

CHAPTER XI

AGRICULTURE

1. MAIN DEVELOPMENTS

THE NET AGRICULTURAL PRODUCT, at constant producer prices, expanded by approximately 19 percent in 1963/64¹ (see Table XI-1), as compared with 10 percent in 1962/63 and an average of 13 percent during the years 1958/59 to 1962/63. The growth rate in 1964, which equalled the peak level of the years 1955/56 to 1959/60 (about 18 percent per annum), is mainly attributable to favorable weather conditions, which resulted in bumper yields of field crops and fruit as well as a saving on irrigation outlay.

However, this departure from the trend of recent years² (see Diagram XI-1) cannot be explained solely by natural factors, since output in livestock farming, which is less affected by weather conditions than crops, also expanded faster than in 1962/63 and the average for the period 1959/60 to 1962/63. The accelerated growth of the agricultural product in 1963/64 was therefore due also to the increased profitability of livestock farming during the last two years and to the maturing of investments made in orchards and citrus groves over the past three to six years.

As happens in every rainy year, there was damage to some crops in 1963/64, especially citrus. The real output of citriculture decreased by 3 percent, after having advanced 42 percent in 1962/63, which was an excellent year for this crop. Excluding citrus, the increase in the real agricultural product in 1963/64 amounted to 25 percent, compared with no increase at all in 1962/63. The rapid growth of the agricultural product stemmed from a marked rise of 13 percent in real output—double the rate in 1962/63—and to a smaller rise—some 6 percent—in the input of materials and services. This development reflects a big improvement in productivity. Factor productivity—i.e. product per unit of capital and labor—went up 13 percent, compared with 9 percent in 1962/63. Total productivity—total output per unit of total input (inclusive of capital and labor)—rose by 7 percent, as against some 5 percent in 1962/63. These increases reflect the influence of the weather, changes in the composition of output and input, and technological advances.

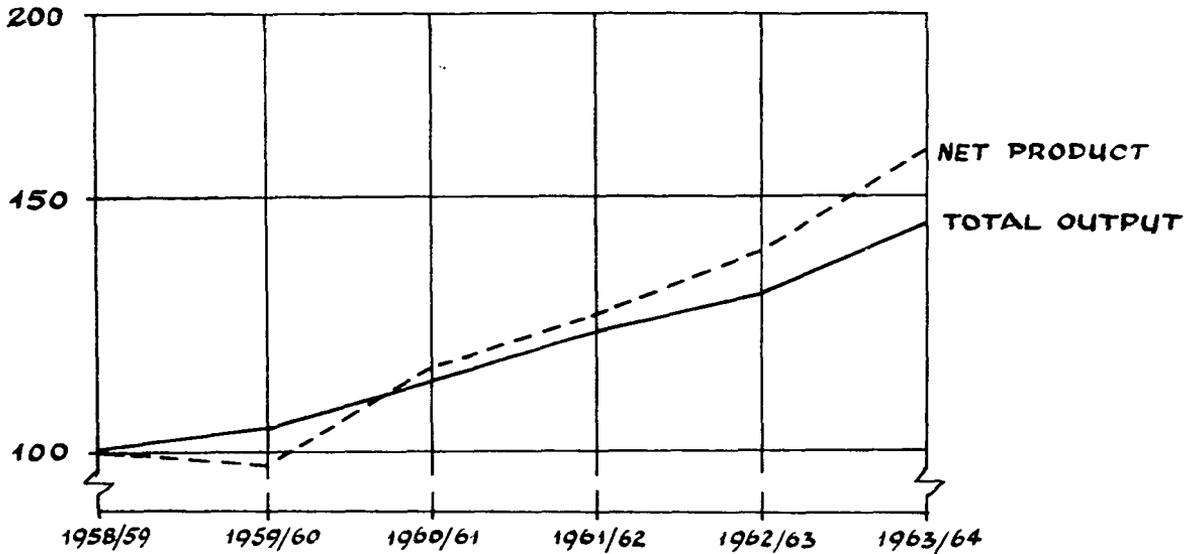
In contrast to 1962/63, price developments were not favorable to agriculture during the year reviewed. Average input prices remained unchanged, but a

¹ From October 1, 1963 to September 30, 1964.

² See the discussion of this subject in the Bank of Israel Annual Report for 1963, p. 197.

Diagram XI-1

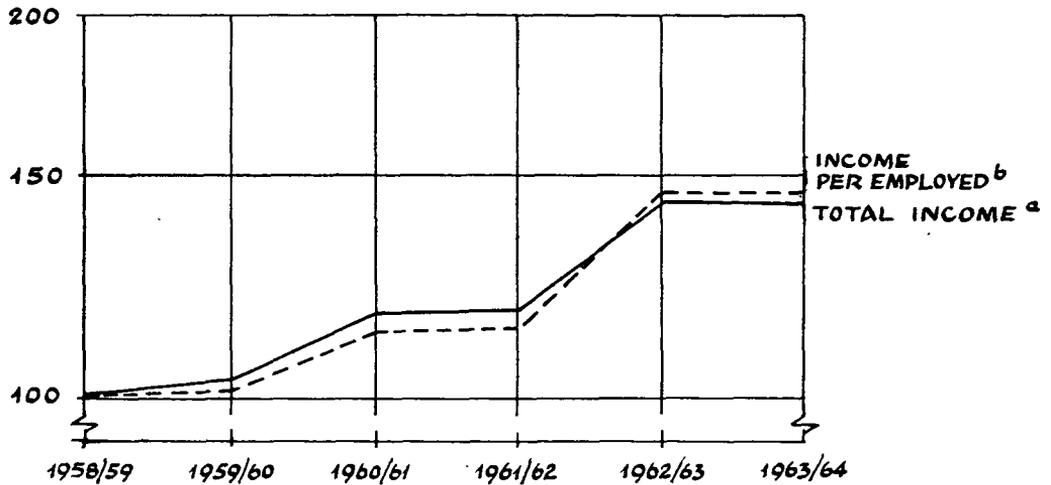
REAL INCREASE IN TOTAL AGRICULTURAL OUTPUT AND NET PRODUCT, 1958/59 TO 1963/64



Semi-logarithmic scale.

Diagram XI-2

REAL INCREASE^a IN INCOME OF FARM OWNERS, 1958/59 TO 1963/64



Semi-logarithmic scale.

^a Less increase in consumer price index.

^b Farm owners, family members, and others working without pay.

Table XI-1
CURRENT ACCOUNT OF AGRICULTURE, 1962/63 AND 1963/64

	Value at current prices (IL million)		Percent increase or decrease (-) from 1962/63 to 1963/64		
	1962/63 ^a	1963/64	Value	Quantity	Price
1. Total agricultural output at producer prices	1,217.8	1,315.0	8.0	12.6	-4.1
2. Less: Agricultural raw materials (intermediate products) ^b	138.0	140.2	1.6	3.6	-2.0
3. Agricultural output at producer prices	1,079.8	1,174.8	8.8	13.7	-4.3
4. Less: Subsidies on output	88.3	98.7	11.8	..	..
5. Agricultural output at market prices	991.5	1,076.1	8.5	13.9	-4.7
6. Less: Purchased input (net of change in inventories)	395.9	420.6	6.2	6.7	-0.4
7. Gross agricultural product at market prices	595.6	655.5	10.1	18.7	-7.3
8. Less: Depreciation	71.3	78.3	9.8	5.6	4.0
9. Net agricultural product at market prices	524.3	577.2	10.1	20.5	-8.6
10. Subsidies on output	88.3	98.7	11.8	..	..
11. Net agricultural product at producer prices (national in- come originating in agriculture)	612.6	675.9	10.3	19.2	-7.5
12. Drought and frost compensa- tion payments	12.7	2.6	-79.5	..	..
13. Total income from agriculture	625.3	678.5	8.5	17.2	-7.4
14. Less: Wages paid to hired labor ^c	130.2	150.3	15.4	3.0 ^d	12.0
15. Less: Interest and rent	36.7	41.3	12.5	..	..
16. Income of farm owners from agriculture	458.4	486.9	6.2	..	..

^a Revised data.

^b Consumed during the year; excluding the IL 20.6 million increase in stocks of intermediate goods.

^c Bank of Israel estimates of the agricultural wage bill are IL 17.4 million less than those of the Central Bureau of Statistics. The variance arose in 1960/61 owing to the different methods of estimation used. According to CBS data, the increase in farm owners' income from agriculture in 1963/64 amounted to IL 26.1 million, or approximately 5.9 percent.

^d Input of standard working days (8 hours) of hired labor.

SOURCE: 1 and 2—Table XI-4.

4 and 12—Table XI-11.

6 and 8—Table XI-8.

14—Bank of Israel estimates.

15—Increase in interest payments in 1963/64—Bank Leumi le-Israel.

decline of some 4 percent in output prices shaved off about 8 percent from the rise in the value of the agricultural product in 1963/64, which amounted to 10 percent as against 26 percent in 1962/63.

Net income of farm owners from agriculture—after deducting the increase in paid labor, interest payments, and rent—totalled IL 487 million in 1963/64; this compares with IL 458 million the year before—a rise of IL 29 million or 6 percent, in contrast to 31 percent in 1962/63. The 1963/64 income level was over 90 percent higher than that of 1958/59, representing an average annual growth of approximately 14 percent during these five years. Taking into account the rise in the labor input of farmers and their families in 1963/64, which is estimated at some 3 percent, as well as a probable increase in the farmers' own capital and the range of errors in the estimates, it would appear that the return on own labor and capital in agriculture hardly went up at all; in fact, if the rise in the general price level is discounted, real income per unit of own capital and labor even edged down somewhat.

