CHAPTER XIII

AGRICULTURE

1. MAIN DEVELOPMENTS

Real net agricultural product increased rapidly in 1974/75[1] similar to the previous year (see Table XIII-1). In 1973/74 the rapid increase in product was due to very favorable weather conditions and a substantial growth in livestock farming output. In 1974/75 the fast real growth in product was repeated, although only partially as output increase in livestock farming slowed because of expansion limitations and production quotas. This development is mainly due to high growth in crop farming output, especially in citrus fruits, and a slowdown in inputs from agriculture and other sectors of the economy.

Some of the factors influencing the change in agricultural product in 1974/75 were different from those noted in the last five-year period. They are:

(a) A slowdown in the expansion of livestock farming, following a rapid growth which was noticed since 1970/71 (see Table XIII-8 and the discussion on "secondary branches" below). This slowdown was due to a relatively moderate increase in poultry output and a decline in the sale of beef.

(b) Citrus exports rose significantly this year following a slowdown trend noticed in previous years.

(c) The marketing volume in crop farming for private consumption was up 10 percent. This increase was achieved while relative output prices remained stable, and in spite of the real decline in income and the moderate population growth. In previous years local per capita demand for crop output increased at a modest rate because of low income elasticity.

1. The 1974/75 agricultural year began in October 1974 and ended in September 1975.

On the other hand, some of the prevailing trends of the last five-year period continued this year:

(a) The rapid increase in productivity of agriculture[2] continued and even accelerated. This explains to a great extent the moderate growth in the purchase of inputs from other economic branches;

(b) Export of non-citrus crop output continued its rapid increase, in spite of drought damages to industrial crops (cotton);

(c) Growth in milk production continued and even accelerated. It should be noted that this expansion occurred with the dollar at a higher rate[3] of exchange (see Table XIII-2)

Table XIII-1
CURRENT ACCOUNT OF AGRICULTURE, 1973/74 AND 1974/75
(IL million, at current prices)

	Value		Annual increase or decrease (-)				
			Average	Percent change in quantity		Percent change in price	
	1973/74[a]	1974/75	1969/70–1973/74[a]	1973/74[a]	1974/75	1973/74[a]	1974/75
Total output at producer, prices	5,506.3	8,650.8	6.1	6.9	6.2	37.4	47.9
Less: agricultural intermediates	519.2	702.6	5.5	11.5	-1.5	41.4	37.4
Agricultural output at producer prices	4,987.1	7,948.2	6.1	6.4	7.0	37.0	48.9
Less: subsidies on output	344.3	662.2	5.7	6.6	9.5	40.5	75.6
Agricultural output at market prices	4,642.8	7,286.0	6.2	6.4	6.9	36.7	46.9
Less: purchased input	2,142.4	3,685.8	6.1	2.1	2.8	43.9	67.4
Gross agricultural product at market prices	2,500.4	3,600.2	6.5	10.8	10.8	31.2	30.5
Less: depreciation	379.5	591.2	6.6	4.8	6.1	33.1	46.8
Net agricultural product at market prices	2,120.9	3,009.0	6.3	11.0	1.1	39.9	27.7
Plus: subsidies on output	344.3	602.2	5.7	6.6	9.5	40.5	75.6
Net agricultural product at producer prices	2,465.2	3,671.2	6.3	11.0	10.9	31.4	34.3
			Percent change in value				
Net agricultural product at producer prices	2,465.2	3,671.2	48.9				
Plus: drought and war compensation	50.4	26.6	-47.2				
Total income from agriculture	2,515.6	3,697.8	47.0				
Less: interest and rent	200.0	350.0	75.0				
Less: wages of hired labor	507.0	710.0	40.0				
Income of farm owners from agriculture	1,808.6	2,637.8	45.9				

[a] Revised figures.
NOTE: The rates of change were calculated from unrounded figures.
SOURCE: The Central Bureau of Statistics.

2. Because of a large sampling error in measuring working hours in the agricultural sector at a point of time, plus the significant influence of weather conditions, one should be careful in trying to arrive at an exact calculation of productivity in a given year. The various indicators for productivity, especially the growth in product despite the drought and the growth in purchased inputs at a lower rate than output growth, and the drop in working hours (as measured in manpower surveys) - all point to continued rapid growth in productivity. A detailed discussion of productivity will appear in an appendix to this report.

3. For the appropriate definitions of the rate of the dollar for milk production see notes for Table XIII-2.

and at a higher growth rate than growth in demand and thus part of the output was directed in unplanned stock.

The large increase in the agricultural product in the years 1973/74 and 1974/75 stands out against the slowdown in national economic growth in 1974 and the stagnation in 1975. The effect of the war, the curbing of final demands by the government, and the recession in industrialized countries - factors which influenced product growth in these last two years - hardly affected the agricultural sector. In 1973/74 agriculture was only slightly affected by the war; in 1974/75 the rapid growth in agricultural exports continued in spite of the recession in Europe; sales to private consumption increased at a rapid rate while stability of relative prices was maintained. Government policy encouraged continued expansion of production in livestock and crop farming, and even of products not intended for export. This expansion was reflected in a continued real growth of agricultural investments. There is no satisfactory explanation at present for some of the described developments: the increase in sales to private consumption, which occurred while relative prices were maintained, is in contrast with the accepted expectations; although demand for agricultural product is not affected much by a decline in income, this does not explain the rapid growth in consumption which actually took place (Table XIII-4). Increase in non-citrus export is also somewhat surprising. This export includes products which are considered sensitive to income changes (flowers, fresh vegetables, and avocado). With the economic recession in Europe, no significant growth could have been expected.

In recent years the problem of allocating factors of production in agriculture became more acute. International price increases of tradable products, given the price control and price freeze of these products for the local producer, widened the gap between the respective factor prices for the national economy and local producer and affected correct allocation of factors of production. This price gap narrowed in the middle of the agricultural year 1973/74.

The prices of the tradable output rose in Israel (wheat, sorghum, beet sugar); while at the same time their prices abroad began to fall. The increase in producer prices of these tradable products was significant, but took place while most agricultural output prices increased rapidly so that the improvement in the relative[4] profitability of these products was modest.

