FINNISH AGRICULTURE IN 1986

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Preface

This publication is a brief review of agricultural development in Finland in 1986. Some of the statistical data are still very preliminary. This is particularly true of farm incomes for 1986. Despite the uncertainty, the statistical data give the trends in the most important factors in agriculture and should thus be useful to the reader.

Part III of the publication contains a short review of agricultural policy. It does not cover the whole sector but concentrates on areas which the author considers most interesting in the past year. Earlier annual reports which have appeared in the series of research reports of the institute may be used to make the review more comprehensive.

This publication would not be possible without the help of the staff of the Institute. I thank Lulu Siltanen, Helena Jokinen, Jukka Kola, Juhani Leppälä, Paavo Mäkinen and John Sumelius from the Institute and Helena Serén from the National Board of Agriculture for helping me to prepare this publication. I also thank the English Centre for checking the English translation.

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This review has also been published in Finnish in publication 52 of the Institute.

Helsinki, January 20, 1987

Lauri Kettunen

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I
FINNISH AGRICULTURE IN GENERAL

1. The role of agriculture in the whole economy

1.1. Gross domestic product and labour input

The contribution of agriculture to the whole economy is small in all industrialized countries. There is a natural explanation for this: the activities carried out in agriculture have shifted to other sectors of the economy. Agriculture used to be more or less self-sufficient, but nowadays it uses an abundance of purchased inputs such as fertilizers, machinery, fuel and services. Agriculture also accounts for a smaller proportion of total production, since it has not grown as much as production in other sectors. This is because growth in consumption of agricultural products has been slow and the expansion of exports of agricultural products has not been profitable.

Agriculture in Finland accounts for about 4.5% of the gross domestic product but for about 9.5% of the labour force (Table 1). The latter figure is thus twice as high as that for GDP. Although this partly reflects the low income level in agriculture, it should be remembered that only about 50% of farmers' incomes come from agriculture; the majority of farmers work outside agriculture.

Table 1. Gross domestic product and the labour force in the whole economy and in agriculture.

Year	Gross domestic product			Labour force		
	total	agriculture		total	agriculture	
	FIM bill.	FIM bill.	%	1000	1000	%
1960	14.08	1.51	10.7	2 097	618	29.5
1965	23.15	2.04	8.8	2 171	539	24.8
1970	38.91	2.70	6.9	2 126	404	19.0
1975	92.95	5.06	5.4	2 221	277	12.5
1980	172.51	7.78	4.5	2 328	251	10.8
1981	195.29	7.65	3.9	2 353	250	10.6
1982	218.82	9.39	4.3	2 377	255	10.7
1983	245.53	11.12	4.5	2 390	246	10.3
1984	273.61	12.20	4.5	2 413	242	10.0
1985	296.71	12.33	4.2	2 437	228	9.4

Source: Statistical Yearbook of Finland 1985/86.

Agricultural investments (FIM 4579 mill.) accounted for about 6.4% of all investments in 1984. This proportion has also fallen as has the proportion of GDP. In 1960, agricultural investments were about 8.5% of all investments.

1.2. Economic growth

Economic growth slowed down in 1986. Exports decreased both to the West and to the East because of the weakening of price competitiveness. In addition, trade with the Soviet Union was seriously affected by the drop in the oil pirce. The value of imports fell considerably, and since the trade with the Soviet Union is barter trade, either exports had to be cut down accordingly or imports had to be expanded in some way. Equalization of trade did not succeed as required, and exports had to be reduced slightly which, of course, contributed to unemployment. The export surplus did not, however, decrease by the full amount, since the equalization of trade is achieved over a five year period.

According to a preliminary estimate, the growth in GDP was only 1.5% in 1986. Thus, there was a considerable shortfall on the steady annual growth of about 3% in the four preceding years. Economic growth in Finland deviated clearly from that in other OECD countries, where it was about 3%. It is too early to say whether the reason for this was the decline in trade or the way in which internal factors affected growth. The general labour market agreements made in the spring raised wage and salary levels by 5—6%, which is a modest increase but perhaps too high compared with competing countries.

As a result of the slow growth, unemployment rose to an annual level of about 6.8%, and it is still forecast to rise in the winter of 1987. The number of the unemployed would then be about 190,000.

Unemployment is considered to be the most difficult economic problem. Inflation has been slowing down and was

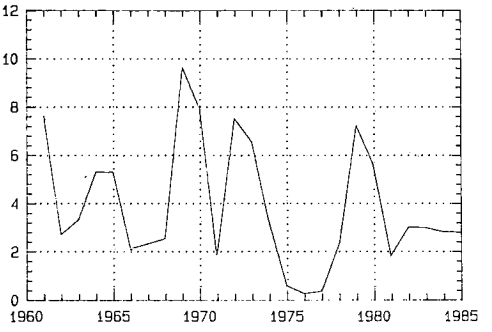

Figure 1. Growth in the volume of the gross domestic product in 1960—86.

about 3% at the end of the year. The fall in import prices (especially that of oil) has contributed to this trend, but the modest wage policy has also helped to lower inflation.