Realized net income¹ increased by only IL 20 million (a little over 4 percent), whereas in 1962/63 it had expanded faster than total net income. This was due to the faster rise in the output of agricultural capital goods, reflected by the larger livestock inventory. In 1962/63, on the other hand, the output of farm capital goods declined.

Following the rapid rise (some 23 percent) in outlay on machinery and equipment, as well as the increase in the number of livestock, investment in farms went up approximately 10 percent in real terms, despite the reduced expenditure on young orchards and new farm structures.

Investment in public development projects connected with agriculture contracted by nearly 28 percent in real terms, owing to the completion of the first stage of the National Water Carrier, which became operative in the summer of 1964.

Production capacity continued upward in 1964 at a slightly faster rate than the year before. The gross value of productive farm assets increased by 5.8 percent, compared with 4.4 percent in 1963. Part of the increment was in installations and labor-substituting equipment; at the same time, the labor input also went up.

The net value of productive farm assets expanded by some IL 148 million (see Table XI-15). On the other hand, there was an increase of about IL 136 million in the institutional farm debt. The stock of fixed assets was augmented by IL 130 million, compared with a rise of IL 105 million in long-term liabilities, while current inventories expanded by IL 18 million, as against IL 31 million in short-term institutional debt. The real increment of finance capital received by agriculture (exclusive of linkage increments) expanded even more: the increase in total outstanding credit reached IL 140 million—IL 109 million in long-term financing and approximately IL 32 million in short-term credits.

¹ Net income, after deducting imputed income from the output of productive assets.

Table XI-2
PARTIAL CAPITAL ACCOUNT OF AGRICULTURE, 1963-64
 (IL million)

	1963 ^a	1964	Percentage change in 1964
Assets			
Fixed assets	1,383.4	1,513.6	9.4
Current assets	292.5	310.3	6.1
Subtotal	1,675.9	1,823.9	8.8
Other assets ^b	..	..	..
Liabilities^c			
Long-term institutional debt	1,063.4	1,168.4	9.9
Short-term institutional debt	185.0	215.6	16.5
Total institutional debt	1,248.4	1,384.0	10.9
Other liabilities ^d	..	..	..
Equity capital	..	..	..

^a Revised data.

^b Private land, land amelioration, and financial assets (cash and deposits, receivables, rights, shares, etc.).

^c Balances at December 31 of each year, including linkage increments totalling IL 3.8 million in 1962, IL 21.8 million in 1963, and IL 18.8 million in 1964.

^d Supplier credit, sundry creditors, and other noninstitutional credit.

SOURCE: Assets—Table XI-13; institutional debt—Table XI-14.

These data are fragmentary only, as complementary figures on both asset inventories and noninstitutional liabilities are not available. Nevertheless, it is clear from these data that the additional long-term and short-term institutional credit made available to agriculture exceeded the amount required to finance the incremental fixed and current assets.¹ These structural changes in the farm sector's balance sheet indicate an improvement in its liquidity position and interest burden—an improvement reflected by the larger relative proportion of comparatively cheap sources of finance credit. On the other hand, it is impossible to ascertain to what extent this change was accompanied by a corresponding decline in other, more expensive liabilities, or to what extent it involved a diminished accumulation of equity capital.

Over 50 percent of the additional financing was provided by the Jewish Agency's Settlement Department, some 20 percent by banks, approximately 15 percent by the Israel Bank of Agriculture, and some 10 percent by other agricultural funds and financial institutions.

¹ Net investment in fixed farm assets totalled IL 42 million. The balance of the incremental value of productive assets stemmed from price increases, and represents capital gains for farmers.

Short-term bank loans (other than from the Israel Bank of Agriculture) expanded in 1964 by IL 32 million, or some 17 percent (see Table XI-16). These figures include credits granted under the Agricultural Production Finance Scheme, controlled jointly by the Bank of Israel and the Government; such credit expanded in 1964 by about IL 16 million, or 13 percent, and constituted approximately 60 percent of total short-term bank credit received that year. The entire increment was granted within the framework of controlled credit (exemptions from liquidity requirements). There was no increase in the amount of loans granted from Government deposits and from the banks' resources in joint funds.

Another IL 10 million was provided during the year by the Government and the banks (in equal measure) for the cultivation of citrus groves. Credits given from the banking institutions' own resources, other than through the above-mentioned financing scheme, expanded by IL 16 million, or 10 percent, in 1964. The additional credit provided from funds exempted from the liquidity requirements went to citrus growers (see Table XI-17), cattle farmers, purchasing organizations, institutions, companies, and farmers hit by drought. On the other hand, credit for field crops contracted following the reduction of cotton and tobacco stocks.

Another indicator of changes in the liquidity position of the sector is the cash surplus in its business account (see Table XI-18), which closely approximated the cash situation of the farmers. The identified cash surplus increased by IL 58 million, or about 24 percent.

(a) *Production trends*

The accelerated expansion of economic activity in agriculture was mainly manifested by an increase in output at a rate far exceeding the average for the years 1959/60 to 1962/63 (see Diagram XI-1) and approximating the average annual rate in the late 1950's. The rapid growth in 1963/64 took place despite the smaller citrus crop.

This departure from the output pattern stands out all the more in the growth rate for total output exclusive of citrus. Here the increase came to 16 percent, as against 12, 7, and 0 percent respectively during the years 1960/61 to 1962/63. The factors slowing down the expansion of output in recent years—the shortage of water, limitations of the local market, and the Government's policy of production curbs—did not operate in 1963/64. The ample rainfall and its even distribution helped to overcome the water shortage; good weather conditions and the maturing of investments made in previous years led to a big increase in fruit output; while types of farming subject to annual production quotas—in particular, poultry farming and vegetables—expanded faster than was planned, creating “surpluses” which were partly destroyed (vegetables) and partly diverted to the export market (eggs).

Because of the smaller quantity of citrus suitable for overseas shipment in 1963/64, agricultural exports fell off some 4 percent at constant prices. Since the prices obtained abroad—especially for citrus and eggs—slipped considerably, receipts shrank by over 20 percent. Even the much larger amount of citrus sold to industry could not offset this decline, which totalled 15 percent if shipments of processed foodstuffs are included.

Domestic farm marketing receipts, on the other hand, moved up appreciably, despite the fall in producer prices caused by the much larger quantities offered for sale, which exceeded the increase in demand at constant prices.¹ The decline in producer prices affected items marketed directly—chiefly fruit and dairy products—where there was a big oversupply.

The imbalance between the growth of supply and demand represented a return to the situation in the years 1959/60 to 1961/62—in 1962/63 the average increase in supplies for the home market roughly equalled the average increase in demand at constant prices.²

The developments in the local market also affected exports, although to a limited extent. Egg shipments once again increased, after having contracted in the two preceding years following production cutbacks because of their unprofitability to the economy. Sales of fresh fruit were stepped up by more than 20 percent, but most of the rise was not connected with the surplus supplies. The increase occurred primarily in bananas, while exports of varieties in oversupply, such as grapes, plums, etc., were relatively small, and in no way matched the volume of surpluses, which are expected to increase still further in coming years.

In connection with the problem of fruit “surpluses”, three points should be noted:

1. Despite the rapid growth of supplies and the downward pressure on prices in the local market, which in the case of certain varieties certainly resulted in many—or even most—producers receiving prices which did not cover their costs during part of the season, it is nevertheless possible that for the season as a whole average producer prices were relatively high, fully covering production costs as far as most varieties are concerned. It should be remembered that the level of prices, especially those of deciduous fruit, was relatively high in previous years.

2. A large part of the surpluses was withdrawn from the markets in an organized attempt to regulate supplies so as to prevent prices from losing further ground—an operation assisted by the granting of subsidies. These

¹ The population increased by some 4 percent, and per capita real income by an average of 5 to 6 percent. According to the income elasticity of demand for food (estimated at about 0.5), the rise in demand at constant prices amounted to 6 to 7 percent, while direct domestic marketing expanded by some 13 percent, and total marketing (including that through industry) by about 15 percent.

² See Bank of Israel Annual Report for 1963, p. 203.

surpluses were for the most part channelled to industry and storage, and should not be regarded as real surpluses, but rather as constituting an economic destination of secondary importance as compared with direct marketing. As to the quantities destroyed, only a small proportion was technically unmarketable. The price elasticity of demand is still high in the case of deciduous fruit, and had these quantities been offered at lower prices, they very likely could have been sold.

3. Under existing conditions it is very doubtful whether export can economically solve the problem of regulating domestic marketing, because of the sizeable losses involved, but is certainly preferable to the destruction of fruit, as long as the return exceeds the transportation costs. This objective might be achieved by proper preliminary planning and organization.

Other agricultural export developments likewise constituted a setback from the economic aspect. Precisely those commodities that are relatively profitable to export, such as groundnuts, cotton, flowers and flower bulbs, chicks, eggs for hatching, winter and spring potatoes, and melons, were not shipped in larger quantities and their aggregate value even dropped somewhat below the 1962-63 figure.

On the other hand, there was a positive development as regards field crops: the ample rainfall resulted in a 150 percent increase in grain yields, which in turn made it possible to reduce imports, effected at a relatively low cost per dollar saved. It also permitted a reduction of the irrigated area under green fodder.

Fluctuations in producer prices, especially those directly affected by Government policies, continued to reflect a tendency to disregard the need to plan the composition of output so as to permit the efficient exploitation of the available agricultural resources. Though there was a fall in the prices of poultry produce, which helped to brake the expansion of this type of farming and to reduce future surpluses, prices of beef, milk, fish, and vegetables moved upward. These increases were largely due to the raising of price supports. In these items there is a tendency to create surpluses (vegetables) or to expand output when it is economically unfeasible because of the high cost of the dollar saved. A major contributory factor in these developments is the continued administrative protection of local products against competing imports. In respect of several commodities, especially fresh meat and dairy produce, this protection is absolute. But even where import is permitted of the same items, or of near substitutes such as milk powder, frozen meat, potatoes, and onions, the volume and timing of imports, as well as the size of import duties, are fixed so as to present a downward adjustment of their prices to an economically desirable level. In some instances this is due to the fact that the decision concerning the terms of import is either completely or partly dependent on the representatives of local producers. Thus we find, for example, that dairies determine the amount of

milk powder to be imported, while the vegetable and meat marketing boards, by announcing their forecast of domestic supplies, greatly influence the decisions of Government departments.