Although the rise in output prices in the last two years was rapid, it did not catch up

4. Since the composition of inputs for the crops under discussion is similar, one can reach conclusions about changes in relative profitability from the changes in relative prices of the products discussed.

with the increase in purchased input prices. The effect of trade terms on the profitability of factors of production employed in agriculture compared to their profitability in other sectors of the economy differed in the two years under survey. In 1973/74 agricultural product prices rose at a rate similar to the product prices in other sectors of the economy; in 1974/75 prices of agricultural products rose at a slower pace than prices of the national product.[5]

The use of purchased input increased only moderately. The expansion was chiefly due to the growth in inputs of packaging because of the rise in exports, and the increased use of fertilizers for grain and pulse growing due to the rise in their profitability in 1974/75. Water input increased only slightly, as a result of stricter quota policy.

The negative effect of terms of trade on the profitability of agriculture was offset by the appreciable real growth in product. Income deriving from agriculture increased slightly in real terms (taking into account the national product prices, the consumer price index etc.) Payment for hired labor and interest rose at a similar rate to derived income, so that real income of farmowners[6] rose modestly at a rate similar to the increase in derived income, following a significant increase last year.

2. INTERNATIONAL PRICES

At the end of 1971/72 world prices of basic products began to climb. This rise which was initially caused by a severe shortage of grains (see the Bank of Israel Report 1974, p. 261) included all raw materials, agricultural and industrial. Agriculture was not immediately affected by these developments, as the price of basic commodities grown in Israel, such as, wheat, cattle fodder, beet sugar, and cotton (for sale on the domestic market) are set by the government, which did not raise the prices of agricultural commodities parallel to the rise abroad. As a result, a gap between the price of these commodities for the economy and their price to the producer was created. This gap is expressed in the relationship between the implicit rate of the dollar for the farmers and the dollar rate for exporters (Table XIII-2).

In 1973/74 the prices which farmers received for wheat, grains, and sugar beet were raised; however, the decision was taken at the end of the agricultural year, and the

5. The national product prices were calculated for the period parallel to the agricultural year and in 1974/75 they reflect the influence of the policy measures of November 1974.

6. The farmowners' incomes include return on own capital and own labor. Generally the nominal increase in proceeds to capital in the consumer price index is not deducted. There is justification for this in the agricultural sector since the main labor force is made up of the owners of capital and of other regular factors of production in the sector.

Table XIII-2
IMPLICIT EXCHANGE RATES[a] FOR THE ISRAELI FARMER, 1969-75

	1969	1970	1971	1972	1973	1974	1975
Wheat	6.64	5.24	6.98	5.17	2.57	4.31	6.74
Sorghum	5.31	5.80	6.31	7.45	6.88	5.52	6.26
Cotton fibre	2.33	2.99	3.61	3.26	4.46	5.27	—
Sugar[b]	10.80	10.30	10.40	6.30	5.27	3.02	—
Tradable milk products[c]	—	—	—	7.48	7.29	21.30	29.62
Rate of the dollar to the exporter (for groups of added value of 65% or more)	3.85	4.03	4.62	5.10	5.26	5.71	7.58
Relative index of the implicit exchange rate for the Israeli farmer compared to the price for the Israeli exporter, 1969-75							
Wheat	1.75	1.30	1.51	1.01	0.49	0.75	0.89
Sorghum	1.38	1.44	1.37	1.46	1.31	0.97	0.83
Cotton fibre	0.61	0.74	0.78	0.64	0.85	0.92	—
Sugar	2.80	2.56	2.25	1.24	1.00	0.53	—
Tradable milk products[c]	—	—	—	1.47	1.39	3.73	3.91

[a] 1) The implicit rate of exchange is the ratio of the price of the commodity for the local producer in Israeli pounds to the international price in dollars. Changes in this rate generally reflect the changes in the price of the saved dollar. The prices do not include transportation or other expenses.
2) The prices for comparison purposes were selected for the months salient to decisions concerning land allocation for relevant crops.
3) The relation between the rate of the implicit dollar rate of exchange and the rate of the dollar for the exporter reflects the profitability rates of the crop if there would be an alternative to export.

[b] The implicit rate of the dollar in sugar production reflects the profitability of growing sugar beet in quantities appropriate to production capacity of the factories.

[c] The rate of the dollar was calculated according to the price rates of hard cheese where the cost of production is measured in prices of the factors of production for the producer in addition to the real cost of raw fodder.

SOURCE: Prices for the domestic producer — Data from the Central Bureau of Statistics; international prices — various sources. For more details see appendix to the following chapter.

farmers did not manage to bring this into account when allocating land for crops. When these prices were again raised at the beginning of the agricultural year 1974/75, this was reflected in the increased area allotted to growing sugar beet to reach the full capacity of the factories and also in a significant expansion in the use of fertilizers in wheat and grains, acreage of which was somewhat increased.

Following the rise in producer prices a drop in world prices of basic commodities began to take place. This decline in the prices of raw material inputs for industry occurred in the wake of the recession and also included basic agricultural commodities. The drop in the price of grains was due both to the good harvests in North America and the Soviet Union in 1973/74 and also to a decline in demand caused by a shortage in foreign currency in the developing countries. In 1974/75 a significant drop in wheat harvests took place in the Soviet Union. This was reflected in a 10 percent drop in the world harvest. The resulting shortage was not accompanied by purchases on the scale of those made in 1971/72 so that in 1974/75, with the exception of a few months, the drop in wheat and animal

fodder prices (corn, sorghum, soy etc.) continued. Israel profited very little from this price drop for, in effect, the government paid a significantly higher price than the average. In addition, the transportation price which the farmer pays is much higher than the prices on the free market.[7] The effect of the price drop will probably be felt only in the second quarter of 1976.

The price changes on the international markets created a gap between the price system facing the local producer and that facing the economy in an opposite direction to the gap between the systems which prevailed during 1972/74. This reversal particularly affected the growing of sugar beet which is no longer profitable. Taking advantage of short-term changes in international prices is most significant in agriculture; thus, for example, if in 1973/74 sugar beet were grown at the full production capacity of the factories, the dollar contribution to the economy would have been much higher than a one percent increase in industrial export (excluding diamonds, in added value terms).[8] It seems, that this problem may be solved by partial indexing of domestic producer prices to the prices on the world markets, while assuring a minimum price that will prevent disruptions in production.

Finally, it should be pointed out, that the gap between the price for the economy and the producer price also exists in livestock farming. The implicit dollar price in milk production intended for dairy products[9] reaches IL28 (see note c, Table XIII-2).

