small decrease in beef prices in 1966/67 and the small rise in 1965/66 are explained by the high price elasticity of demand for the product and by changes in the consumption of frozen meat. In 1965/66 per capita consumption of frozen beef increased, as its quality improved while its relative price fell; in 1966/67, on the other hand, per capita consumption was reduced following a decline in quality and an 8 percent rise in the retail price.

(ii) Poultry farming

The real output of poultry farming expanded by 12 percent in 1966/67, the result of a 15 percent increase in eggs and a 9 percent increase in poultry. In the previous year real output went up only 3 percent, with egg production contracting by 4 percent and that of poultry advancing 11 percent.

Producer prices edged up 1 percent in 1966/67, eggs fetching 2 percent more and poultry remaining stable.

By the end of 1966/67 the steep rise in edible egg production, attributable to the increased profitability of 1965/66 and 1966/67, had resulted in a surplus of about 80 million eggs. But the rise in producer prices of some 8 percent in 1965/66 and 2 percent in 1966/67, together with the increase in the relative profitability of unorganized marketing (i.e. outside the quota system),[1] induced farmers to maintain and even expand output. In the second half of 1966/67 the prices fetched abroad dropped steeply and exports were discontinued by the Poultry Marketing Board, to be renewed in August and September because of the egg surplus piling up. If exports had not been resumed in August, the surplus would have reached some 100 million eggs by the end of 1966/67.

Although poultry production advanced 11 percent in 1965/66, the price to the farmer fell by only 1.3 percent (partly because the reduced supply of fresh beef prompted some consumers to substitute poultry). Poultry production was therefore expanded further in 1966/67, though more moderately. As a result

[1] The consumer price of eggs was raised in 1965/66 in order to reduce the direct subsidy burden. The return to the farmer remained unchanged for eggs produced within the planned quotas, since the rise in the market price was offset by the cut in the subsidy. But the profitability of unorganized marketing obviously went up. A proposal to increase fodder prices and have the additional cost refunded on quota eggs in order to neutralize the increased profitability of production outside the quota system was not accepted. The rise in the profitability of unorganized marketing, together with the fines imposed by the Egg Marketing Board on eggs delivered to it in excess of quotas, stimulated the growth of unorganized marketing in 1966/67 at a rate variously estimated at between 15 and 56 percent, with the latter probably being more plausible. Unorganized marketing thus accounted for 12 to 16 percent of total domestic sales in 1966/67, or for between 110 million and 150 million eggs.

of this, and also because of the decline in fresh beef prices, which led to the substitution of beef for poultry, the price received by the farmer for poultry fell in the first half of 1966/67 by 9 percent compared with the first half of 1965/66, and by 6 percent compared with the second half of 1965/66. This price decline slowed down the expansion of output—from some 14 percent in the first half of 1966/67 to only 5 percent in the second half—and pushed up the consumer price at the beginning of 1967/68.

2. *Crops*

The real output of crops increased by 16 percent in 1966/67, compared with 1 percent the year before. The most impressive gain, a result of the favorable weather, was in cereals and pulses, which soared by nearly 115 percent (compared with a 30 percent decline in 1965/66). Output of citrus and other fruit also increased much more rapidly: citrus went up by about 15 percent, compared with 7 percent the year before, and other fruit also gained 15 percent, as against a 9 percent advance in 1966. The real output of vegetables, which had risen by 15 percent in 1965/66, did not change, while that of potatoes continued downward—by 10 percent as against 5 percent in 1965/66.

Average producer prices remained stable in 1966/67. The price of noncitrus fruit dipped 9 percent, apparently because of the rapid growth of supplies. Sugar beet prices were down 7 percent, because the delay in harvesting due to the Six Day War reduced the sugar content. Vegetable prices were up 5 percent, and potato prices by 18 percent. Citrus prices rose more moderately than in 1965/66, by 3 percent as against 4 percent.

(i) Citriculture

The real output of citrus grew by 15 percent in 1966/67, or twice as fast as the 7 percent gain in the previous year (see Table XI–5). The main reasons for the accelerated rise were an 8 percent expansion of the fruit-bearing area and a 10 percent rise in the average yield per dunam, the latter largely due to the particularly favorable weather conditions in the autumn of 1966. The hard winter, however, brought up the proportion of low-grade fruit, and hence offset somewhat the real increase in output value. The average rise in yields does not fully reflect the influence of weather conditions: weighting output by the age of the groves shows that, other things being equal, the change in the age-structure would have reduced the yield per fruit-bearing dunam by about 1 percent.

Physical output grew as follows: Shamuti oranges and grapefruit by 21 percent, Valencia oranges and lemons by 15 percent, other citrus by 2 percent. The ranking is somewhat different in constant prices: Valencias—20 percent; grapefruit—18 percent; Shamuti—14 percent; lemons—7 percent; and other citrus—4 percent. The differences between the growth rates in physical and constant-price terms reflects the differences in the composition of the four varieties by economic destination, particularly direct export.