(b) *Factors of production*

In respect of productive factors, a number of trends apparent in previous years continued during 1963/64. There was a slow decline in the number of self-employed agricultural workers (i.e. farm owners and family members), while the average number of man-days per gainfully employed rose. On the other hand, there was a slight increase in the number of hired hands, employed for the most part in citriculture and in vegetable, fruit, and tobacco farming. However, data on agricultural employment are incomplete, and it is difficult to obtain a reliable picture as to the extent of these developments. The decrease in the number of self-employed (reflected by a switch to different branches in kibbutzim¹ and by nonfarm work in moshavim²), even though agricultural output rose, was made possible by higher productivity and greater use of capital.

2. OUTPUT

(a) *Value of output*

The total farm value of agricultural output, at producer prices, went up 8 percent in 1963/64, compared with 19 percent in 1962/63. The slower rate of increase was due to the drop in output prices. At constant prices, the rise reached 13 percent during the year reviewed, as against 6 percent in 1962/63. The decline in the producer prices of output averaged some 4 percent; in 1962/63 there was an advance of 12 percent.

Farm subsidies were enlarged in proportion to the volume of output; hence there was virtually no change in the average subsidy rate per unit of output. Total subsidy payments rose by IL 10 million, representing more than 10 percent of the incremental farm value of the output.

(b) *Destination of output*

Of the IL 100 million increase in the value of output, about two-thirds derived from the larger quantities marketed, while the remaining third represented the additional value of output retained on farms. The value of marketed output rose to a lesser extent than that of output retained on farms, and consequently its weight in the total moved down from 78 to 77 percent. Receipts from direct export declined, but export through industry expanded by

¹ Collective settlements.

² Smallholders' settlements.

62 percent, after having contracted in the two preceding years. The volume of local marketing rose by 15 percent; sales to industry contributed about two-thirds of the increase, with rises being recorded in meat, locally grown wheat, and industrial crops. Output consumed on farms, which had declined in 1962/63, was appreciably larger during the year reviewed.

Table XI-3
TOTAL AGRICULTURAL OUTPUT,^a BY ECONOMIC DESTINATION,
1962/63 AND 1963/64
 (IL million)

	Value at current prices		Percent increase or decrease (-) from 1962/63 to 1963/64		
	1962/63 ^b	1963/64	Value	Quantity	Price
Output marketed					
For local consumption					
Direct marketing	421.6	455.4	8.0	13.0	-4.4
Through industry ^b	272.3	340.6	25.1	22.5	2.1
Total	693.9	796.0	14.7	16.7	-1.7
For export					
Direct marketing	239.9	191.4	-20.2	-4.3	-16.7
Through industry ^b	14.9	24.2	62.4	71.8	-5.5
Total	254.8	215.6	-15.4	0.2	-15.5
Total marketed output					
	948.7	1,011.6	6.6	12.3	-5.0
Thereof: Through industry					
	287.2	364.8	27.0	25.0	1.6
Output retained on farms					
Own consumption	69.0	66.7	-3.3	1.4	-4.7
Capital goods ^c	62.1	70.1	12.9	6.1	6.4
Agricultural raw materials (intermediate goods)	138.0	168.8 ^d	16.5	19.8	-2.7
Total	269.1	297.6	10.6	11.6	-0.9
Output destroyed ^e		5.8			
Total output	1,217.8	1,315.0	8.0	12.6	-4.1

^a Revised figures.

^b All industrially processed commodities, including milk processed in dairies, meat processed in slaughterhouses, industrial crops, and wheat, vegetables, fruit, and frozen eggs for export. Owing to measurement difficulties, this estimate does not cover all agricultural output exported through industry.

^c The rise in the value of orchards and livestock remaining on the farm, as well as investments in afforestation, drainage, soil conservation and reclamation, and irrigation networks laid by the farmers themselves.

^d Including an increase of IL 20.6 million in stocks of intermediate goods.

^e Fruit and vegetables destroyed, except for IL 973,000 worth of citrus which is included with marketed output despite its destruction.

SOURCE: Output volume—Central Bureau of Statistics; output prices—Central Bureau of Statistics and Bank of Israel estimates.

The average annual volume of marketed output hardly changed over the last two years: quantities sold at home rose by 17 percent, as against 11 percent in 1962/63, but exports remained at the same level, after having expanded considerably in 1962/63. Direct exports were smaller than in 1962/63, chiefly because of the poorer performance of citrus, which accounted for 74 percent of direct agricultural exports. Exports through industry advanced 72 percent, after having declined in 1962/63. Most of the increase resulted from the doubling of the figure for citrus products.

As to output retained on the farm, there was a particularly big increase in the production of intermediate goods, which led to the accumulation of grain stocks. The output of investment goods rose somewhat, after a decline in 1962/63. Most of the new investments were in citrus groves, livestock, and afforestation.

The sharpest price fluctuations were in direct exports, where the level receded 17 percent owing to the lower prices fetched by citrus and eggs. Prices of commodities marketed directly sagged 4 percent, because of decreases in fruit and poultry produce, which together accounted for over 50 percent of total farm marketings for direct local consumption in 1963/64. On the other hand, prices of products sold to industry edged up 2 percent. Since the relative weight of marketing through industry increased, this helped to moderate the decline in the producer prices of agricultural commodities.¹

Prices of output retained on the farm averaged about the same as in 1962/63, while prices of products for the farmers' own consumption declined *pari passu* with prices of output for the domestic market.² Prices of capital goods rose in proportion to their production costs. Prices of intermediate goods fell by 2 per cent, following increases in supplies.

(c) *Output, by type of farming*

Current output expanded by 13 percent at constant prices, compared with 8 percent in 1962/63 (see Table XI-4). The increase was greater in crops than in livestock, despite the rapid rise in poultry farming and the decline in citriculture. The relatively biggest expansion took place in field crops and summer fruit.

The producer prices of current output fell 4.6 percent. The decline occurred in crops (mainly fruit), whereas the average producer prices of livestock products rose by some 2 percent, despite sagging egg prices.

¹ It should not be concluded from this that sales to industry are more profitable for the producer than marketing for direct consumption, since we are not referring to identical commodities. For identical items, industry generally pays a lower price than that obtainable for produce sold for direct consumption.

² This follows from the method of estimating the prices of commodities consumed on the farm. Discrepancies are due to differences in methods of estimation and the introduction of new commodities.

Table XI-4
CURRENT AGRICULTURAL OUTPUT,^a BY TYPE OF FARMING,
1962/63 AND 1963/64
 (IL million)

	Value at current prices		Percent increase or decrease (-) from 1962/63 to 1963/64		
	1962/63 ^b	1963/64	Value	Quantity	Price
Livestock					
Poultry	238.8	262.4	9.9	11.1	-1.1
Cattle	190.9	212.7	11.4	7.2	4.0
Other livestock	72.4	76.6	5.8	0.6	5.2
Total	502.1	551.7	9.9	7.8	1.9
Crops					
Fruit	365.8	333.3	-8.9	11.8	-18.4
Vegetables	98.9	115.2	16.6	9.9	6.0
Field crops and miscellaneous	188.9	244.7	29.5	30.4	-0.6
Total	653.6	693.2	6.1	16.9	-9.2
Total current output	1,155.7	1,244.9	7.7	12.9	-4.6

^a Marketing, on-farm consumption, and agricultural raw materials (intermediate goods).

^b Revised figures.

SOURCE: Central Bureau of Statistics.

Output of poultry and poultry products rose by 11 percent in real terms, in contrast to a 4 percent decline the previous year. There was an especially big increase in egg production. The rise in edible egg output, which is subject to quantitative restrictions, for the most part accorded with the planned quotas. The quotas were enlarged by 30 million eggs, and in addition producers drew on unutilized quotas totalling 70 million eggs. The balance of the output increment—some 15 million units—was outside the planned framework. The rapid expansion of egg production was presumably due in the main to a rise in the profitability of this item during the second half of 1962/63, when exports were reduced and price supports increased. The higher profitability began to leave its mark at the beginning of 1963/64, supplies being considerably expanded. The growth of some 15 percent in average egg supplies was not accompanied by a parallel rise in domestic demand, and consequently there was a marked increase in surpluses, which were diverted to the export market. Overseas shipments of eggs went up from 130 million to 190 million, while f.o.b. egg prices slipped 25 percent—from 2.5 to 1.9 cents per egg. This decline stemmed not only from the larger quantity exported and the fall in prices

fetched abroad, but also from the higher rates of customs duty imposed by the Common Market countries. The increased weight of exports and their lower prices depressed the average price obtained for marketed eggs. Even the raising of the subsidy by 11 percent, which amounted to 2 percent of the producer price in the previous year, could not prevent a drop of some 2.7 percent in the average price to the farmer.

Under the Government's consumer-price stabilization policy, the subsidy on eggs marketed locally was raised, thus keeping their price steady and, in relation to other consumption items, even depressing it. This, together with the advance in incomes, caused egg consumption to expand by some 5 percent per capita and helped reduce the volume of surplus eggs channelled to the overseas market.