3. THE TERMS OF TRADE[10] IN AGRICULTURE

One can examine the effect of "terms of trade" from two main aspects:

(a) the effect on the profitability of factors of production owned by farmers; that is, capital, land, water, and own labor.

(b) the effect on the relative profitability of the different crops in agriculture.

The effect of terms of trade in itself on the farmowners' profitability is defined (approximately) as a change in the prices of agricultural product relative to the prices of the product for the economy (the influence of the price of hired labor which constitutes purchased input for the farmowner is included in the prices of the

7. The agreement for the transport of fodder and grains from the United States to Israel provides that about 50 percent of the volume must be transported in American ships. Regarding the remainder, the government signed an agreement with Zim at a price significantly higher than on the free market, and this expense was passed on to the agricultural producer.

8. Detailed calculation - see appendix to this report.

9. Since milk for drinking and liquid products (sour milk, yoghourt etc.) are not tradable, this only applies to part of milk output (about 40 percent) intended for hard cheeses and butter.

10. "Terms of trade" are defined as the relationship between output and input prices.

Table XIII-3
RELATIVE PRICES FOR THE FARMER, 1964/65–1974/75

	Percent annual increase or decrease (–)							
	National product prices (1)	Index of net agricultural product (2)	Relative price of agricultural product[a] (3)	Index for column (3) (1968/69=100) (4)	Output prices (5)	Input prices (6)	Development of terms of trade[b] (7)	Index for column (7) (1968/69=100) (8)
1964/65	8.3	9.5	1.1	110.8	7.5	6.7	.0.7	106.0
1965/66	9.0	1.9	–6.5	103.6	4.3	7.6	–3.1	102.7
1966/67	3.6	–1.2	–4.6	98.9	–0.2	3.0	–3.2	99.4
1967/68	3.2	4.3	1.1	100.0	5.5	7.6	–2.0	97.4
1968/69	2.6	2.6	0.0	100.0	5.8	3.0	2.7	100.0
1969/70	6.7	–3.8	–9.8[c]	90.2	–0.5	4.1	–4.5	95.5
1970/71	11.6	15.8	3.8[d]	93.6	13.5	12.2	1.1	96.6
1971/72	13.9	6.4	–6.6	87.4	9.5	14.8	–4.7	92.1
1972/73	19.2	26.8	6.4	93.0	18.9	14.2	4.1	95.9
1973/74	30.3	31.4	0.8	95.3	34.6	42.2	–5.5	90.6
1974/75	37.8	34.3	–2.5	90.1	45.5	64.7	–11.7	80.0

[a] The relative price of the agricultural product as a relationship between the index of the agricultural product prices and the index of the national product prices.
[b] The difference between column (3) and column (7) is due to the fact that the relative product prices take into account the weight of input in output.
[c] 1969/70 was an extraordinary year as a result of the crisis in the citrus branch.
[d] The improvement in 1970/71 is due to the rapid rise in output prices in the citrus branch.
SOURCE: Central Bureau of Statistics.

agricultural product). The change in the relative prices of agricultural product was due to the effect of terms of trade, which are determined outside the sector. In 1973/74 the prices of agricultural product rose relative to overall product prices, and in 1974/75 they dropped; the main explanation for this lies in government policy of November 1974 (the agricultural year 1974/75). In addition, the prices of purchased inputs in 1974/75 far surpassed the price increase in output. The negative effect of terms of trade on the profitability of production factors in agriculture is typical of most years, and in this respect Israel's economy is similar to most developed economies in the world. In Israel this effect was offset by high productivity and the rise in returns to the constant production factors, which in general are not tradable.[11] The profitability trends in the sector changed in 1974/75: the profitability of cotton, wheat, and livestock fell relatively after a significant improvement the previous year; however, the profitability of the citrus branch improved and returned to its high level of 1970/71. The profitability of other export crops also improved except for vegetable crops for export and avocado.

11. The increase in the ratio of input per unit of constant factors of production causes an increase in returns to the constant factor of production.

The effect of terms of trade on farmowners' income, that is the proceeds of factors of production employed in agriculture, excluding hired labor, was significant, when compared to incomes in other sectors of the economy, both in 1973/74 and in 1974/75. It varied, however, in the different subbranches: in 1973/74 the profitability of grains, industrial crops, and livestock rose. These branches employ a substantial proportion of the factors of production owned by farmers, and indeed the income of farm owners rose at a high rate relative to income in the economy; in 1974/75 the relative profitability of citrus, vegetable and some of the fruit crops rose. The portion of factors of production owned by farmers is relatively small in these branches, and therefore farmowners' income rose moderately relative to incomes in other sectors of the economy.

4. OUTPUT DESTINATIONS

(a) *Crops*

The real marketed output of crops increased by 8 percent in 1974/75 following a similar rise during the previous year. Exports of non-citrus products continued to rise rapidly, although not as much as in the past; citrus exports also expanded. Output for direct domestic consumption increased in real terms by 10 percent, this despite the decline in real income and the slowdown in population growth, while relative prices were maintained for the producer and the consumer. Sales to industry declined following a drop in output of field crops, the diversion of citrus fruits to direct export, and the stopping of sales of olives for oil pressing (because of the low yields - a result of 'alternation').[12]

The high growth rates in recent years (except for 1972/73) are due to the vigorous expansion of exports and industrial crops. This expansion is a success from the point of view of adaptation of production to demand as well as of marketing.

Elasticity of demand for food and growth of population influence domestic demands for crop output. In the past, domestic demands for crop output rose slowly, since the elasticity in demand for food is low relative to income, and population growth has been no more than 3 percent yearly. The increase of domestic demand would have made possible a 5 percent increase in sales. The actual increase was greater, since there was an expansion in direct and indirect exports, as well as in sales to industry. This expansion demanded

12. It is characteristic of olives that yields are high in one year and low in the next without any connection with climatic or cultivation conditions. This phenomenon is called 'alternation.'