Table XI-5

CITRUS OUTPUT,[a] BY ECONOMIC DESTINATION, 1965/66 AND 1966/67

	Quantity ('000 tons)		Value at current prices (IL million)		Percent increase or decrease (–) from 1965/66 to 1966/67[c]		
	1965/66	1966/67	1965/66[b]	1966/67	Value	Quantity	Price
Direct export	581.9	664.6	219.4	256.9	17.1	14.4	2.4
Industry	214.9	308.6	17.9	26.6	49.0	43.2	4.0
Organized domestic marketing	74.3	72.6	19.1	20.3	6.4	–0.6	7.1
On-farm consumption and private sales	35.4	36.1	12.2	13.3	9.1	2.4	6.5
Total	906.5	1,082.0	268.6	317.2	18.1	14.7	3.0

[a] In 1965/66 the Central Bureau of Statistics changed the definition of citrus output value (see Bank of Israel Annual Report for 1966, p. 272).
[b] Revised figures.
[c] Rates of change have been calculated from unrounded figures.

The percentage of physical output marketed abroad was highest for Valencias (74 percent), followed by Shamutis (66 percent), grapefruit (54 percent), and lemons (40 percent). In 1965/66 Shamutis topped the list with 71 percent, followed by Valencias—69 percent; grapefruit—56 percent; and lemons—43 percent.

The biggest real increase in the year reviewed was in the proportion of output diverted to industry—43 percent as contrasted with a 5 percent decline the year before. On the other hand, the quantity sold for direct domestic consumption fell slightly (by 0.6 percent). Real direct export was up 14 percent, the same growth rate as for total citrus output.

The proportion of low-grade fruit within total citrus tonnage rose by 8 percent to stand at 39 percent, compared with 26 percent in 1965/66. At constant prices, the proportion remained unchanged at 18 percent, thanks to the increased share in exported output of Valencias, which fetch a higher price abroad than do other varieties. The accelerated rise in sales to industry was only partly due to the higher percentage of culls. No less important was the policy of the Citrus Marketing Board, which channelled to industry all quantities not taken by domestic consumers at the prices fixed by the Board. Demand studies made in Israel show that had the Board not raised the consumer price of citrus

in 1966/67, domestic consumer demand presumably would have left a smaller quantity for industry.[1]

Producer prices of citrus rose 3 percent in 1966/67, compared with 4 percent in the preceding year. Prices of output for direct consumption, which are fixed in advance for the entire season, advanced 7 percent, compared with 15 percent in 1965/66. The price received from industry was up 4 percent, compared with 3.6 percent in 1965/66, and that from direct export rose by 2.4 percent, as against 2.8 percent in 1965/66.

The moderate rise in the producer prices of citrus exports, despite a 3 percent drop in average f.o.b. prices, can be ascribed to the Government's decision to grant incentives amounting to IL 20 per ton of fruit. The average return on export decreased, apparently because of the raising of Common Market tariffs. Changes in f.o.b. prices were not uniform: grapefruit prices advanced 3 percent, Shamutis fell by 4 percent, Valencias by 5 percent, and lemons by 6 percent.

The increase in producer prices of citrus diverted to industry stemmed partly from the grant of a subsidy in the amount of IL 2.2 million (IL 7 per ton of fruit); this accounted for 8 percent of total receipts from sales to industry.

An analysis of price developments in terms of producer prices is somewhat deficient, owing to the intervention of the Citrus Marketing Board through an equalization fund mechanism: the prices received by growers from the canneries are supplemented by charges on fruit sold for direct local consumption. Since the payments are not proportional to the transfers, the price ratio between the different varieties is not the same for the growers as that existing in the market. For instance, in 1966/67 the Board's receipts per ton of grapefruit sold for domestic consumption rose by 6 percent, but the producer price fell by 23 percent, the difference being due to a 54 percent increase in the internal levies. The Board's receipts per ton of Shamutis sold to industry rose by 23 percent, but the producer price did not change since supplementary payments to growers were cut by 43 percent. As to lemons, supplementary payments were first introduced in 1966/67, and the producer price rose by 41 percent, while the Board's per ton receipts went up only 16 percent. This distortion of market price relationships presumably hampers citrus growers in arriving at optimum economic decisions. Further distortions probably arise from the pooling of prices and costs by the Citrus Marketing Board and the contractors serving it. For instance, the fact that citrus growers are often charged for culls on the basis of the packing-house average rather than the exact percentage in their own consignments does not encourage them to take better care of their groves and fruit. The pooling of transportation and packing expenses apparently leads to similar distortions.

[1] Y. Mundlak, *Long-Term Projection of Supply and Demand for Agricultural Products*, Falk Project for Economic Research in Israel, Jerusalem, 1964.

(ii) Other fruit

The output of noncitrus fruit rose by 15 percent at constant prices, compared with 8.5 percent in 1965/66. The increase was due mainly to larger average yields per dunam and the extension of the fruit-bearing area.

Deciduous fruit supplies were up 15 percent, while producer prices fell by 17 percent; this prompted the Planning Authority to suspend planting except for replacements. This price decline which accompanied the physical growth is not unreasonable in view of the general level of consumption of summer fruit. However, an examination of separate time-series data on supply and demand for several kinds of fruit (apples, pears, plums, and peaches) does not show any signs of their having been affected by imports from the administered areas. Nor do other direct sources of information show such a development. In this connection it should be stressed that the current agricultural year ended three months after the war.