Output of poultry meat went up 11 percent, despite the official freeze on production. Part of the expansion was in laying hens, but mostly in broilers. This deviation from plan is also explained by the rise in producer prices in the second half of 1962/63, and especially during the last months of that year, as well as by the expectation of further price increases following an upturn in beef prices. However, the growth of demand did not keep pace with production, resulting in a larger surplus being withdrawn from the market at the guaranteed minimum prices. These were higher than in 1962/63, but the average producer price of poultry meat fell by 1.3 percent, chiefly owing to the larger surpluses.

Meat and milk output expanded by 7 percent, a slower rate than in 1962/63. The main real increase was again in meat—a growth of 11 percent compared with some 40 percent in the preceding year. Milk output, which had not increased at all in 1962/63, rose by 3 percent during the year reviewed. Prices to the farmer went up by some 4 percent, about the same as in the previous year.

Milk output, which is subject to production curbs, showed a continuation of the trends noticeable in 1962/63: a decline in moshavim and other farms where cattle is privately owned, a rapid growth in kibbutzim (sometimes exceeding planned quotas), but aggregate output failing to reach the planned quotas.

The tendency to limit milk output in moshavim mainly affected the new settlements in 1963/64. The marked rise of some 17 percent in the producer price of milk since 1961/62 has still not been fully reflected by increases in output, owing to the operation of long-term contractionary factors.¹ Subsidies on cow's milk totalled IL 32 million, constituting over a quarter of the price received by the producer. Milk subsidy rates were raised by 14.5 percent, accounting for nearly 4 percent of the increase in the producers' return. A further rise of more than 1 percent was made possible by the change in milk

¹ For an explanation see the Bank of Israel Annual Report for 1963, p. 207.

consumption, the proportion of milk for drinking rising at the expense of that for dairying.

The expansion of meat output, while it did not reach the 1962/63 level, was still quite appreciable and was accompanied by a 3 percent rise in the price to the producer. The upward movement of prices, despite the big expansion of imported frozen meat supplies, is attributable to the faster increase in demand for fresh meat, and it permitted the cutting of meat subsidies by 20 percent. The subsidy rate per unit of output declined by 30 percent. Moreover, the tendency to slaughter cattle from milch herds, which prevailed in the last few years, was checked, and the additional quantity of locally produced meat marketed consisted mainly of fattened calves.

The total fish catch rose by 12 percent. The area of fish ponds was only slightly expanded, owing to water limitations, but real output went up 6 percent because of the higher average yield per unit of pond area. Producer prices moved up 2 percent. Sea fishing showed an increase of 26 percent in real terms, owing to the larger catch in distant waters. Direct price supports were doubled in 1963/64 to reach IL 2.5 million; the additional sum was intended to bring down the prices of pond fish to the consumer.

The output of orchards, including citrus, increased by 12 percent at constant prices, compared with 27 percent in 1962/63. The slower growth rate was due to lower citrus yields. Output of other fruit went up by over 38 percent; their prices receded by an average of 18 percent, and accordingly proceeds from all fruit declined by approximately 9 percent.

Citrus output increased by 3 percent in 1963/64, after having expanded by 42 percent the year before. Prices were 20 percent below their 1962/63 level. The steep decline in output value was due chiefly to frost damage, though it should be remembered that 1962/63 was a particularly good year for citrus from the aspect of both weather and prices. The frost damage was mainly reflected by an impairment of quality, while the number of tons harvested was 12 percent larger than in 1962/63. Because of the poorer quality of the fruit, a much larger proportion than usual was declared unfit for export in order to keep up the standard. Despite the smaller quantities shipped, prices obtained in foreign markets were also lower. This was due partly to the lower quality, but in the main to the larger supplies of citrus and deciduous fruit available in West European markets. The lower export price and the doubling of the proportion of the crop sold to industry caused the steep drop in the average producer price.

The output of other fruit expanded by 38 percent in real terms. The increase in output and quantities marketed encompassed almost all types of fruit, though at differing rates. The most prominent rise was in deciduous fruit—approximately 54 percent. In other varieties the increases were more moderate. Banana output moved down slightly owing to frost damage, which also affected

some subtropical varieties. The weight of the latter in total fruit output, however, is insignificant. The cold winter and other weather conditions led to a huge growth in certain fruit crops, especially plums, peaches, and apricots, as a result of which their prices to the consumer tumbled. Nevertheless some surpluses remained; these were partly destroyed and partly sold to industry. The cool spring delayed ripening, so that the supply of unstorable fruit lasted for a shorter period. The quantity of table grapes expanded by 43 percent, depressing their price by 28 percent. The olive crop was 47 percent larger than in 1962/63, all of it being marketed with Government assistance. As a result of the minimum price agreement covering certain types of fruit, subsidies to fruit farmers were three times larger than in 1962/63, reaching IL 3.8 million.

Table XI-5
CITRUS OUTPUT, BY ECONOMIC DESTINATION, 1963/64

Destination	Quantity ('000 tons)	Value at current prices (IL m.)	Percent increase or decrease (-) from 1962/63 to 1963/64 ^a		
			Value	Quantity ^a	Price
Direct export	454.3	141.3	-30.0	-9.5	-22.7
Industry	242.4	17.6	85.3	105.3	-9.7
Local consumption	113.6	21.2	-5.4	0.9	-6.2
Fruit destroyed	28.7	2.0			
Total	839.0	182.1	-22.2	-3.0	-19.7

^a Weighted according to destination.

SOURCE: Central Bureau of Statistics.

The output of field crops expanded by 30 percent in 1963/64, after moving down 4 percent the previous year. Most of the increase was in tobacco, grains, and cotton. Average prices fell off 1 percent, following a rise of 6.9 percent the year before.

Grain output increased by 150 percent, partly because of the extension of the cultivated area by 10 percent, but mainly because yields were appreciably larger as a result of the heavy rainfall and its even distribution following several years of drought. The excellent harvests caused a slight depression of consumer prices. But since a large part of the grain output was used as livestock feed, the price change was mainly reflected in the distribution of farm incomes.

The cotton crop was 16 percent larger, most of the rise being due to higher average yields. Price supports were increased by only IL 0.1 million, but the price received by the grower was 2.6 percent higher owing to an improvement in quality.

Sugar beet output was 3 percent above the 1962/63 level. Average output per dunam declined, the increase in production being entirely due to the

extension of the cultivated area. The area under sugar beet was enlarged after the raising of the minimum price by 6.7 percent. The unirrigated area under sugar beet was also expanded, especially in Arab villages.

The tobacco crop was six times larger than in 1962/63, when most of the seedlings were destroyed by pests before planting. The area sown with tobacco—25,000 dunams—was still below the 30–40,000 figure of recent years.

The groundnut crop was 28 percent smaller owing to the reduction of the cultivated area. Prices went up 4 percent as a result of a 50 percent increase in subsidies. The subsidy rate per unit of output was doubled in order to encourage the raising of this item, which has good export prospects. However, the subsidy was upped too late to expand production in 1963/64.

As to other industrial crops, output was appreciably bigger while prices fell. Melon output also increased, but in this case prices rose too.

The vegetable crop expanded by 12.4 percent, while potato output was down 2 percent. Acreage was enlarged by only 2 percent, but there was a sizeable increase in yields per dunam during the summer months. Poor weather in the autumn and winter seriously damaged the crop during these seasons. However, conditions improved in the spring and early summer, leading to a considerable increase in the annual output despite the smaller area cultivated. The heavy summer yields and the absence of pests aggravated the problem of summer surpluses. Excess supply increased by 50 percent; as in 1962/63 more than half consisted of tomatoes, the remainder being mainly cucumbers, dry onions, eggplant, and peppers. Surpluses accounted for about one-third of the total tomato crop, and in the case of cucumbers and onions—about one-fifth. Approximately a quarter of the oversupply was sold to industry—a similar proportion as in the previous year.

The increase in surpluses is primarily attributable to unforeseen fluctuations in crop yields brought on by weather conditions, but in no small measure it was also due to the failure to adapt production quotas to the volume of demand at a constant price level. If quotas are not exceeded, the planned surpluses may be expected to amount to some 5 to 10 percent of total production. A decline in output caused a potato shortage, making it necessary to import approximately 8 percent of the requirements. The planned potato area was smaller than in 1962/63, but the number of dunams actually sown was even less than the plan; as a result, the price to the farmer jumped approximately 30 percent.

The average producer price for all vegetables rose by 6 percent compared with 1962/63. Prices of commodities marketed on an organized basis, which account for nearly 80 percent of total vegetable output, averaged 5 percent higher during the year reviewed. The withdrawal of large surpluses from the market apparently helped to raise producer prices above the guaranteed minimum, despite the greater excess supply.

Table XI-6
OUTPUT OF AGRICULTURAL CAPITAL GOODS,^a 1962/63 AND 1963/64
 (IL million)

	Value at current prices		Percent increase or decrease (-)		
	1962/63	1963/64	Value	Quantity	Price ^b
Livestock	—	2.4			
Orchards	35.6	38.1	7.0	-0.1	7.1
Of which: Citrus	24.4	27.1	11.1	4.5	6.3
Other capital goods					
Irrigation networks	0.5	—	-100.0		
Afforestation	12.7	15.2	19.9	14.0	5.2
Land reclamation and conservation	10.2	10.2	0.5	-3.6	4.2
Drainage, pasture, misc.	3.1	4.2	22.0	14.7	6.4
Total	26.5	29.6	11.7	5.5	5.9
Grand total	62.1	70.1	12.9	6.1	6.4

^a Increase in the value of livestock, orchards, and other production assets originating in agriculture.

^b Imputed prices based on costs.

SOURCE: Central Bureau of Statistics.