Table XIII-4
TOTAL AGRICULTURAL OUTPUT, BY ECONOMIC DESTINATION, 1973/74 AND 1974/75
(IL million, at current producer prices)

	Value		Percent annual increase or decrease (-)				
			Quantity			Price	
	1973/74[a]	1974/75	Average 1969/70-1973/74[a]	1973/74[a]	1974/75	1973/74[a]	1974/75
Output marketed							
Direct domestic consumption	1,898.4	3,002.5	5.7	3.2	7.6	40.5	47.0
Industry	1,555.7	2,297.1	14.1	11.5	3.2	44.5	43.0
Direct exports	1,173.6	2,089.5	7.3	14.4	11.0	23.4	60.4
Total	**4,627.7**	**7,389.1**	**6.4**	**8.7**	**7.0**	**37.0**	**49.2**
Output retained on farms							
Own consumption	201.1	300.2	2.5	2.2	2.5	41.0	45.6
Capital goods	154.0	253.5	8.1	9.7	14.9	34.6	43.3
Agricultural raw materials	519.2	702.6	5.5	11.5	-1.5	41.4	37.4
Total	**874.3**	**1,256.3**	**4.6**	**6.4**	**2.3**	**40.0**	**40.4**
Crops destroyed	4.3	5.4	—	—	-4.7	—	31.7
Grand total	**5,506.3**	**8,650.8**	**6.1**	**6.9**	**6.2**	**37.4**	**47.9**

NOTE: Rates of change have been calculated from unrounded figures.
[a] Revised figures.
SOURCE: Central Bureau of Statistics.

organization in several areas: (a) a greater variation of crops and introduction of export crops par excellence, such as cotton, avocado, and other subtropical fruits, flowers, and types of vegetables suitable for export; (b) growers organized themselves into production boards, and through them, established Agrexco, a company specializing in marketing produce abroad; (c) hothouses were used for growing vegetables and flowers, mostly for export, and water-saving techniques were employed. All these were aided by the extension of long-term credit for financing investments, as well as directed short-term credit for export crops.

1. Direct domestic consumption

The marked increase in sales for direct domestic consumption in 1974/75 came about while maintaining relative prices. There is no satisfactory explanation for this, bearing in mind the decline in real income and a marked decline in population growth.

The price increases of certain fruits and vegetables this year (grapes, bananas, citrus fruits, and potatoes) were impressive even when viewed against the rapid price rises in the economy during the same period. These increases (with the exception of grapes) may be explained by the marketing through cartels. In the case of grapes the price increase seems to be due to a decrease in grape production in Judea and Samaria leading to shortages.

Table XIII-5
MARKETED AGRICULTURAL OUTPUT, BY ECONOMIC DESTINATION, 1973/74 AND 1974/75
(IL million, at current producer prices)

	Value		Percent annual increase or decrease (–)	
	1973/74[a]	1974/75	Quantity	Price
Crops				
Direct domestic consumption	794.2	1,205.6	10.0	37.9
Industry	756.9	1,014.0	–1.0	35.4
Direct export	1,093.8	1,993.4	13.1	61.2
Total	**2,644.9**	**4,213.0**	**8.1**	**47.3**
Livestock				
Direct domestic consumption and industry	1,903.0	3,080.0	6.4	52.1
Direct export	79.7	96.1	–17.3	45.8
Total marketed	**1,982.7**	**3,176.1**	**5.5**	**51.9**
Total agricultural output marketed	**4,627.7**	**7,389.1**	**7.0**	**49.2**

NOTE: Rates of change have been calculated from unrounded figures.
[a] Revised figures.
SOURCE: Central Bureau of Statistics.

2. Industry

Several factors have jointly led to a decline in sales to industry: a decline in the diversion of citrus fruits to industry, because of the lively demand of the export market (see section 5); low cereal and pulse yields because of drought; stability of industrial

Table XIII-6
DIRECT AGRICULTURAL EXPORT,[a] 1973/74 AND 1974/75
(IL million, at current producer prices)

	Value		Percent annnual increase or decrease (–)				
			Quantity			Price	
	1973/74[b]	1974/75	Average 1969/70–1973/74[b]	1973/74[b]	1974/75	1973/74[b]	1974/75
Field crops	252.9	333.9	22.4	97.0	–4.5	54.5	38.3
Vegetables, potatoes, melons	77.9	137.2	17.7	–16.5	22.7	19.5	43.5
Noncitrus fruit	59.8	115.3	15.7	45.8	23.4	19.3	56.2
Eggs	23.1	34.4	6.1	1.9	–10.8	29.6	67.0
Meat	33.5	42.2	8.0	–32.8	–8.1	25.0	37.0
Fish	5.2	3.4	56.3	–43.6	–51.9	48.9	36.0
Flowers, seedlings, ornamental plants, vegetable seeds, etc.	63.4	128.5	20.7	24.2	52.8	8.4	32.6
Livestock, miscellaneous	18.0	16.1	18.7	53.2	–33.3	17.4	34.2
Total, excluding citrus	**533.8**	**811.0**	**13.0**	**31.2**	**7.5**	**28.7**	**41.4**
Citrus	639.8	1.278.5	3.8	4.4	13.9	17.5	75.4
Total, including citrus	**1,173.6**	**2,089.5**	**7.3**	**14.4**	**11.0**	**23.4**	**60.4**

NOTE: Rates of change have been calculated from unrounded figures.
[a] Includes exports to administered areas.
[b] Revised figures.
SOURCE: Central Bureau of Statistics.

crop output, except for sugar beet raising and considerable 'alternation' in olive yields (5,000 tons in 1974/75, compared with 30,000 tons in the previous year). In one type of industrial crop - tomato - output did rise, as a result of anticipation of increased demand for tomato puree in the domestic market. These expectations led to the signing of agreements at the beginning of the season for expanding the areas of tomatoes grown for industry.

3. Exports

Exports of other crops increased significantly, in real terms, in 1974/75 - 11.8 percent, excluding citrus fruit, which increased at a rate of 14 percent (see Table XIII-6). The increase in exports of citrus fruit resulted from a lively demand for Israeli citrus abroad, as there was a decrease in sales of competing countries. Spain's yields were affected by a heat wave, those of Cyprus were adversely affected by civil war, and those of Morocco were bought by Eastern European countries as a result of trade agreements for most of the yield. The increase in export of citrus was not accompanied by an increase in production (see the section on "Secondary branches" - citrus), since the additional export was achieved by reducing sales to industry.

Most of the expansion in exports of other crops in 1974/75 resulted from an increase in exports of flowers and vegetables. In 1973/74, production of these crops was not realized to the fullest because of the war. Foreign sales of cotton did not increase this year because of a drop in yield, although in 1973/74 they had doubled.