Real output of table grapes continued downward in 1966/67, by 2 percent, but in contrast to 1965/66, producer prices also fell—by 13 percent. The smaller output can be largely ascribed to the uprooting of vineyards, which was partly offset by the higher yields per dunam. The drop in producer prices was due mainly to the belated picking of grapes because of the cold spring. In June 1967 only 700 tons of table grapes were supplied to the market, as compared with 3,500 tons in June 1966, and the peak season "shifted" to September and October, when there was an abundance of other fruit. In addition, the proportion of grapes suitable only for industrial processing, which yield a lower return to farmers, was larger in 1967. The Fruit Production and Marketing Board intends to encourage the cultivation of better strains by offering financial inducements to those growing a high percentage of good quality grapes.

The area under wine grapes was further enlarged in 1966/67, by 2 percent, and real output grew by 19 percent. Output value is expected to be 11 percent higher, both because devaluation will increase the return on wine produced from the 1966/67 crop and because of its heavier subsidization.

Although acreage continued to contract, real output of olives soared 98 percent, this being an exceptionally good olive year (a poor year is generally followed by a good year). The price to the producer rose by 2 percent in 1966/67 as a result of various marketing arrangements and the credit granted for industrial stocks of pickled olives and olive oil.

Banana production was down 7 percent in 1966/67, compared with a 25 percent gain the year before. The quantity supplied the local market expanded by 6 percent; nearly all of the decrease was in exports, which were down 25 percent. As a result, average producer prices, which had fallen in 1965/66, rose by 5 percent, since the return is lower on exports than on domestic sales.

The fact that growers received a higher price in 1966/67 despite the drop of about 5 percent in retail prices is attributable to the reduced weight of exports.

Output of subtropical fruit was up 21 percent in physical terms, compared with 17 percent in 1965/66. Most of the expansion was in guavas and avocados, the latter gaining 53 percent, with over half the increment being exported. Producer prices of subtropical varieties rose by 6 percent, compared with a decrease of 7 percent in 1965/66; the prices received for domestic marketing advanced 14 percent, while those for exported output dipped 27 percent in the wake of a 98 percent physical increase.

(iii) Industrial crops

Real output of industrial crops was 8 percent higher in 1966/67, compared with a 7 percent rise the year before. The most striking increase was in cotton—up 15 percent (the same as in the preceding year). Sugar beet gained 3 percent, while groundnuts were down 4 percent. Tobacco production was 13 percent larger in the year reviewed.

The increase in cotton production can be attributed to a 34 percent extension of acreage, made possible in the main by the ample rainfall and cool summer. The unirrigated area and that under auxiliary irrigation nearly tripled, and their share of total cotton acreage rose from 7 percent in 1965/66 to 16 percent; the irrigated area expanded by 22 percent. The average yield per dunam fell by 10 percent. The reasons for the continued drop in average yields are still unclear, but presumably the disruption of irrigation in 1966/67 because of the war and the serious pest damage were additional factors. The year reviewed was a bad one as regards pests, necessitating a larger input of insecticides and a number of extra treatments.

Most of the incremental output of cotton fiber was marketed overseas; direct exports rose by 24 percent, and the quantity going to local industry by 9 percent.

The farm price of the cotton crop was 2 percent higher in 1966/67, the price of fibers holding steady and that of cottonseed rising by 11 percent. The stability in fiber prices can be attributed to the diversion of most of the incremental output to the export market, where the average f.o.b. price fetched was about 14 percent higher than in the previous year, and to the raising of the subsidy rate per unit of output by some 11 percent (see Table XI–10). The larger return on cottonseed was due to the higher price paid by industry this year.

Irrigated sugar beet cultivation suffered in the year reviewed from the cold, rainy winter and from the delay in harvesting caused by the Six Day War. As a result, the quantity of beet per irrigated dunam declined by 8 percent and the sugar content by 10 percent, reducing the sugar yield per dunam by 17 percent. Total sugar beet output grew by 3 percent, thanks to an 11 percent

expansion of acreage. The larger output can be attributed entirely to the 60 percent increase in the unirrigated area (including that under auxiliary irrigation) following the heavy rainfall in the winter of 1966/67. The irrigated area grew by only 7 percent, which was almost completely counterbalanced by the smaller average yield per dunam.

Although the price received by growers for beet with a 16 percent sugar content rose by 3 percent during the year reviewed (from IL 68 to IL 70 per ton), this was more than offset by the decline in sugar content, so that average price received was 7 percent lower.

Groundnut production, which began to fall off in 1959/60, continued downward in the year reviewed, by 4 percent, with acreage being reduced by 7 percent. A new strain introduced in 1966/67 may raise the relative share of this crop, about half of whose output is exported. The new strain ripens before the advent of the rainy season, and therefore should bring up the proportion of exportable nuts from an average of about 50 percent to approximately 80 percent.

(iv) Vegetables

The real output of vegetables (excluding potatoes), which increased by 15 percent in 1965/66 and contracted by 12 percent in the preceding year, remained stable in 1966/67.

The area under vegetables was curtailed by 3 percent in 1966/67. Most of the decline occurred in the winter season, partly because of the 4 percent drop in producer prices the year before and partly because the winter was exceptionally cold and wet. The area under spring crops was reduced by about 4 percent compared with the same season the year before, and summer crop acreage was reduced to a similar extent.