3. INPUT

(a) *Changes in input*

The real increase in the input of materials and services (excluding labor, interest, and rent) reached 6.7 percent in 1963/64, compared with 2.6 percent in 1962/63. Labor input rose by an estimated 3 percent; the growth occurred mainly in hired help, the number of man-days invested by farm owners and their families being only slightly higher than in the previous year.¹ Labor input increased primarily in orchards, owing to the expansion of output and the maturing of young groves, and also in tobacco cultivation following a marked extension of the area planted. On the other hand, the number of man-days worked on field crops (other than industrial crops) was down 14 percent despite an increase in acreage and output. This development resulted from a

¹ The number of unpaid workers is estimated to have decreased by some 3 percent, but the number of man-days per unpaid worker increased. The total number of gainfully employed in agriculture did not change significantly. These data are based on manpower surveys conducted by the Central Bureau of Statistics and on estimates of standard 8-hour working days invested in agriculture. The method of calculating standard working days is described in the Appendix to the Bank of Israel Annual Reports for 1960 and 1963 (in Hebrew only).

change in the production program: the proportion of fodder, which is labor-intensive, decreased, while that of grains rose—a trend influenced by the rise in the cost of labor relative to that of capital and by the shortage of water for irrigation. The latter factor has an especially important bearing in years of ample rainfall, permitting a reduction of the irrigated area sown with fodder in favor of unirrigated land.

Table XI-7
INPUT OF MATERIALS AND SERVICES^a IN AGRICULTURE, BY SOURCE,
1962/63 AND 1963/64
(IL million)

Source	Value at current prices		Percent increase or decrease (-) from 1962/63 to 1963/64		
	1962/63 ^b	1963/64	Value	Quantity	Price
Purchases from other sectors					
Fodder (net of changes in stocks)	168.6	182.2	8.1	8.6	-0.5
Fertilizers	22.8	23.4	2.7	2.4	0.3
Seeds	5.2	4.2	-17.4	-10.2	-5.9
Pesticides and veterinary preparations	17.3	16.5	-4.4	-5.0	0.6
Water	45.2	39.4	-12.7	-13.0	0.3
Packing materials	42.1	46.3	9.8	9.5	0.3
Transportation	25.8	28.5	10.5	9.9	0.6
Spare parts, repairs, and small tools	23.2	31.5	35.7	33.0	2.0
Fuel and electricity	12.7	16.6	30.0	30.0	—
Services	10.4	9.6	-7.9	4.4	-11.8
Taxes	16.3	15.3	-5.9	-8.1	2.4
Miscellaneous	6.3	7.1	11.8	26.4	-11.5
Total	395.9	420.6	6.2	6.7	-0.4
Intermediate goods	138.0	140.2	1.6	3.6	-2.0
Depreciation^c	71.3	78.3	9.8	5.6	4.0
Total input	605.2	639.1	5.6	5.9	-0.3

^a Excluding labor, interest, and rent.

^b Revised figures.

^c Calculated on the basis of replacement values.

SOURCE: Central Bureau of Statistics.

(b) *Productivity*

Taking into consideration the real increase in the net capital stock, factor productivity—expressed by the ratio between the growth of the real product and the increase in the real input of capital and labor—was 13 percent greater in

1963/64 than in the previous year. Total productivity—reflected by the ratio between the increase in real total output and the increase in real total input—materials, services, capital, and labor—advanced 7 percent.¹ In 1962/63 factor productivity went up by an average of 9 percent, and total productivity by 5 percent. The rise during the year reviewed was partly due to natural factors, which helped to increase yields and expand the product, especially in respect of grains and deciduous fruit which together accounted for over 20 percent of total output. Changes in the composition of production were responsible for another part of the rise, and only the balance can be attributed to higher productivity in the various types of farming.

The data point to a more efficient utilization of purchased inputs and labor in livestock farming. Output here moved up 8 percent, while the input of purchased fodder and intermediate goods increased by less than 7 percent, and the labor input did not rise at all. This development is partly ascribable to internal structural changes—especially the larger weight of poultry farming and the higher capital input component (depreciation), which apparently resulted in a more efficient utilization of the other productive factors.

Table XI-8
WATER INPUT IN AGRICULTURE, 1958/59 TO 1963/64

	Unit	1958/59	1959/60	1960/61	1961/62	1962/63	1963/64
Irrigated area	Thousands of dunams	1,230	1,300	1,360	1,415	1,465	1,457
Quantity of water	Millions of m ³	990	1,060	1,025	1,139	1,150	1,000
Quantity of water per dunam of irrigated area	M ³	805	815	754	805	785	685
	Index	100	101	94	100	97	85
Rainy (+) or dry (-) year		—	—	+	—	—	+

SOURCE: Quantity of water and irrigated area—Central Bureau of Statistics.

¹ For detailed definitions and methods of calculation, see the Appendix to the Bank of Israel Report for 1964 (in Hebrew only). In computing productivity, national water projects and public development works have been conceptually excluded from the agricultural sector even though many of them must be regarded as investment in agriculture. If the capital outlays on national water projects serving agriculture and on the other development works are included, the rise in factor productivity during 1962/63 (for which final data are available) came to only 4.6 percent. The difference between the two figures reflects the fact that during the years referred to big investments were made in water projects which have not yet made their impact on agricultural production.

A similar trend is discernible in crops. Despite the higher output, outlay on pesticides decreased owing to the good summer weather and the cold winter, which reduced pest damage as compared with previous years.

Purchases of seeds were much smaller, apparently because of import substitution. On the other hand, the input of spare parts, tools, fuel, and electric power expanded appreciably because of the aforementioned tendency to increase capital intensity by mechanization.

The input of packing materials went up 9 percent, corresponding roughly to the increased output of fruit and vegetables, the main items packed. Actually, the rise was more moderate, owing to the decline in overseas shipments of citrus.

Water consumption contracted by 13 percent. Since the irrigated area was reduced by only 0.5 percent as compared with 1962/63, the water input per dunam of irrigated land also declined by 13 percent (see Table XI-9). During the year reviewed the National Water Carrier was put into operation for the first time, but it is working at only partial capacity. The additional water from this source, together with the lower consumption because of the abundant rainfall, made it possible to avert the overexploitation and further depletion

Table XI-9
CULTIVATED AREA,^a 1963/64

	Thousands of dunams	Percent of total cultivated area	Percent increase or decrease (-)	
			From 1962/63 to 1963/64	From 1958/59 to 1963/64
Unirrigated land^b				
Field crops	2,291	54.3	9.4	-1.0
Vegetables and potatoes	22	0.5	15.8	-29.4
Orchards	221	5.2	-2.6	-6.8
Miscellaneous ^c	230	5.5	12.6	88.5
Total	2,764	65.5	10.8	-3.7
Irrigated land				
Citrus	405	9.6	7.1	37.3
Other fruit	204	4.8	4.6	37.8
Field crops	468	11.1	-12.0	1.3
Vegetables and potatoes	231	5.5	2.2	15.5
Fish ponds	59	1.4	1.7	40.5
Miscellaneous	90	2.1	2.4	8.4
Total	1,457	34.5	-0.5	18.5
Grand total	4,221	100.0	6.3	3.0

^a Area sown.

^b Including partially irrigated land.

^c Including land being prepared for cultivation.

SOURCE: Central Bureau of Statistics.

of underground resources. The overpumping of such sources in recent years lowered the water table to a serious extent and, were it not for the additional quantities drawn from Lake Tiberias, might have increased the salinity of underground water, necessitating the reduction of the irrigated area.

The water tariff for agriculture was raised by less than 1 percent on an average, but it is not possible to determine to what extent this affected consumption during the year reviewed. Even after the upward revision of the tariff, the prices paid by the agricultural sector do not cover the costs involved. The difference is covered by a Government subsidy and by the higher rates charged nonfarm consumers (especially households). In the last few years there has been an increasing tendency to bring agricultural water prices more in line with the cost of exploitation and supply. This policy may help bring about a more efficient utilization of this input and its optimum allocation. However, it seems that this objective can be attained in agriculture, which accounts for some 80 percent of the country's total water consumption, only if the price is really brought in line with costs. During the spring and summer months of 1963/64, the agricultural settlements for the most part utilized their water quotas, and to the extent that the quotas were not utilized, it was due to the smaller quantity required during the winter. The reduced consumption per dunam of irrigated area during the year reviewed, without any decline in output, was made possible by the heavy winter rains and by a partial switch to irrigated crops requiring less water. In fruit farming the reduction was made possible also by improved irrigation methods. At the same time, the area under vegetables (in particular winter varieties) was extended, bringing down the average consumption per dunam of vegetables. The increase in the proportion of vegetables and industrial crops raised by Arab farmers also helped depress the average, since they still use less water per dunam than the Jewish sector. To sum up, despite the smaller water input, the output of irrigated crops did not decline because of the abundant rainfall, changes in the crop program including its seasonal distribution, and technical advances in irrigation methods.

(c) *Prices*

The level of purchased input prices (excluding labor) edged down somewhat (see Table XI-7). There were no striking changes in the different components; none of them became appreciably dearer, while prices of imported seeds fell by 6 percent and service prices by 8 percent. There was also a slight decrease in average fodder prices owing to the bumper grain crop and the difficulties of storing harvested grain.

4. INCOMES

(a) *Aggregate farm income*

Income originating in agriculture increased by some IL 63 million in 1963/64, compared with IL 126 million in the previous year, and totalled IL 676 million. The growth rate was 10 percent in 1963/64, compared with 26 percent in 1962/63, 8 percent in 1961/62, and no change during the years 1958/59 to 1959/60. The increase in the net agricultural product reached 19 percent, as against some 11 percent in 1962/63. But whereas in 1962/63 changes in output and input prices led to an improvement in agriculture's "terms of trade", enlarging income by some 15 percent, an opposite trend prevailed in 1963/64: changes in input and output prices worsened the sector's "terms of trade", reducing income by approximately 8 percent. Since drought compensation payments were IL 10 million smaller, aggregate farm income rose by only IL 53 million, or about 8 percent (compared with 26 percent in 1962/63), to stand at IL 678 million.