Despite the rapid increase in export of fruit, vegetables, and flowers, the full potential of production and export of these crops has not yet been realized. Their export involves air transport to the respective markets, chiefly to preserve their freshness, but also in order to allow flexibility in allocation of the products among the markets. The agricultural exporters pay more than the standard rates per ton of produce transported. The arrangements for air freighting of agricultural products from Israel require that farmers use El-Al's services, according to a rate schedule set by the government. For a number of crops, such as strawberries and flowers, this cost prohibits expansion of production. As for other crops, such as tomatoes, the high price of transportation is equivalent to the c.i.f. price which could be obtained in foreign markets, thus prohibiting export; if real market rates were charged for transport, it would be possible to develop and expand this industry.

Table XIII-7
OUTPUT OF AGRICULTURAL CAPITAL GOODS, 1973/74 AND 1974/75
(IL million, at current producer prices)

	Value		Percent annual increase or decrease (-)				
			Quantity			Price	
	1973/74[a]	1974/75	Average 1969/70–1973/74[a]	1973/74[a]	1974/75	1973/74[a]	1974/75
Orchards	44.3	67.2	21.1	3.2	16.0	34.8	30.7
Livestock	40.7	64.0	28.5	-21.2	17.2	33.8	34.2
Land reclamation and conservation, drainage, natural pasture, etc.	39.1	76.6	-9.3	15.5	24.6	34.4	57.3
Afforestation	29.9	45.7	8.6	-1.0	-2.7	35.6	57.0
Total	**154.0**	**253.5**	**8.1**	**9.7**	**14.9**	**34.6**	**43.3**

NOTE: Rates of change have been calculated from unrounded figures.
[a] Revised figures.
SOURCE: Central Bureau of Statistics.

(b) *Livestock*[13]

In 1974/75, the rapid rise (in real terms) continued of sales of livestock products to the domestic market. The demand for such products began to grow rapidly in the seventies with the increase in income. This rise took place at a time when international prices for butter and powdered milk were high, and the need for complementary export compelled the government to cancel quotas on milk production and to encourage expansion of poultry production. As a result of this, exports did indeed decline. However, government policy is such that domestic demands are met by the producer with little regard for the economic price.

Against the background of expansion of production, demand became stable in 1974/75 as a result of relative consumer price increases on these products, a decrease in real income, and a slowdown in population growth rate. This conflict between the development of supply and demand led to the production of "excess" produce,[14] both of milk and poultry meat .

1. Eggs and milk

Milk and egg prices are fixed by the government, both for the producer and the consumer. We will deal here with the reactions of consumers to the changes in price; producers' reactions will be considered further on in section 5. Sales of raw milk[15] in

13. This section will not consider all output destinations of this branch, as the principal output is intended for domestic consumption, whether directly or following some industrial process.
14. The use of the word "excess" is relevant, in that the price of milk for the producer is fixed by the government, and the price of meat is also greatly influenced by government policy.
15. The concept of "raw milk" refers to the total milk marketed to all destinations, both for drinking and as a raw material for dairy products.

1974/75 increased by 9 percent, while the price of milk and most milk products for the consumer rose by some 60 percent in January 1974, and by another 35 percent in November 1974. The demand for milk for drinking is largely stable, while the demand for milk products in general, and for butter and hard cheese in particular, is sensitive to price and income. In consequence, the supply of butterfat increased each month, and the government therefore took steps which led to the cessation of the import of butter and a decline in the import of powdered milk.

Marketing of edible eggs was expanded by 9 percent, despite the marked price rise (identical with that of milk). However, unlike that of milk, the demand for eggs was unaffected, and the extra output was absorbed in the markets without any appreciable increase in stocks. It appears that the demand for eggs is extremely inelastic, as evidenced by the fact that even the slightest shortage leads to the creation of a black market in which prices are much higher than the official ones.

2. Meat marketing

The marketing of meat is controlled by a number of external factors relating both to supply and demand. With regard to supply: (a) The price of imported beef is fixed by the government, which markets the entire amount demanded at the set price. (b) The supply of poultry meat is determined to a great extent according to developments of the previous year (see section 5). (c) The supply of beef from dairy herds depends on the profitability of dairy farming and the quota policy. As for demand, the external factors are the changes in real available income and in the population.

In 1974/75 there was an increase in the supply of poultry, albeit at a slower rate than in previous years (see Table XIII-8), and the supply of beef from dairy herds decreased, because of diversion of calves to dairy herds and the prohibition of "selection" (in order not to adversely affect production, it is forbidden to remove cows from dairy herds). The decrease in real income and the moderate population growth led to a levelling of demand. As a result of all this, the price of poultry meat decreased to a level lower than that guaranteed (the government was compelled to make up the difference between the market price and the guaranteed price), and an unplanned stock of poultry meat built up. The decrease in supply of fresh beef did not lead to any significant price rise, thanks to the consumers' changing to poultry meat and the stability of imported meat prices.

Table XIII-8

CURRENT AGRICULTURAL OUTPUT,[a] BY TYPE OF FARMING, 1973/74 AND 1974/75

(IL million, at current producer prices)

	Value		Percent annual increase or decrease (-)				
			Quantity			Price	
	1973/74[b]	1974/75	Average 1969/70–1973/74[b]	1973/74[b]	1974/75	1973/74[b]	1974/75
Livestock							
Poultry							
Eggs	435.9	739.5	3.7	10.1	4.2	36.3	62.8
Meat	730.3	1,165.3	12.4	12.9	7.3	36.8	48.7
Miscellaneous	18.8	19.1	2.6	4.0	-12.8	8.7	16.5
Total	**1,185.0**	**1,923.9**	**9.0**	**11.7**	**5.8**	**36.1**	**53.4**
Cattle							
Milk	494.2	860.8	6.2	4.9	8.8	53.2	60.1
Meat	254.6	329.4	2.2	6.3	-4.4	32.8	35.4
Miscellaneous	29.8	29.8	6.3	15.1	-12.8	12.1	14.6
Total cattle	**778.6**	**1,220.0**	**4.8**	5.9	3.6	43.9	51.2
Other livestock							
Milk	62.3	91.6	-0.8	-0.1	3.9	66.1	41.6
Meat	120.7	185.7	4.2	3.5	5.7	34.4	45.5
Fish	105.5	148.9	1.9	-13.7	-2.6	45.0	44.8
Miscellaneous	20.6	29.0	6.2	22.1	3.4	34.0	37.7
Total other livestock	**309.1**	**455.2**	**2.0**	**2.6**	**2.7**	**43.6**	**44.0**
Total livestock	**2,272.7**	**3,599.1**	**6.4**	**7.6**	**4.7**	**39.7**	**51.4**
Crops							
Citrus	801.0	1,452.4	4.3	-1.7	6.3	16.8	70.6
Other fruit	550.4	853.4	8.5	17.4	8.0	28.5	43.6
Vegetables	412.4	549.7	4.2	-7.4	23.6	59.6	7.8
Melons	67.9	111.0	1.1	-1.8	6.2	15.4	54.0
Potatoes	77.1	153.5	7.6	-2.9	7.1	46.5	85.8
Cereals and pulses	306.4	414.9	16.2	15.2	-11.2	64.1	52.4
Industrial crops	576.0	835.2	4.0	23.4	2.2	55.4	41.9
Fodder	137.1	182.1	-0.8	3.6	0.4	35.1	32.2
Flowers, seedlings and ornamental plants	75.4	138.6	28.2	21.5	45.9	4.9	26.0
Other crops	75.9	107.4	14.5	19.5	0.7	43.0	40.6
Total crops	**3,079.6**	**4,798.2**	**6.0**	**6.9**	**6.7**	**35.8**	**45.6**
Total current output	**5,352.3**	**8,397.3**	**6.1**	**7.2**	**6.0**	**37.5**	**48.0**