Quarterly constant-price data for organized vegetable marketing show the following picture (each quarter of 1966/67 compared with the corresponding quarter of 1966/65): first quarter (autumn), no change; second quarter, a decline of 16 percent; third quarter, a decline of 24 percent; and last quarter, an increase of 28 percent. These data seemingly reflect the influence of the war (which occurred in the third quarter) on vegetable supplies; however, time-series data on the major crops show that the influence of the war was marginal and that the cold, rainy winter and the late spring were chiefly responsible for the poorer results in the third quarter. The 28 percent gain in last-quarter sales indicates that sowing was carried out without undue disruptions in the third quarter (when the war took place). The shifting of the vegetable season is illustrated by the tomato crop: in 1966/67, 69 percent (18,900 tons) of the year's surplus piled up in the last quarter, compared with 35 percent (5,500 tons) in 1965/66, although the total quantity of tomatoes marketed during the year was off 10 percent.

The stability or decline in the quantity of vegetables marketed in the first three-quarters of the year resulted in producer prices advancing about 15 percent by the end of the third quarter. The steepest rise—about 22 percent—was in the second quarter, while in the last quarter of 1966/67 prices slipped by some 9 percent. On an annual average, they were up 5 percent.

Real output of potatoes declined by 10 percent in 1966/67, although the area sown was enlarged by 4 percent. Most of the growth in acreage took place in the winter (when the total was 12 percent above that in the winter of 1965/66); the inclement weather during this season badly affected the crop, so that marketed output tumbled 41 percent. Producer prices averaged 18 percent higher for the year.

(v) Cereals and pulses

This branch benefited most from the weather conditions of 1966/67. Real output, which declined by 30 percent in 1965/66, soared 115 percent. Barley was up about 141 percent, wheat by 122 percent, sorghum by 81 percent, and pulses by 65 percent. During the year barley acreage was trimmed by 11 percent and wheat acreage was expanded by 17 percent, both in line with the previous year's trends. The area under sorghum was extended by 137 percent: the unirrigated area was enlarged by 186 percent and the irrigated area reduced by 25 percent.

Since the Government is either the only (as in wheat) or the principal (as in fodder) purchaser of cereals, producer prices remained stable despite the big

Table XI-6

OUTPUT OF AGRICULTURAL CAPITAL GOODS, 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Value	Quantity	Price
Livestock	1.2	13.0	983.3	983.3	0.0
Orchards	31.8	27.0	–15.1	–21.4	8.0
Land reclamation and conservation, drainage, natural pasture, etc.[c]	10.7	10.0	–6.5	–10.3	4.2
Afforestation	15.0	27.0	80.0	69.3	6.3
Total output	58.7	77.0	31.2	24.4	5.5

[a] Revised figures.
[b] Rates of change have been calculated from unrounded figures.
[c] In previous years this item was listed as "miscellaneous".
SOURCE: Central Bureau of Statistics.

physical increase in output. The Government regulates imports according to the volume of domestic output.

3. Input

(a) *Changes in input*

Inputs purchased from other sectors increased by 4.5 percent in 1966/67, compared with 10 percent the year before (see Table XI–7).

Table XI–7

INPUT OF MATERIALS AND SERVICES IN AGRICULTURE,[a] 1965/66 AND 1966/67

(IL million)

	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[c]		
	1965/66[b]	1966/67	Value	Quantity	Price
Purchases from other sectors					
Fodder	230.7	240.6	4.3	3.7	0.5
Fertilizers	30.3	31.9	5.3	3.6	1.6
Seeds etc.	3.6	3.6	0.0	–16.7	20.0
Pesticides and veterinary preparations	18.1	21.7	19.9	19.9	0.0
Water	56.7	51.0	–10.1	–10.1	0.0
Packing materials	61.9	71.0	14.7	9.8	4.4
Transportation	46.8	52.8	12.8	12.6	0.2
Spare parts, repairs, etc.	34.5	32.8	–4.9	–6.4	1.5
Fuel and electric power	18.8	20.8	10.6	10.1	0.5
Services	13.9	16.2	16.5	13.7	2.5
Taxes	16.5	17.0	3.0	0.0	3.0
Miscellaneous	8.4	12.3	46.4	44.0	1.6
Total	540.2	571.7	5.8	4.5	1.3
Wages of hired labor	200.8	200.2	–0.3	–0.4[d]	0.1
Interest and rent	48.0	52.5	9.4	4.8	4.4
Total purchased input	789.0	824.4	4.5	3.3	1.2
Intermediate goods	131.0	153.3	17.0	14.9	1.8
Depreciation	103.4	109.8	6.2	3.4	2.7
Total	1,023.4	1,087.5	6.3	4.8	1.4

[a] Excluding capital and labor of farm owners.
[b] Revised figures.
[c] Rates of change have been calculated from unrounded figures.
[d] The change in the annual average number of hours worked per week by hired labor, according to the manpower surveys of the Central Bureau of Statistics.
SOURCE: Central Bureau of Statistics.