Price supports were expanded by IL 17 million, or about 16 percent, and reached IL 124 million. This constituted approximately 18 percent of total income from agriculture in 1963/64, as compared with some 17 percent in 1962/63 and approximately 16 percent, in 1961/62; during the last two years price supports accounted for nearly 25 percent of aggregate net income of farm owners.

(b) *Factor shares of income*

Average hourly wages in agriculture were some 12 percent higher during the year reviewed.¹ Since the input of hired labor was slightly larger, the increase in the sector's wage bill reached 14–16 percent, compared with about 18 percent in 1962/63, and totalled IL 150 million.²

Interest and rent payments rose by approximately IL 4 million during the year. The average rate of interest on the sector's institutional liabilities apparently went up somewhat owing to a change in the composition of the liabilities—an increase in the proportion of bank credit, which bears a higher rate of interest than that from other institutional sources.

Net of expenditure on wages, interest, and rent, the farm owners' net income from agriculture expanded by about IL 28 million, or only 6 percent, compared with 31 percent in 1962/63, and reached IL 487 million. If we take into account a rise of some 3 percent in the number of man-days invested by farmers and members of their families, average income per man-day worked in agriculture by farm owners and family members went up by approximately 3 percent, compared with nearly 36 percent in 1962/63.

¹ During the calendar year 1964 the increase was 14.5 percent.

² For an explanation of the difference between the Bank of Israel estimates and those of the Central Bureau of Statistics, see note ° to Table XI-1.

Table XI-10
AGRICULTURAL SUBSIDIES, 1962/63 AND 1963/64
 (IL million)

Commodity	1962/63 ^a	1963/64	Percent increase or decrease (-)		
			Subsidies	Physical output	Subsidy per unit of output
Eggs	20.2	27.0	33.7	14.5	16.8
Poultry	4.6	4.8	4.3	11.3	-6.3
Cow's milk	26.7	31.8	19.1	3.3	15.3
Beef	4.1	3.3	-19.5	14.7	-29.2
Ewe's milk	0.2	0.4	100.0	-0.3	100.6
Cotton	10.6	10.7	0.9	16.0	-13.0
Vegetables and potatoes	14.6	11.0	-24.7	10.1	-31.6
Groundnuts	0.4	0.6	50.0	-28.4	109.5
Fruit	1.3	3.8	192.3	38.2	111.5
Fish	0.6	0.4	-33.3	26.1	-47.2
Tobacco	1.6	1.5	-6.2	515.4	55.7
Flowers	0.1	0.1	—		
Oranges (Valencia)	0.1	0.2	-80.0	28.6	-84.4
Carp	0.7	2.1	200.0	6.5	166.4
Subsidies by the Jewish Agency Settlement Dept.	1.6	1.0	-37.5		
Total subsidies on output	88.3	98.7	11.8	12.6	-0.7
Fodder ^b	—	13.7			
Fertilizer and water	5.7	9.2	61.4		
Total factor subsidies	5.7	22.9	301.7		
Frost and drought compensation payments	12.7	2.5	-80.3		
Total subsidies	106.7	124.1	16.3		

^a Revised figures.

^b Difference between grain prices in equalization funds.

SOURCE: Output—Central Bureau of Statistics.

Subsidies—Ministry of Agriculture, Report of Minister of Agriculture for 1965/66; Ministry of Finance, Reports of Accountant General for the Years 1963 to 1965; Jewish Agency, Report on Income and Expenses for the Years 1963 to 1965.

Table XI-11
PERCENTAGE INCREASE IN FARM INCOME COMPARED WITH
AVERAGE INCOME IN ENTIRE ECONOMY, 1958/59 TO 1963/64

	1958/59 to 1959/60	1959/60 to 1960/61	1960/61 to 1961/62	1961/62 to 1962/63	1962/63 to 1963/64	1958/59 to 1963/64
(1) Total farm income at producer prices	4.7	15.4	8.2	27.7	7.4	79.6
(2) Income of farm owners from agriculture ^a	7.4	20.6	9.1	32.5	8.5	93.8
(3) Average farm income per gainful nonhired agricultural worker	4.9	18.1	10.5	35.8	6.2	96.7
(4) Average income per gainfully employed in the economy as a whole ^b	7.3	11.8	14.9	17.2	10.2	78.0

^a Total income from agriculture, after deducting paid wage labor, interest, and rent.

^b According to calendar years.

SOURCE: (1) Central Bureau of Statistics, *National Income Originating in Agriculture in Israel, 1962 to 1963*.

(1) and (2) Ibid.; wages, interest, and rent—Annual Reports of the Bank of Israel.

(3) Number of farm owners—Bank of Israel estimates.

(4) Annual Reports of the Bank of Israel.

These sharp annual fluctuations in farm-income growth rates are characteristic of other countries too, being in large measure due to the influence of weather conditions. One should therefore evaluate developments in this sector over a period of several years (see Table XI-11).

In 1963/64 total farm income was 94 percent higher than in 1958/59. Since the labor input of farm owners and family members was approximately 3 percent lower in 1963/64 than in 1958/59, average income per man-day worked in agriculture by farm owners and their families rose over this period by 97 percent. During the same period average national income per gainfully employed person in the economy as a whole went up by 78 percent. Nevertheless, the average income level in agriculture in 1963/64 remained lower than in other sectors. This disparity in average income levels is primarily attributable to the low incomes of Arab farmers and of Jewish farmers in young settlements. The difference was relatively smaller in 1963/64 than in 1958/59.

5. CAPITAL AND FINANCING

(a) *Investment in agriculture*

Gross investment in agriculture and public development projects connected with this sector declined in 1963/64 by IL 20.5 million; this represents a decrease of 7 percent at current prices and 12 percent at constant prices (see Table XI-12). The lower figure was due to the smaller volume of work on water

Table XI-12

ESTIMATED GROSS INVESTMENT IN AGRICULTURE, 1962/63 AND 1963/64^a
(IL million)

	Value at current prices		Percent increase or decrease (-) from 1962/63 to 1963/64		
	1962/63	1963/64	Value	Quantity	Price
Investment in farms					
Orchards	36.3	38.1	5.0	-1.9	7.1
Installation of irrigation networks	17.0	18.5	8.8	1.8	6.9
Livestock and farm buildings	18.6	21.7	16.7	9.7	6.4
Livestock	0.2	2.4	1,100.0	1,000.0	9.1
Farm buildings	18.4	19.3	4.9	-1.1	6.0
Machinery and equipment	42.7	53.9	26.2	23.6	2.1
Total	114.6	132.2	15.4	10.0	4.8
Investment in public development projects					
Water projects	124.3	83.8	-32.6	-35.1	3.8
Afforestation, land reclamation, drainage, experimental farms, natural pasture, etc.	25.2	27.6	9.5	5.2	4.2
Total	149.5	111.4	-25.5	-28.3	3.9
Grand total	264.1	243.6	-7.2	-11.7	4.4

^a The differences between data cited here and those in Table XI-6 are due to the use of different sources.

SOURCE: Central Bureau of Statistics.

projects connected with the National Water Carrier. The first stage of the Carrier was completed in the winter of 1963/64 and began to operate in the spring. Outlay on the Carrier was down IL 40 million during the year reviewed, a real decrease of 35.1 percent. Investment in farms expanded by 10 percent in real terms. The biggest increase was in machinery and equipment—24 percent at constant prices. Investment in livestock was up IL 2.2 million, after tapering off in 1962/63; this represents a real increase of 1 percent in livestock inventory. Most of the other capital items have shown a marked downward trend in real terms for some years past; this continued in 1963/64, though expenditure on irrigation networks increased by 2 percent at constant prices. These investments resulted in a real growth of 5.8 percent in the gross stock of productive farm assets (see Table XI-13).

Table
STOCK OF CAPITAL ASSETS

	IL million, at current prices				Gross stock of capital		
					Percent increase		
	1961	1962	1963	1964	1962		
				Value	Quantity	Price	
Fixed assets							
Orchards	532.5	619.8	703.9	792.0	16.4	6.2	9.6
Farm buildings, irrigation networks, and local water projects	576.3	651.3	686.1	751.4	13.0	5.1	7.5
Machinery and equipment	182.8	238.3	270.2	303.7	30.4	13.4	15.4
Livestock	222.6	232.2	245.8	271.7	4.3	4.3	—
Total	1,514.2	1,741.6	1,906.0	2,118.8	15.0	6.3	8.2
Currents assets							
Current inventories ^b	212.7	237.9	292.5	310.3	11.8	6.7	4.8
Grand total	1,726.9	1,979.5	2,198.5	2,429.1	14.6	6.5	7.6

^a Excluding land and financial assets (cash, deposits, securities, rights, receivables, etc.).

^b Estimate for the end of the agricultural year, whereas other data refer to calendar years.

SOURCE: Fixed assets—A. L. Gaathon, *Capital Stock, Employment and Output in Israel, 1950–1959*, Jerusalem, 1961 (revised data).

Outlay on public works (excluding water projects) showed a real rise of 5 percent as compared with 1962/63. This was due to a 13 percent increase in afforestation.

(b) *Institutional liabilities*

The outstanding institutional farm debt increased by IL 136 million, or nearly 11 percent, during the year reviewed, compared with IL 92 million, or some 8 percent, the year before (see Table XI-14). Long-term indebtedness grew by IL 105 million, or some 10 percent—about the same as in 1963. Short-term liabilities expanded by IL 31 million, or 17 percent, after having contracted by IL 5.7 million (about 2.9 percent) in 1963.