NOTE: Rates of change have been calculated from unrounded figures.

[a] Marketed output, on-farm consumption and intermediate goods (agricultural raw materials).

[b] Revised figures.

[c] Includes straw, green manure, forest products, citrons and vegetable seeds.

SOURCE: Central Bureau of Statistics.

5. SECONDARY BRANCHES

(a) *Livestock*

The rate of real increase in output of livestock slowed down in 1974/75. This resulted from the moderate rate of increase of poultry meat output and the decline in beef output (see Table XIII-8). The slowdown was partially compensated for by the accelerated rate of increase in production of milk and edible eggs.

1. Poultry

In 1974/75 the expansion of poultry farming continued, although at a slower rate than the previous year. The source of this slowdown is the table fowl extension of this branch. As mentioned in this section in previous years, expansion of the poultry branch is generally set by government policies regarding quotas. In mid-1974 there was a slackening in profitability of table fowl, but in 1974/75 there was still need for control over orders for hatching eggs for the renewal of table fowl flocks, and it appears that the quotas were still effective. The slackening in output growth resulted from a slowdown in increase of quotas. The process of decreased profitability of edible eggs led to a decrease in orders for fertile eggs (for flock renewal) to a degree lower than that obligatory for production according to the quota system. This influence was still not fully expressed in 1974/75, during which time the marketing of edible eggs increased by 9 percent; it will only be fully realized in 1975/76.

2. Dairy farming

The real rate of increase in current production of milk products (see Table XIII-8) decreased in 1974/75. This slowdown reflects the decline in marketing of beef, while production of milk rose rapidly. The decline in meat marketing resulted chiefly from a greater diversion of calves to dairy herds, as well as from the prohibition on selection of milch cows; as usually practiced, after several milking seasons, milch cows are removed from the herd and sent to the stockyards.

Indeed, in 1974/75 the number of dairy cows increased at a rapid rate, approximately 17 percent, although this increase does not fully explain the decrease in marketing of beef. The phenomenon of rapid increase of dairy cows (thanks to prohibition of selection and maximum diversion of calves, as mentioned above) is characteristic of periods of accelerated growth of milk production, against a background of apprehensions by producers concerning the reimposition of production quotas; in 1974/75[16] apprehensions grew that the quotas lifted in 1970/71 will be reimposed.

In addition to rapid expansion, another key development in the dairy branch in recent

16. The cancellation of quotas in 1970/71 came against a background of rapid expansion of the demand for milk and dairy products, in the face of a decrease in relative prices. Suspicions of renewal of quotas rose when prices of milk and dairy products increased following cancelling of subsidies, and the rate of increase in demand was markedly slowed down. As already mentioned, imports of butter and powdered milk were consequently limited while stocks of butterfat increased during that year.

years has been the transition to large production units, because of their increasing returns to scale. This transition has been in process for some years and is reflected both in the fact that in each sector (moshav and kibbutz) farmers are changing over from smaller cowsheds to larger ones, as well as the fact that the kibbutz sector (with larger cowsheds) is increasing its share in total milk production at the expense of the moshavim. The increase in the kibbutz sector's share of milk production rose especially after the Yom Kippur War,[17] despite the massive encouragement given by the Ministry of Agriculture to moshav dairy farmers - support which was intended to check the continued decline in their relative share of cow's milk production. The importance of the transition to larger production units is expressed in the greater efficiency of larger cowsheds, compared with smaller ones. In 1974/75 this efficiency was expressed by the fact that the great increase in milk production was not accompanied by a parallel increase in demand for fodder.[18]

Table XIII-9
CITRUS OUTPUT, BY ECONOMIC DESTINATION, 1973/74 AND 1974/75
(IL million, at current producer prices)

	Value		Percent annual increase or decrease (-)				
			Quantity			Price	
	1973/74[a]	1974/75	Average 1969/70-1973/74[a]	1973/74[a]	1974/75	1973/74[a]	1974/75
Direct export	639.8	1,278.5	3.8	4.4	13.9	17.5	75.4
Industry	104.1	89.5	17.4	18.6	-39.5	11.1	42.1
Domestic consumption[b]	48.9	78.0	-1.6	-8.1	8.6	29.5	46.9
On-farm consumption	6.4	6.4	2.6	6.5	—	—	—
Crops destroyed	1.8	—	—	—	—	—	—
Total	**801.0**	**1,452.4**	**4.3**	**-1.7**	**6.3**	**16.8**	**70.6**
Total in tons	1,698.0	1,506.0			-11.3		

NOTE: Rates of change have been calculated from unrounded figures.
[a] Revised figures.
[b] Including private sales.
SOURCE: Central Bureau of Statistics.

(b) *Crops*

1. Citrus

Real output of citrus rose owing to an increase in the share of export. The yield in tons was 11 percent down on the previous year. The increase in exports was the result of

17. See the Bank of Israel Annual Report for 1974, page 327.
18. There was no increase in crude fodder; the increase in concentrated fodder for the dairy branch was similar to that in the previous year, and the amount of orange peels set aside for that purpose was smaller than for the previous year. On the other hand, however, a marked increase was noted in the use of other agricultural by-products for cattle fodder, mainly the refuse of sugar beet resulting from the marked expansion of sugar beet yield.

increased demand from abroad following poorer yields of competitors (Spain and Cyprus), as well as the agreement between Morocco and the East European countries, which diverted Moroccan crops from the West to Eastern Europe. The increase in exports was accompanied by a significant price rise abroad, and the export incentive was also increased.