Table XI–8

WATER INPUT IN AGRICULTURE, 1958/59 to 1966/67

	Unit	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64	1964/65	1965/66	1966/67
Irrigated area[a]	thousand dunams	1,240	1,305	1,360	1,445	1,505	1,500	1,550	1,580	1,618
Quantity of water										
Total	million m^3	990	1,060	1,025	1,125	1,140	1,025	1,095	1,265	1,126
Per dunam of irrigated area	m^3	798	812	754	779	757	683	706	800	696
	index (1963/64=100)	117	119	110	114	111	100	103	117	102
Rainy (+) or dry (–) year[b]		–	–	+	–	–	+	+	–	+
Annual increase or saving (–) in water consumption due to changes in weather conditions	million m^3		19	–80	49	–25	–113	27	147	–156

[a] Revised figures.
[b] According to a general evaluation.
[c] For method of calculation see the appendix to this Report (in Hebrew only).
SOURCE: Central Bureau of Statistics.

Total purchased inputs (including those from agriculture itself) increased more moderately—by about 3 percent—since the input of hired labor (measured by average weekly hours of work) hardly changed. Agricultural raw materials rose by 15 percent, so that total inputs (excluding the labor and capital of farm owners) were up 5 percent in real terms.

The decelerated rise in inputs from other sectors in 1966/67 was the outcome of a 10 percent decline in water consumption, a slower increase in purchases of fodder and fertilizers, and a decrease in seeds, spare parts, repairs, etc.

The smaller amount of water used in 1966/67 was due to the year's heavy rainfall (see Table XI-8), the saving being estimated at 156 million cubic meters, or about 12 percent of the water consumption of 1965/66. The irrigated area increased by 2.4 percent in 1966/67, compared with 1.9 percent the year before, while the unirrigated area was reduced by 0.2 percent following an increase of 0.8 percent in 1965/66.

Table XI-9

THE CULTIVATED AREA,[a] 1965/66 AND 1966/67

	1965/66[b]		1966/67		Percent increase or decrease (–)	
	Thousands of dunams	Percent of total cultivated area	Thousands of dunams	Percent of total cultivated area	From 1965/66 to 1966/67	From 1958/59 to 1965/66
Unirrigated land[c]						
Field crops	2,158	53.0	2,160	52.7	0.1	–1.3
Vegetables and potatoes	17	0.4	17	0.4	0.0	0.0
Orchards	209	5.1	202	4.9	–3.3	–1.5
Miscellaneous	106	2.6	106	2.6	0.0	–1.3
Total	2,490	61.1	2,485	60.6	–0.2	–1.3
Irrigated area						
Citrus	455	11.2	458	11.2	0.6	52.7
Other fruit	217	5.3	223	5.4	2.8	5.1
Field crops	528	13.0	562	13.7	6.4	2.0
Vegetables and potatoes	226	5.6	222	5.4	–1.8	1.3
Fishponds	60	1.5	59	1.4	–1.7	28.3
Miscellaneous	94	2.3	94	2.3	0.0	13.3
Total	1,580	38.9	1,618	39.4	2.4	30.5
Grand total	4,070	*100.0*	4,103	*100.0*	0.8	0.2

[a] An area is included as many times as it is sown.
[b] Revised figures.
[c] Including land under auxilliary irrigation.
SOURCE: Central Bureau of Statistics.

The change in the irrigated crop program normally would have caused a rise of some 8 percent in the water input per dunam, but it actually declined by 13 percent—from 800 cu. meters per dunam to 696. The combined result of the various factors described was, as stated, a decrease of some 10 percent in the total water input.

Fodder purchases grew more slowly in 1966/67 because of the much larger output of agricultural raw materials, which permitted the expansion of the country's grain stocks. The drought of 1965/66 was apparently the main reason for the slower rise in fertilizer consumption in the year reviewed; the 1965/66 purchases were not all used up at the time, and some of the fertilizer that was applied did not dissolve and therefore required only supplementary applications (e.g. phosphates). Seeds too were not all used up in 1965/66, and purchases fell 17 percent in the year reviewed. The decline in "spare parts, repairs, etc." is partly explained by the fact that because of the drought equipment was used less heavily in 1965/66, reducing wear and tear and allowing stocks of spare parts to build up. The recession was another factor, as it caused farmers to postpone repairs and the replacement of various accessories (e.g. tires). Transportation, fuel, electric power, packing material, and services increased more or less in proportion to the rise in total agricultural output, of which they are a function. The steep rise in purchases of pesticides and veterinary preparations was due to severe attacks of various pests, which affected several crops in 1966/67. The Six Day War may have been a contributory factor, because the postponement of treatment at this time may have meant that additional treatment was necessary later on.

The total input of labor (hired and nonhired) declined by 3.3 percent in terms of average hours worked per week, compared with 3 percent in 1965/66. The structure of agricultural employment changed: in 1965/66 many farm owners who had taken on jobs outside the sector returned to farming, replacing hired labor (reflected in both the number of employed and number of man-hours); in 1966/67 the proportion of hired labor rose, particularly during the second and third quarters (compared with the same period in 1966). This suggests that nonhired farm workers who were called up during the period of national emergency were replaced by hired labor.

(b) *Productivity*[1]

The 1964/65 decline in total and factor productivity (by 3 and 6 percent respectively) has not recurred since.[2] In 1965/66 (a year of drought), total productivity went up 2 percent and factor productivity by 4 percent; the rise in total

[1] New series (see the appendix to this Report—in Hebrew only).