The main item of institutional indebtedness is that owed to the Jewish Agency, which constituted 64 percent of total institutional liabilities during the year reviewed. The incremental debt in 1964 includes linkage increments (arising

N AGRICULTURE,^a 1961-64

Assets						Net stock of capital assets		
Over previous year						IL m. at current prices	Percent real increase over previous year	
1963			1964				1964	1963	1964
Value	Quantity	Price	Value	Quantity	Price			
13.6	5.6	7.5	12.5	5.1	7.1	575.2	3.5	2.7
5.3	1.5	3.7	9.5	4.2	5.1	475.1	2.0	1.3
13.4	8.0	4.9	12.4	10.1	2.1	191.6	8.6	11.2
5.9	0.1	5.8	10.5	0.9	9.5	271.7	0.1	0.9
9.4	3.5	5.7	11.2	4.7	6.2	1,513.6	2.7	2.84
22.9	9.5	12.3	6.1	11.9	-5.2	310.3	9.5	11.9
11.1	4.4	6.3	10.5	5.8	4.4	1,823.9	4.0	4.5

Current inventories—For 1962: M. Hayat, *Estimated Current Capital Stock and Demand for Working Capital in Israeli Agriculture in 1963/64*, Ministry of Agriculture, November 1963; for 1961, 1963, and 1964: Bank of Israel calculations.

mainly from the devaluation of 1962), which totalled IL 16.8 million compared with IL 21.8 million in 1963.¹

These changes in agriculture's debt position seem to constitute an improvement in relation to the size and structure of the net capital stock. The ratio between institutional debt and assets went up from 1: 1.34 in 1963 to 1: 1.32 in 1964, but since most of the rise in the value of fixed assets (IL 113 million out of

¹ No great significance should be attached to data on linkage increments, since it is highly probable that additional amounts have not yet been recorded or a final decision taken as to whether they must be paid. The decline in linkage increments in 1964 does not reflect the sum actually repaid, for some of these increments were added to the ordinary debt balances. The figure on linkage increments represents a lower limit, since data on the size of such increments are not available for a considerable proportion of long-term credit from financial institutions. As these institutions have generally preferred to link their loans to the consumer price index, the figure cited is presumably a reasonably close estimate.

Tab
OUTSTANDING INSTITUTIONAL
(I)

	1961	1962		1963	
		Incl. linkage increments ^a	Excl. linkage increments ^a	Incl. linkage increments ^a	Excl. linkage increments ^a
Long-term^b	906.4	965.3	965.3	1,045.2	1,063.4
(1) To the Jewish Agency ^c To financial institutions ^d	676.5	744.3	744.3	810.2	810.2
(2) Of which:					
To Israel Bank of Agriculture	137.6	138.6	138.6	140.0	158.2
(3) Of which:					
From own resources	77.8	76.6	76.6	75.6	84.9
(4) From Govt. deposits	59.8	62.0	62.0	64.4	73.3
(5) To agricultural funds and agricultural financial institutions ^e	56.4	58.9	..	59.7	..
(6) To other financial institutions	3.8	2.0	..	5.1	..
(7) To banks—from Government deposits	7.5 ^a	4.1	..	11.3	..
(8) To other institutions ^f	24.6 ^a	17.4	..	18.9	..
Short-term^g	169.7	186.9	190.7	181.4	185.0
(9) To banks—from own resources ^h	157.2	172.8	176.6	166.6	170.2
(10) To banks—from Government deposits	12.5	14.1	14.1	14.8	14.8
Total institutional debt	1,076.1	1,152.2	1,156.0ⁱ	1,226.6	1,248.4^j

NOTE: The sign (..) indicates that no data are available.

^a Revised data.

^b Including some short-term credit which cannot be separated because of insufficient data.

^c Assets of the Settlement Department of the Jewish Agency in the agricultural sector (loans and investments of the Jewish Agency, net of its direct investments). A large part of this sum does not constitute an actual liability, but is a potential debt pending the signing of contracts with the settlers for the consolidation of their farms. Contracts have already been signed in respect of IL 206 million. This sum includes linkage increments, since the assets transferred to the settlers were revalued prior to the signing of the contracts. Consequently, these liabilities do not necessarily reflect the original values plus accrued interest. On the other hand, the figure for total assets does not include all linkage increments due up to the end of the year in question; these will be debited to the settlers when they sign their consolidation contracts.

^d As defined in Chapter XVII, "Financial Institutions".

^e Some of the financial resources of these institutions (especially the funds of the settlement movements) constitute equity capital of the agricultural sector. This sum has not been deducted from the balance of these institutions' liabilities to agriculture.

^f Gmud Ltd., provident funds, and insurance companies.

XI-14

FARM DEBT, 1961-64
million)

1964		Increase or decrease (-) as against previous year							
Incl. linkage increments ^a	Excl. linkage increments ^a	Excluding linkage increments						Incl. linkage increments	
		1962		1963		1964		1964	
		IL m.	%	IL m.	%	IL m.	%	IL m.	%
1,154.2	1,168.4	58.9	6.4	79.9	3.3	109.0	10.4	105.0	9.9
883.4	883.4	67.8	10.0	65.9	8.8	73.2	9.0	73.2	9.0
158.9	173.1	1.0	0.7	1.4	1.0	18.9	13.5	14.9	9.4
97.1	106.1	-1.2	-1.6	-1.0	-1.4	21.5	28.4	21.2	25.0
61.8	67.0	2.2	3.7	2.4	3.9	-2.6	-4.0	-6.3	-8.6
70.9	..	2.5	4.4	0.8	1.4	11.2	18.8	..	..
7.3	..	-1.8	-47.4	3.1	155.0	2.2	43.1	..	..
10.2	..	-3.4	-45.3	7.2	176.0	-1.1	-9.7	..	..
23.5 ^a	..	-7.2	-29.3	1.5	8.6	4.6	24.3	..	..
213.0	215.6	17.2	10.1	-5.5	-2.9	31.6	17.4	30.6	16.5
193.8	196.4	15.6	9.9	-6.2	-4.5	27.2	16.3	26.2	15.4
19.2 ¹	19.2 ¹	1.6	12.8	0.7	5.0	4.4	29.7	4.4	29.1
1,367.2	1,384.0 ¹	76.1	7.1	74.4	6.5	140.6	11.5	135.6	10.9

^a Including some medium- and long-term credit which cannot be separated because of insufficient data. On the other hand, short-term credit from the Israel Bank of Agriculture and from Government deposits is included with long-term credit.

^b Including loans from Government deposits for payment of income tax debts to the amount of IL 3.7 million in 1961, IL 3.0 million in 1962, IL 1.3 million in 1963, and IL 1.5 million in 1964. Also included are Bank of Israel rediscounts totalling IL 5.1 million in 1961, IL 0.8 million in 1962, IL 0.4 million in 1963, and IL 0.9 million in 1964.

¹ Including IL 5 million in credit from Government deposits for citriculture.

² Obtained by adding together amounts including linkage increments and amounts excluding linkage increments in columns where the sign (..) appears.

SOURCE: Line (1)—Reports of the Jewish Agency and the Zionist Organization.

Lines (2), (3), (4)—Bank of Israel.

Lines (5) and (6)—Chapter XVII, "Financial Institutions".

Line (7)—Bank of Israel; the method of calculation is described in the Appendix to this Report (in Hebrew only).

Line (8)—Bank of Israel.

Line (9)—Bank of Israel.

Line (10)—Ministry of Agriculture.

IL 130 million) stemmed from the appreciation of the stock of such assets in existence at the beginning of the year, it emerges that the additional finance capital made available by institutions far exceeded the amount required for new investments in fixed assets and for expanding current inventories (see Table XI-15).¹

There was a relative increase in the share of new assets appropriately financed as far as maturities and interest rates are concerned. This development enabled the sector to reduce its other liabilities, which are more onerous from these two aspects.

(c) *Institutional financing*

The net increment of institutional farm credit, excluding linkage increments,² reached approximately IL 141 million, or 11.5 percent, as against IL 74 million, or 6.5 percent, in 1963.

The additional financing provided in 1964 by the Jewish Agency Settlement Department amounted to IL 73 million—9 percent more than in 1963. Net credit from the Israel Bank of Agriculture expanded by some IL 19 million, adding some 13.5 percent to the outstanding balance of loans from this source (excluding linkage increments).

Other institutions, which provide long-term credit in the main, added about IL 17 million net, or approximately 18 percent. Total borrowings from institutions supplying mainly long-term finance capital expanded by IL 109 million, or 10.4 percent.

Incremental short-term bank credit, excluding that granted from Government deposits, reached IL 27 million, or 16 percent (inclusive of such credit, the rise was 17.4 percent). A further IL 15.7 million, or 13 percent, was obtained in the form of directed credit (see Table XI-16), the increase being made possible by a growth of IL 16.7 million (18 percent) in the volume of credit not subject to liquidity regulations. Credit granted from Government and bank resources through joint financing funds contracted somewhat. Besides the financing of production through directed credits, IL 10 million was given in special credits to citrus growers in 1964—half of the sum from Government deposits and the other half from bank resources within the ordinary liquidity framework. The increase in the volume of nondirected farm credit from banking institution resources totalled IL 6.2 million, or about 10 percent.

The destination of directed credit underwent a marked change (see Table XI-17). The proportion granted for field and garden crops declined from 41.3 percent of the total to 35.8 percent, owing to the smaller amount extended

¹ The ratio between short-term debt and current assets rose from 1:1.58 to 1:1.47; the ratio between long-term debt and fixed assets remained unchanged at 1:1.30.

² Increments arising from linkage to the consumer price index are paid at the end of every year, or together with the annual interest payments.