With the exception of trade with the Soviet Union foreign trade has generally been in balance. Earlier in the 1970s trade deficit hampered the conduct of economic policy, but is no longer the case. The Finnish mark was, however, threatened by speculations about devaluation in the summer. Foreign exchange reserves fell rapidly and the Bank of Finland had to raise the call money rate considerably, to 40%, which certainly had a devastating effect on the economy as a whole. The situation balanced out and foreign exchange reserves are once again satisfactory.

Forestry was in difficulties in the early part of the year, but, with the recovery of western European demand, exports of forest products expanded rapidly during the later part of the year.

1.3. The Finnish farm

Finnish agriculture is based on family farms. Farms still tend to be relatively small (about 12 ha), although they have grown somewhat in recent years (Table 2). As small farms stop producing, the average size of farms increases. Nevertheless, the number of larger farms has not increased very much and present

Table 2. The size and distribution of farms (over 1 ha).

	1959		1969		1977		1984	
	1000	%	1000	%	1000	%	1000	%
1—4.9	147.6	44.6	108.8	36.6	75.7	31.8	60.0	29.4
5—9.9	101.8	30.7	98.0	33.0	76.2	32.1	58.0	28.5
10—19.9	62.2	18.8	68.0	22.9	58.7	24.7	53.9	26.4
20—49.9	18.0	5.4	20.6	6.9	24.4	10.3	28.7	14.1
50-	1.6	0.5	1.9	0.6	2.7	1.1	3.3	1.6
Total	331.2		297.3		237.7		203.9	
Arable land 1000 ha	2 614.4		2 669.1		2 477.9		2 417.9	
Average size ha	7.89		8.98		10.43		11.86	

Source: Official statistics and farm registers.

agricultural policy does not support farm expansion. In 1984, 252,000 ha of arable land was rented. Because the price of land is high and farms are unlikely to be sold, renting land seems to be the only way to enlarge farms in the future.

Table 3. The regional distribution of arable and forest land per farm (hectares) in selected provinces in 1983.

Province	Arable land and gardens	Forest land
Uusimaa	19.2	27.9
Häme	14.9	31.0
Vaasa	12.0	25.5
Kuopio	10.1	37.1
Oulu	9.7	46.4
Lapland	6.4	80.1
Whole country	11.6	35.6

Source: Farm registers.

Forest land is an integral part of the Finnish farm, the average farm comprising 12 ha of arable land and 35 ha of forest land. The regional distribution, however, varies. In general, there is more arable land in the south than in the north, but there is correspondingly more forest land in the north (Table 3).

About 99% of farms are privately owned, but a large number of them belong to pensioners or heirs. This means that only about half the farms are owned by active farmers, and this group includes many part-time farmers who have other occupations as well. According to TOLVANEN (1985), in 1982, about 75,000 farms obtained more than 75% of their income from agriculture and forestry. There are about 200,000 farms in Finland, but only half of them are real producing farms.

Pensioners owned 18.4% of private farms. Farmers and pensioners thus

owned 80.2% of all farms, heirs and farm companies 19.1% and others 0.7%.

Finnish agricultural production is highly livestock intensive. Only 15% of arable land is used for producing plants for human consumption. Milk accounts for 36% of the total value of production (calculated from appendix 5), and cattle for 52%, when beef production is taken into account. Hay, silage and pasture constitute about one third of the total arable land. About one third of feed grain is fed to cattle. The structure of production has changed over the years, with the contribution of milk decreasing and that of meat increasing (Figure 2).

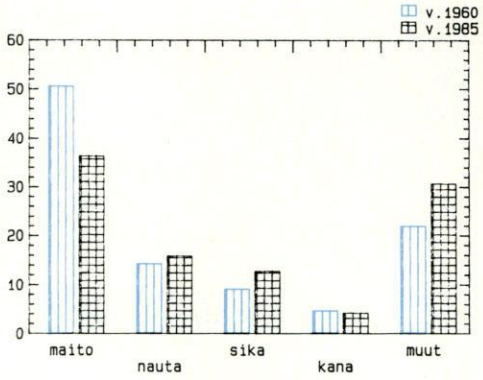

Figure 2. The distribution of gross returns in 1960 and 1985.

II
PRODUCTION, PRICES AND FARM INCOME

2. Plant production

2.1. Weather conditions

The spring came early in 1986, and in many places sowing started up to two weeks earlier than normal. Conditions continued favourable, even though the beginning of the summer was very dry precipitation levels being well below normal. Rainfall was abundant in July, but even then southeastern Finland suffered from drought.