The price rise led to an increase of 78 percent in nominal returns to capital and profits. In real terms (i.e. accounting for the consumer price index of the same period), this comes to an increase of some 17 percent. This development led to a marked improvement in profits after two years of decline, and it may be assumed that profits have reached the high level attained in the past. The economic advisability of expanding the citrus branch may not be concluded from this, as such an expansion would lead to a drop in prices on the export market and bring about an increase in production costs.

2. Other fruit

The real output of other fruit (excluding citrus) was up 8 percent. This mild rise resulted from reduced olive crops owing to alternation.[19] Excluding olives, there was a significant real increase in the output of fruits - 20 percent. This real increase was accompanied by a marked rise in producer prices, especially for grapes, avocado, and bananas. There is a continuing trend of decreasing profits on deciduous fruits, as compared with avocado, subtropical fruits, grapes, and bananas.

3. Vegetables, potatoes, and melons

After two years of reduced output there was in 1974/75 a real increase. The rise in output resulted from an expansion of growing areas of tomatoes intended for processing and of potatoes, as well as an increase in export of vegetables. In 1972/73 and 1973/74 there was a considerable improvement in profitability of these crops, and it appears that this was an incentive to farmers for increasing the number of workers and the areas cultivated. Potatoes and tomatoes intended for processing do not require much manpower and may be grown in concentrated areas. The increased output of 1974/75 is partially due to the decrease in vegetable output in winter 1973, because of the war.

4. Cereals and pulses

Real output decreased in 1974/75, after a significant increase in the previous year. Developments in both years may be explained on the basis of climatic conditions: increased precipitation in 1973/74 and drought in 1974/75. The great increase in profitability in

19. See note 12.

1973/74 led to an increase in areas allotted for these crops and to additional water allocated for sorghum. The increased allocation of resources for these crops was insufficient to set off the influence of the drought in 1974/75, in which yields were even lower than those of previous drought years.

Table XIII-10
INPUT OF MATERIALS AND SERVICES IN AGRICULTURE,[a] 1973/74 AND 1974/75
(IL million, at current prices)

	Value		Percent annual increase or decrease (-)				
			Quantity			Prices	
	1973/74[b]	1974/75	Average 1969/70–1973/74[b]	1973/74[b]	1974/75	1973/74[b]	1974/75
Fodder	991.0	1,684.0	7.0	4.7	3.9	42.8	63.6
Water	128.2	254.9	0.2	-7.3	2.5	48.7	94.0
Packing materials	193.3	376.7	9.5	5.2	14.0	26.1	70.9
Fertilizers	73.5	139.1	2.6	-9.0	9.0	46.2	73.8
Transportation	177.3	277.7	8.8	1.3	4.9	32.9	49.3
Spare parts, repairs, and tools	122.4	213.3	4.4	4.5	19.1	23.7	46.3
Fuel, lubricants, and electricity	86.0	179.1	2.9	8.0	-4.3	106.7	117.6
Pesticides and veterinary preparations	184.8	267.3	10.2	7.8	-33.5	42.8	117.5
Insurance and government services	105.8	190.0	4.4	5.6	10.9	34.1	62.0
Miscellaneous	80.1	103.7	10.8	-0.4	7.0	70.3	21.1
Total purchases from other sectors	**2,142.4**	**3,685.8**	**6.1**	**2.1**	**2.8**	**43.9**	**67.4**
Wages of hired labor	507.0	710.0	—	—	—	—	—
Interest and rent	200.0	350.0	—	—	—	—	—
Intermediate goods	519.2	702.6	5.5	11.5	-1.5	41.4	37.4
Depreciation	379.5	591.2	6.6	4.8	6.1	33.1	46.8
Grand total	**3,748.1**	**6,039.6**	—	—	—	—	—

[a] Excluding labor and capital of farm owners.
[b] Revised figures.
SOURCE: Central Bureau of Statistics.

5. Industrial crops

Real output of industrial crops rose slightly - by 2 percent. This rise resulted entirely from expansion of sugar beet fields (approximately threefold), motivated by a highly significant rise in the controlled price. The rise in the price of sugar beets on the one hand and the decrease in the world price of sugar on the other hand closed the price gap between locally produced and imported sugar and brought about a virtually full utilization of local sugar production plants. Cotton output remained constant despite expansion of acreage, because of an unexplained drop in yield. Output prices rose by 42 percent, after a significant rise during the previous year. The price rise reflects the

rise in the dollar rate of exchange for exporters as well as the rise in sugar beet prices. The prices of cotton and peanuts are dependent on prices abroad, which rose slightly.

Output prices rose at a low rate compared to both input prices and the consumer price index of that year,[20] thus profitability was reduced for all these crops, including cotton.

6. PURCHASED INPUTS

In 1974/75, as in the previous year, there was only a moderate increase in the extent of purchases by the agricultural sector from other sectors of the economy. Thus, these two years show a change from the trend of the past five years, in which a rapid increase was noted in the use of inputs, especially purchased fodder. In addition, in 1973/74 there was a slowdown in increase of purchases, partly due to the favorable climatic conditions which allowed a cutback in the use of water and the substitution of hay and raw fodder for the purchased variety. In 1974/75, however, the climatic conditions operated in the reverse direction, although purchase of fodder expanded at a rate less than that of the increase in livestock, and the use of water grew only slightly (see Table XIII-11).

A significant increase was noted in inputs intended for export crops - packing materials, plastic - as well as for field crops, fertilizers, spare parts, and tools. The increased use of packing materials and plastic is a direct result of the expansion of growing areas and the impressive growth in agricultural exports. The increased use of fertilizers and tools results from more intensive cultivation of nonirrigated crops, following their increased profitability in the past year, due to price rises. The moderate rise in the use of commercial fodder was due to the improved physical efficiency in milk production, resulting from the transition from smaller installations to larger ones.[21] In addition, the rise in fodder prices over the past two years led to greater emphasis on distribution of concentrated food in all livestock branches, which brought about, in turn, investment in equipment (for example, machines for measuring precise portions of food).