[2] This decline was due chiefly to a rise in the labor input according to manpower survey data. No good explanation has been found for the higher recorded labor input, which may have stemmed from statistical deficiencies.

productivity was due mainly to the stability of the total input, the result of an 18 percent decline in agricultural raw materials and a smaller labor input. The rise in factor productivity in 1965/66 is explained by a decline in the labor input, which outstripped the growth of the capital stock.

In 1966/67 total productivity rose by about 12 percent, reflecting the 14 percent growth of real output and the modest 2 percent increase in real input.

Although the volume of agricultural raw materials was up 15 percent, inputs purchased from other sectors, whose weight is considerably greater, rose by only 5 percent, while the labor input declined by 3 percent. The real input of capital was only 3 percent larger in the year reviewed.

The small increase in the stock of capital assets and the further decline in the labor input resulted in a 2 percent decrease in total factors of production. On the other hand, real gross product rose by 19 percent, so that factor productivity advanced in 1966/67 by 22 percent.

Owing to the strong influence of natural factors on agricultural productivity, greater importance attaches to the trend rather than to annual changes.

4. Income

Income originating in agriculture (i.e. the net agricultural product at producer prices) grew in 1966/67 by IL 143 million, or 20 percent, compared with IL 3 million in 1965/66 and 45 million in 1964/65. The increase in 1964/65 was caused by a rise in net product prices, which was partly offset by a decrease in the real product. In 1965/66 net product prices rose less than in the preceding year and real product continued downward, with the result that nominal income moved up at a slow rate. In 1966/67 the real product grew, while product prices fell by only 1.2 percent.

Total income from agriculture (including drought compensation payments etc.) increased by IL 132 million, or 18 percent, in the year reviewed. The difference between this sum and income originating in agriculture stemmed from a decrease of some IL 11 million, or 82 percent, in drought compensation and similar payments.

The income of farm owners from agriculture rose by IL 128 million, or 27 percent, in 1966/67; this compares with a decline of IL 7 million (about 1 percent) in 1965/66 and a growth of IL 30 million (7 percent) in 1964/65. The higher growth rate in 1966/67 can be ascribed to the increase in total income and the stability in wage payments to hired labor. Farm income per nonhired worker rose by 31 percent in 1966/67, reflecting a decline of 3 percent in the number of self-employed.

Direct agricultural subsidies went up by IL 6 million to IL 156 million (see Table XI–10). Their distribution changed little: subsidies on output increased by IL 12 million, or 13 percent, and factor subsidies by IL 5 million, or 12 percent. Drought compensation and similar payments were down IL 11 million.

The average price support per unit of subsidized output remained virtually at the 1965/66 level, but there were substantial changes in the commodity distribution. The subsidy per unit of milk and egg output fell by 23 and 18 percent respectively, chiefly because consumer prices were raised in order to cut subsidies and because output exceeded quotas. The subsidy per unit of vegetable

Table XI-10

AGRICULTURAL SUBSIDIES, 1965/66 AND 1966/67

	IL million		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Total subsidy	Physical output or input	Subsidy per unit of output or input
Citriculture	—	2.2	—	—	—
Eggs	24.0	22.4	–6.7	15.1	–18.9
Poultry	1.7	7.6	347.0	8.8	310.8
Cow's milk	29.7	24.9	–16.2	9.2	–23.3
Beef	2.4	4.0	66.7	8.2	54.1
Fish	0.5	0.5	0.0	2.0	–2.0
Cotton	7.6	9.7	27.6	14.8	11.1
Vegetables and potatoes	9.2	7.3	–20.7	–2.2	–18.9
Wine grapes	1.4	1.1	–21.4	19.3	–34.1
Other fruit	2.3	2.7	17.4	15.0	2.1
Groundnuts	3.3	2.7	–18.2	–4.1	–14.7
Sugar beet	5.3	5.8	9.4	2.7	6.5
Tobacco	0.5	0.7	40.0	12.8	24.1
Wheat	4.0	11.5	187.5	122.1	29.4
Miscellaneous	0.3	0.5	66.7	—	—
Subsidies by the Jewish Agency's Settlement Department	0.8	1.4	75.0	—	—
Total subsidies on output	93.0	105.0	12.9	12.4[c]	0.4
Fodder	25.5	32.7	28.2	3.7	23.6
Water	15.1	13.2	–12.6	–10.1	–2.8
Fertilizers	3.0	2.9	–3.3	3.6	–6.7
Total factor subsidies	43.6	48.8	11.9	–1.1[c]	13.1
Drought compensation etc.	13.8	2.5	–81.9	—	—
Total subsidies	150.4	156.3	3.9	—	—

[a] Revised figures.
[b] Rates of change were calculated from unrounded figures.
[c] Real change in total output or input subsidized.
SOURCE: Ministry of Agriculture, Jewish Agency, and Ministry of Finance.

output declined by 19 percent, as the high prices fetched at the beginning of 1966/67 resulted in the payment of a smaller total subsidy. The decline in wine grapes, where the total subsidy is fixed, was due to the expansion of output; however, the total subsidy actually paid is fixed after a certain time-lag, and the final amount presumably will be bigger. The marked increase in the average poultry subsidy was due primarily to the larger aggregate amount paid. This reflects a change in the method of subsidizing broilers (on the basis of the average wholesale price for two months instead of three months, as before); Government aid to the Poultry Marketing Board in an effort to reduce the number of laying hens through early slaughtering at guaranteed prices; and overproduction of poultry at various times during the year.