PARTIAL CAPITAL ACCOUNT OF AGRICULTURE, 1961-64

(IL million)

End of period	1961 ^a	1962 ^a	1963 ^a	Percent increase or decrease (-)			
				From 1961 to 1962	From 1962 to 1963	From 1963 to 1964	
Assets							
(productive, net of depreciation and at replacement prices)							
Fixed assets							
Orchards, farm buildings, irrigation networks, and local water projects	797.4	892.0	968.9	1,050.3	11.9	8.6	8.4
Machinery, equipment, and livestock	334.6	387.4	414.5	463.3	15.8	7.0	11.8
Current assets							
Current inventories	212.7	237.9	292.5	310.3	11.8	22.9	6.1
Subtotal	1,344.7	1,517.3	1,675.9	1,823.9	12.8	10.5	8.8
Other assets ^b	..	..	..	..	..	..	..
Liabilities^c							
Long-term institutional debt	906.4	965.3	1,063.4	1,168.4	6.5	10.2	9.9
Short-term institutional debt	169.7	190.7	185.0	215.6	12.4	-3.0	16.5
Total institutional debt	1,076.1	1,156.0	1,284.4	1,384.0	7.4	8.0	10.9
Other liabilities ^d	..	..	..	..	..	..	..
Equity capital	..	..	..	..	..	..	..
Balance sheet ratios							
Long-term institutional debt to:							
Identified fixed assets	1:1.25	1:1.33	1:1.30	1:1.30			
All identified assets	1:1.48	1:1.57	1:1.58	1:1.56			
Short-term institutional debt to:							
Current assets	1:1.25	1:1.25	1:1.58	1:1.44			
All identified assets	1:7.92	1:7.96	1:9.06	1:8.46			
Total institutional debt to all identified assets	1:1.25	1:1.31	1:1.34	1:1.32			

^a Revised figures.^b Private land, land amelioration, and financial assets (cash, deposits, receivables, rights, shares etc.).^c Including linkage increments totalling IL 3.8 million in 1962, IL 21.8 million in 1963, and IL 16.8 million in 1964.^d Supplier credit, sundry creditors, and other noninstitutional credit.

SOURCE: Assets—Table XI-13; institutional debt—Table XI-14.

OUTSTANDING BALANCE OF SHORT-TERM

(IL

	1961 ^b		1962 ^b		1963 ^b	
	End of year	Annual average ^c	End of year	Annual average	End of year	Annual average
(1) Directed credit (exemptions from liquidity regulations and Bank of Israel rediscounts) ^d	87.3	77.2	102.2	85.1	92.5	80.4
(2) From banks' own resources (not exempted from liquidity regulations) ^e	10.0 ^f	10.0 ^f	10.9 ^f	10.5 ^f	11.4	11.1
(3) From Govt. deposits earmarked for working capital credits ^g	12.5	12.5	14.1	13.3	14.8	14.5
(4) Total credit under agricultural production financing program ^h	109.8	99.7	127.2	108.9	118.7	106.0
(5) Credit under joint fund for citriculture ⁱ	..	..	..	..	..	..
(6) Other credit from banks' own resources	61.5	56.5	61.0	60.3	64.3	60.2
(7) Total short-term bank credit	171.3	156.2	188.2	169.2	183.0	166.2
(8) Of which: From banks' own resources subject to the liquidity requirements ^j	71.5	66.5	71.9	70.8	75.7	71.3

^a Balances do not include linkage increments. Short-term credit granted by the Israel Bank of Agriculture and listed in Table XI-4 has also been excluded, except for some IL 1.5 million which is not subject to the liquidity requirements and which has been included under directed credit.

^b Revised figures.

^c The calculation of annual averages is explained in the Appendix to this Report (in Hebrew only).

^d Including the Israel Bank of Agriculture.

^e Participation of banks (other than the Israel Bank of Agriculture) in joint funds with the Government and Jewish Agency Settlement Department for granting working capital loans within the framework of the liquidity regulations.

^f Estimate.

BANK CREDIT TO AGRICULTURE,^a 1961-64

million)

1964		Percent increase or decrease (-) as against previous year											
End of year	Annual average	End of year						Annual average					
		1962		1963		1964		1962		1963		1964	
		IL m.	%	IL m.	%	IL m.	%	IL m.	%	IL m.	%	IL m.	%
109.2	90.1	14.9	17.1	-9.7	-9.5	16.7	18.1	17.9	10.2	-4.7	-5.5	9.7	12.1
11.0	11.2	0.9	9.0	0.5	4.6	-0.4	-3.5	0.5	5.0	0.6	5.7	0.1	0.1
14.2	14.3	1.6	12.8	0.7	5.0	-0.6	-4.1	0.8	6.4	1.2	9.0	-0.2	-1.4
134.4	115.6	17.4	15.8	-8.5	-6.7	15.7	13.2	9.2	9.2	-2.9	-2.7	9.6	9.1
10.0	4.6	..	..	..	..	10.0	..	..	..	..	..	4.6	..
70.5	71.3	-0.5	-0.8	3.3	5.4	6.2	9.6	3.8	6.7	-0.1	-0.2	11.1	18.4
214.9	191.5	16.9	9.9	-5.2	-2.8	31.9	17.4	13.0	8.3	-3.0	-1.8	25.3	15.2
86.5	84.8	0.4	0.6	3.8	5.3	10.8	14.3	4.3	6.5	0.5	0.7	13.5	18.9

^a The data have been revised following the receipt of more detailed reports.

^b Joint program of the Bank of Israel and the Ministry of Agriculture.

^c Joint fund financed in equal measure by the Government and by the banks.

^d Line (2) plus the participation of banks in the joint fund for financing citriculture (see note ¹), plus line (6).

SOURCE: Line (1)—Bank of Israel.

Line (2)—Estimate based on Ministry of Agriculture data.

Line (3)—Table XI-14, line 10.

Line (5)—Citrus Marketing Board.

Line (6)—Bank of Israel.

Table XI-17

AVERAGE ANNUAL BALANCE OF DIRECTED CREDIT,^a BY DESTINATION, 1963-64

Destination	1963		1964		Increase or decrease (-) from 1963 to 1964	
	IL m.	%	IL m.	%	IL m.	%
Field crops and garden plants ^b	43.8	41.3	41.4	35.8	-2.4	-5.5
Citrus	9.0	8.5	12.3	10.6	3.3	36.7
Livestock, livestock products, and fodder ^c	11.4	10.8	13.2	11.4	1.8	15.7
Other inventories and miscellaneous ^d	5.1	4.8	6.1	5.3	1.0	19.6
Undefined ^e	36.7	34.6	42.6	36.9	5.9	16.1
Total	106.0	100.0	115.6	100.0	9.6	9.1

^a The method of calculating the average outstanding balance of directed credit is explained in the Appendix (in Hebrew only). For a definition of directed credit to agriculture, see Table XI-16.

^b Credit for cotton, unirrigated crops, groundnuts, potatoes, tobacco, sugar beet, exportable vegetables, and other agricultural exports.

^c Credit for imports of fodder, local fodder cultivation, production of alfalfa meal, livestock farming (cattle, sheep, and poultry), imports of poultry products, imports of breeding materials, and credit to fisheries.

^d Credit for canned foodstuffs (fruit, vegetables, and fish), for the production of alcohol and wine, and for miscellaneous items.

^e Credit to purchasing organizations, companies, farms, and individuals, for the production and storage of seeds, to victims of drought, credit under the various funds, etc.

to cotton and tobacco growers because of the reduction of stocks. On the other hand, the proportion granted for unspecified purposes and to citrus growers increased, the weight of the former going up from 34.6 percent of total directed farm credit to 36.9 percent. In recent years there has been a rising trend in this type of credit, which is extended to purchasing organizations, companies, farms, funds, etc. for virtually all their finance requirements but primarily the purchase of animal feed and other raw materials.

A further indicator of changes in agriculture's financial situation is the cash surplus from farm transactions (see Table XI-18). This figure closely approximates the farmers' cash position on business account, though it represents an annual balance and hence gives no picture of seasonal fluctuations. During the year reviewed the identified cash surplus increased by IL 85 million.

Partial data on additional sources of farm credit are reflected in the operations of agricultural purchasing cooperatives. Supplier credit to these organizations was 15 percent larger in 1963/64, reaching IL 136 million. Since approximately 70 percent of the purchases consisted of agricultural raw materials, it can be assumed that nearly IL 100 million of the total sum was intended for the farm sector. Such credit is normally given at bank rates.

Table XI-18

IDENTIFIED CASH SURPLUS IN AGRICULTURE'S BUSINESS ACCOUNT, 1963-64

(IL million)

	1963 ^a	1964 ^a	Increase or decrease (-) from 1963 to 1964	
			IL m.	%
(1) Surplus of receipts over payments on current account ^b	403.1	395.7	-7.4	-1.8
(2) Net increment of institutional credit	74.4	140.6	66.2	89.0
(3) Purchases of capital assets (incl. increase in current inventories) ^c	128.4	102.3	-26.1	-20.3
(4) Cash surplus ^d (1) + (2) - (3)	349.1	434.0	84.9	24.3

^a Data on credit refer to calendar years, while other data refer to agricultural years; hence there is a certain downward bias in the cash surplus figures for calendar years. Data for 1963 have been revised.

^b Receipts (sales and drought compensation) less payments (purchased input, wages, interest, and rent). Most operations on both the receipts and payments side are partly financed by credit, but it may be assumed that net changes in such credit do not increase from year to year.

^c Gross investment in farms less output of capital assets (exclusive of public development projects). This too is partly financed by credit, but again it can be assumed that relative changes from year to year are not significant.

^d This surplus represents the cash balances of farmers available for allocation to depreciation funds, for saving, consumption, and other purposes, after financing all business requirements, on the assumption of the constancy of net financing from other sources.

SOURCE: Tables XI-1, XI-14, and XI-15.