The moderate rise in water usage, after significant decrease during the previous year, reflects the insistence of the water authorities on maintaining quotas, owing to the

20. The world price of cotton dropped, but Israel did not sell her cotton at record prices, and the drop was therefore not expressed in prices to the local producer. The reduced profitability of industrial crops followed a significant improvement in 1973/74, thus the low level of profitability is still high, relative to previous years.

21. See detailed discussion in the section on dairy farming ("Secondary branches").

Table XIII-11
AGRICULTURAL SUBSIDIES,[a] 1973/74 AND 1974/75
(IL million, at current prices)

	Value		Percent annual increase or decrease (–)		
	1973/74[a]	1974/75	Value	Quantity	Price[b]
Eggs	62.9	148.1	135.5	4.9	124.5
Poultry	31.0	151.3	388.1	7.3	354.9
Milk	225.2	292.0	29.7	8.2	19.9
Beef	—	9.9	—	—	—
Mutton	1.0	1.5	50.0	1.1	48.4
Fish	7.5	2.2	-70.7	-2.6	-15.5
Vegetables, potatoes, and melons	1.6	18.2	1,037.5	19.2	854.3
Other fruits	10.6	16.9	59.4	8.0	47.6
Tobacco	0.4	—	—	—	—
Peanuts	0.1	0.1	—	—	—
Domestic wheat	4.1	22.1	439.0	-11.2	453.4
Total output subsidies	**344.4**	**662.3**	**92.3**	**9.5**	**75.6**
Fodder	201.0	209.8	4.4	3.9	0.5
Water	43.2	71.2	64.8	2.5	60.8
Total input subsidies	**244.2**	**281.0**	**15.1**	**3.8**	**10.9**
Drought compensation	50.4	26.6	—	—	—
Total subsidies	**639.0**	**969.9**	**51.8**	—	—

[a] Revised figures.
[b] The change in prices represents the change in subsidy rate per output unit.
SOURCE: Ministry of Agriculture.

severe national water shortage. In order to overcome this problem investments were increased in water-saving devices to save water (drip pipes, supervision centers for water allocation, etc.), and many water storage tanks were constructed, thanks to the initiative of agricultural settlements.[22] It should be stressed that the significant increase in input costs over the past two years – above and beyond the increase in capital costs – have made more profitable investments leading to economy in input utilization.

7. AGRICULTURAL SUBSIDIES

Two external factors influence the income of farmers: the market and the government. The influence of prices and some of the price controlling activities of the government were dealt with in the section on price fluctuations. Government influence on prices works in two ways: fixing the market price and granting subsidies to the producer. It should be noted that some of the subsidies compensate the producer for the fact that market prices have been fixed by the government, as a result of which prices may be lower than the real

22. It appears that the input of stored water is not included in the estimation of input water purchased for agriculture.

market price. In 1974/75, the amount of output subsidies paid was nearly doubled (see Table XIII-11).

Most of the subsidies (about 95 percent) are given for livestock products, and the rise in subsidies represents in general, compensation for the rise in commercial fodder prices (which is the principal cost of the livestock branch). In 1974/75, there was a significant increase in fodder prices and a parallel increase in subsidies. In addition, the price of poultry meat fell below the guaranteed level, and the government had to make up the difference in price. The increase in this last item took up some 38 percent of the extra subsidies.

About 10 percent of the increase in output subsidies resulted from a real increase in sales of those products which qualify for subsidies. As stated above, some of this increase in output was greater than demand, and this was shown by increased milk stocks and a drop in the price of poultry to a level below costs. Moreover, although the real growth in subsidized output explains the increase in subsidies only partially, it is impressive when contrasted to the growth of agricultural production and especially to the moderate increase in livestock output. This fact makes evident the importance of the subsidy as a tool of production growth; in 1974/75 subsidies encouraged those branches in which the cost dollars thus saved by them was high and the demand for them did not increase.

Table XIII-12
ESTIMATED GROSS INVESTMENT IN AGRICULTURE, 1974 AND 1975
(IL million, at current prices)

	Value		Percent annual increase or decrease (–)		
	1974[a]	1975	Value	Quantity	Price
Orchards	47.4	73.6	55.2	23.4	25.8
Livestock	40.6	77.6	91.1	16.3	64.3
Farm installations[b]	146.6	135.5	–7.6	–28.5	29.2
Machinery and equipment	313.0	521.4	66.6	23.1	35.3
Land reclamation and conservation, drainage, natural pasture, etc.	80.7	122.7	52.0	–5.7	61.2
Total investment in agriculture	**628.3**	**930.8**	**48.1**	**2.9**	**44.0**
Afforestation	33.0	46.2	40.0	–6.5	49.7
Total investment in agriculture (excluding water projects)	**661.3**	**977.0**	**47.7**	**7.1**	**37.9**
Water projects	119.4	221.3	85.3	45.7	27.2
Total investment in agriculture	**780.7**	**1,198.3**	**53.5**	**13.2**	**35.6**

[a] Revised figures.
[b] Farm buildings, fish ponds and local irrigation networks.
SOURCE: Central Bureau of Statistics.

Input subsidies rose moderately, and the entire increase was used to cover increased costs of water production and transportation, resulting from higher electricity costs. Subsidies for purchased fodder remained high, although their relative share in terms of the total agricultural payments decreased significantly. It should be noted that fodder subsidies are the result of budgetary calculations, and the prices of fodder in 1974/75 do not represent the alternative costs to the economy. This is especially true for 1975/76 (the price of soybean husks in the United States is significantly lower than that paid by local farmers).

Table XIII-13
GROSS STOCK OF FIXED ASSETS IN AGRICULTURE,[a] 1974 AND 1975
(IL million, at current prices)

	Value		Percent annual increase or decrease (–)			
			Quantity		Price	
	1974[b]	1975	1974	1975	1974	1975
Orchards and farm installations[c]	8,415.0	11,935.8	3.3	3.5	26.9	37.0
Machinery and equipment	1,529.4	2,313.3	7.9	11.8	25.4	35.3
Livestock[d]	1,026.1	1,752.6	5.7	4.0	32.8	64.3
Total	**10,970.4**	**16,001.7**	**4.2**	**4.8**	**27.2**	**39.2**

NOTE: Rates of change have been calculated from unrounded figures.
[a] Excluding land and financial assets.
[b] Revised figures.
[c] Includes farm buildings, local irrigation networks and water projects, afforestation, land reclamation, drainage and conservation, natural pasture, etc.
[d] Excluding poultry broilers and fish.