The steep rise in the beef subsidy per unit of output reflects the fact that price supports were reintroduced in the second half of 1965/66 after the auction system of cattle sales was resumed in June 1966 (the farmer is subsidized to the extent of the difference between the price actually received and the guaranteed price).

Fodder was more heavily subsidized in the year reviewed in order to keep down its cost to the farmer (barley and corn were the items whose prices rose most).

5. Investment and Financing

(a) *Investment and capital stock*

Real gross investment in agriculture and irrigation rose by 2 percent, compared with a 5 percent decrease in 1965/66. Outlay on water projects, which edged down 1 percent in 1965/66, declined by 12 percent; with the virtual completion of projects for developing available water resources, the emphasis shifted to ways of economizing in the conveyance and use of water.

Real gross investment in agriculture rose by 10 percent, compared with a decline of 6 percent in 1965/66. This should not be regarded as reversing the declining trend in evidence since the late 1950's, for most of the increase in the year reviewed was in afforestation, which was stepped up by 62 percent in physical terms under the relief work program in order to help mitigate the impact of the recession on the employment situation. Moreover, the faster recorded growth of the livestock inventory is a preliminary estimate, which may be revised.[1]

Discounting the accelerated investment in afforestation and livestock, real gross farm investment declined in 1966/67.

Investment in orchards fell by 21 percent, and that in machinery and equipment by 7 percent. These decreases apparently reflect the desire of

[1] Since the dairy herd grew more slowly in 1966 than in the previous year, it is not plausible that the addition to the livestock inventory should have been so great.

Table XI–11

ESTIMATED GROSS INVESTMENT IN AGRICULTURE AND IRRIGATION, 1965/66 AND 1966/67

(IL million)

Destination	Value at current prices		Percent increase or decrease (–) from 1965/66 to 1966/67[b]		
	1965/66[a]	1966/67	Value	Quantity	Price
Agriculture					
Orchards	31.8	27.0	–15.1	–21.4	8.0
Livestock	1.2	13.0	983.3	983.3	0.0
Farm installations[c]	30.7	33.8	10.1	10.1	0.0
Machinery and equipment	47.1	44.2	–6.2	–7.4	1.4
Land reclamation and conservation, drainage, natural pasture, etc.	12.4	12.0	–3.2	–7.3	4.3
Afforestation	15.7	27.0	72.0	61.8	6.3
Total	138.9	157.0	13.0	9.6	3.2
Irrigation					
Water projects	77.0	68.3	–11.3	–11.6	0.3
Grand total	215.9	225.3	4.4	2.0	2.3

[a] Revised figures.
[b] Rates of change were calculated from unrounded figures.
[c] Farm buildings, fishponds, and local irrigation networks.
[d] In previous Bank of Israel Annual Reports this item was listed as "miscellaneous". It includes local authority investments in the amount of IL 1.7 million in 1965/66 and IL 2.0 million in 1966/67; these are not defined as agricultural output and hence do not appear in Table XI–6.

SOURCE: Central Bureau of Statistics.

producers to adjust the growth of agricultural output to the moderate increase in demand therefor. Expenditure on farm installations was up 10 percent, due to the greater use of hothouses (most of whose output is exported) and the addition of livestock structures following the accelerated growth of the dairy herd in 1965/66.

At current prices, gross investment in agriculture expanded by about IL18 million in 1966/67, the biggest increases being in citrus (IL 13 million) and deciduous fruit orchards (IL 8 million).

The gross stock of fixed assets (see Table XI–12) expanded at about the same rate as in 1965/66, according to a preliminary estimate. But when the 1966/67 gross investment estimates are revised, the growth rate will probably turn out to be lower than in 1965/66. This deceleration of the capital stock growth rate, which has persisted for the last few years, is the result of a decline in new investment and a rise in discards.

Table XI–12

STOCK OF FIXED ASSETS IN AGRICULTURE,[a] 1966–67

(IL million, at current replacement values)

	Gross capital stock					Net capital stock				
	Value		Percent increase or decrease (–) from 1966 to 1967[c]			Value		Percent increase or decrease (–) from 1966 to 1967[c]		
	1966[b]	1967	Value	Quantity	Price	1966[b]	1967	Value	Quantity	Price
Orchards	977	1,089	11.5	2.6	8.4	674	726	7.7	–0.6	8.4
Installations[d]	1,617	1,721	6.4	3.3	3.0	1,167	1,224	4.9	1.8	3.0
Machinery and equipment	424	427	0.7	–0.7	1.4	254	245	–3.5	–4.9	1.4
Livestock[e]	289	302	4.5	4.5	0.0	289	302	4.5	4.5	0.0
Total	3,307	3,539	7.0	2.7	4.2	2,384	2,497	4.7	0.7	4.0

[a] Excluding land and financial assets. Data on investments from agricultural output (orchards and livestock) are for the end of the agricultural year; other data are for the end of the calendar year.
[b] Revised figures
[c] Rates of change have been calculated from unrounded figures.
[d] Farm buildings, local water projects, irrigation networks, and (in contrast to previous years) afforestation, land reclamation and conservation, drainage, natural pasture, etc.

SOURCE: Based on estimates of A. L. Gaathon. For definitions and explanations, see A. L. Gaathon, *Capital Stock, Employment and Output in Israel, 1950–1959,* Bank of Israel, Special Studies No. 1, Jerusalem, 1961.

The net stock of capital assets increased by less than 1 percent in real terms, and apart from livestock, afforestation, and land reclamation, net investment was negative.

(b) *Financing*

The main sources of farm credit are the public sector, banking institutions, and social insurance funds and insurance companies; like other sectors, agriculture also resorts to private noninstitutional sources of funds—the bill brokerage market, supplier credit, and settlement and purchasing organizations.

Statistics on agricultural financing are incomplete, as there are no reliable data on credit from sources which are neither public nor institutional, while public sector and bank credit entails problems of definition. The various suppliers of credit do not use identical criteria for classifying credit by sector of destination; in fact, the definition used by a single institution may vary from year to year. Consequently, it is almost impossible to distinguish between credit to agriculture and that to farmers. The most reliable (though by no means complete) figures are for short-term bank credit.

Outstanding short-term bank credit increased by IL 73 million, or 28 percent, in 1967 to stand at IL 328 million at year's end. (see Table XI–13). The share of credit granted under the agricultural production financing program declined, owing to the early sale of the cotton fiber output by the Cotton Production and Marketing Board and the delayed cultivation of winter grains. Working-capital credits from earmarked Government deposits (which represent the Government's participation in various funds) rose by IL 12 million, or 8 percent, and came to IL 17 million at the end of 1967.

Credit granted from the bank's own resources other than under the agricultural production financing program expanded by IL 75 million (73 percent) to reach IL 178 million at year's end. This apparently reflects the highly liquid state of the economy in the first half of 1967 and the change in sources of funds, bill brokerage credit shrinking and credit from bank resources expanding.

Directed credit (exempted from the liquidity requirements) contracted by some IL 3 million in 1967 and totalled IL 122 million at the end of the year. The outstanding balance of all credit granted under the financing program fell by IL 2 million (see Table XI–14). The drop occurred in credit for field crops and vegetables (the important items here being cotton and cereals); that for citriculture rose by IL 4 million, for the storage of livestock products and fodder by IL 5 million, and that for unspecified purposes by IL 4 million.

As regards citrus, the larger output forecast for 1967/68 raised credit requirements for packing materials; export consignments in the current season were held up, and this too necessitated more credit. In livestock and fodder, nearly all the additional credit was for the storage of quota surpluses of dairy produce (mainly butter and hard cheese) and eggs.

Table XI–13

OUTSTANDING BALANCE OF SHORT-TERM CREDIT TO AGRICULTURE,[a] 1966–67

	1966[b]		1967		Increase or decrease (–) from 1966 to 1967	
	IL m.	%	IL m.	%	IL m.	%
(1) Directed credit (exemptions from liquidity requirements and Bank of Israel rediscounts)	124.9	48.8	121.6	37.0	–3.3	–2.6
(2) From resources of banking institutions and Jewish Agency (not exempted from liquidity requirements)	12.3	4.8	12.1	3.7	–0.2	–1.6
(3) Working-capital credits from Government deposits	15.7	6.1	17.0	5.2	1.3	8.3
(4) Total credit under agricultural production financing program	152.9	59.7	150.7	45.9	–2.2	–1.4
(5) Other credit from banks' own resources	103.0	40.3	177.7	54.1	74.7	72.5
(6) Total short-term bank credit	255.9	100.0	328.4	100.0	72.5	28.3
(7) Of which: From banks' own resources subject to liquidity requirements	110.3	43.1	189.8	57.8	79.5	72.1

[a] Balances include linkage increments. Short-term credit from the Israel Bank of Agriculture is excluded, except for the balance exempted from the liquidity requirements, which has been included under direct credit.
[b] Revised figures.
SOURCE: Lines 1, 5, 6, and 7—Bank of Israel; lines 2 and 3—estimate based on Ministry of Agriculture data.

Credit for unspecified purposes, which may well cover some nonagricultural uses, has been rising steadily. From the end of 1961 to the end of 1967 the weight of this item went up from 27 to almost 40 percent of total directed credit.

Table XI–14

AVERAGE ANNUAL BALANCE OF DIRECTED CREDIT,[a] BY DESTINATION, 1966-67

Destination[b]	1966		1967		Increase or decrease (–) from 1966 to 1967[c]	
	IL m.	%	IL m.	%	IL m.	%
Field crops and vegetables	62.5	41	46.7	31	–15.8	–25.3
Citriculture	21.9	14	25.6	17	3.7	16.9
Livestock, livestock products, and fodder	9.1	6	14.3	9	5.2	57.1
Other inventories and misc.	6.7	4	7.3	5	0.6	8.9
Unspecified[d]	52.7	35	56.8	38	4.1	7.8
Total	152.9	100	150.7	100	–2.2	–1.4

[a] For method of calculating the average outstanding balance of directed credit and the definition of such credit, see the appendix to the Bank of Israel Annual Report for 1964 (in Hebrew only).
[b] For a more precise definition of the destination, see previous Bank of Israel Annual Reports.
[c] Rates of change have been calculated from unrounded figures.
[d] Although this item is included in the agricultural financing program, there is no way of knowing whether it was in fact used for agricultural purposes.