In order to obtain a good yield through rapid sowing, precipitation levels should be low in May, but rain is needed by the young crop in June. Later in the summer levels of precipitation can be lower again. However, marked variations are typical of the weather in Finland, and consequently the expectations of farmers are only met in some years. Precipitation was more or less normal during the growing period but the timing was wrong. In June the amount of rain was only half the normal amount, whereas later in the summer it was above normal.

The effective temperature sum for the growing period was 1100—1300 degrees in southern and central Finland and 900—1000 degrees in northern Finland. In terms of temperature, the growing period was a couple of weeks ahead of normal until August, when the weather became unstable and the temperature remained below normal for the rest of the summer. Nevertheless, the total effective temperature sums for the growing period were 3—5% above normal in southern Finland up to 9% (in southeastern Finland). Thus, in the early summer the weather was good for holidaymakers but less so for farmers. Hay was harvested under almost ideal conditions, except in northern Finland, although the yield suffered to some extent from the drought in the early summer.

2.2. Areas and yields

Arable land has declined annually by around 20,000 hectares. This was the case in 1986, too. Total arable land decreased by 18,500 hectares or 0.8%. The area under cultivation was reduced even more, by 49,000 hectares. Fallowing increased by 34,000 hectares as a result of fallowing contracts, which affected 60,000 hectares; 44,000 hectares were fallowed without contracts. Another 111,400 hectares were uncultivated, which was slightly more than in the previous year. The soil bank system now covers only 19,200 hectares. The increase in the total uncultivated area indicates that the land released from annulled contracts tends to remain out of production.

Feed grain was mainly affected by the decline in the cultivated area. The area under rye decreased slightly, but the area under spring wheat increased a little, although not as much as would be required to achieve self-sufficiency in bread grain. The area under barley in particular declined substantially (48,200 hectares).

Table 4. The harvested areas and yields of main crops in 1985 and 1986.

	1985			1986		
	Area	Yield		Area	Yield	
	1000 ha	100 kg/ha	total mill.kg	1000 ha	100 kg/ha	total mill.kg
Winter wheat	15.6	31.2	48.6	15.3	36.1	55.3
Spring wheat	141.4	30.0	423.5	150.5	31.5	473.8
Rye	30.9	23.7	71.8	26.6	26.6	70.6
Barley	645.7	28.7	1853.8	589.4	29.1	1713.8
Oats	411.3	29.6	1217.8	403.2	29.1	1174.5
Potatoes	39.4	179.6	707.8	39.4	196.2	773.2
Sugar beet	31.2	237.0	739.4	29.1	272.3	792.2
Hay	397.7	41.6	1654.1	387.4	40.4	1564.1
Silage	222.9	204.2	4552.5	231.7	214.2	4962.9
Oil seeds	57.7	15.5	89.3	74.8	16.6	123.9
Other crops	43.1			40.6		
Total	2036.9	2649[1]	5323[2]	1988.0	2663[1]	5310[2]
Unharvested				13.0		
Pasture	169.8			156.6		
Fallow	69.7			103.7		
Soil bank	26.4			19.1		
Other land	107.6			111.4		
Total hectarage	2410.4			2391.9		

[1] *f.u./ha without straw,* [2] *mill. f.u. without straw.*

The weather conditions during harvesting were difficult in places and consequently about 13,000 hectares of grain (mainly barley and oats) remained unharvested. Nevertheless, the quality of the grain was good, indeed, the best so far in 1980s. The quality varied considerably, though. The drought in early summer led to better quality, but quantity suffered slightly from drought. However, feed grain is cultivated for its energy content, and protein is supplemented with essential protein crops. Hence, the overall goal is a high yield per hectare and not a rise in protein content. The total grain yield was 3520 mill.kg, or 122 mill.kg less than the previous year.

The area under *wheat* has increased almost to the self-sufficiency requirement. This area continued to increase last year, and thus the total yield of wheat was slightly higher than in the

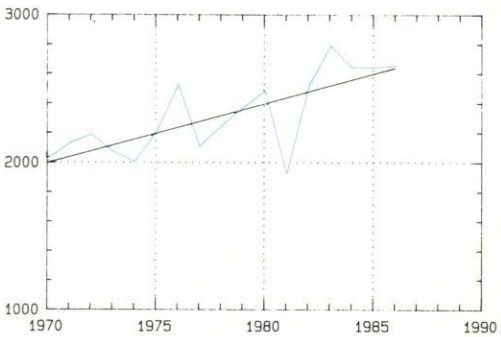

Figure 3. The total yield, without straw, in feed units per hectare in 1970—86.

previous year. The yield hectare was somewhat below the trend yield. The yield of *rye* almost equalled that of 1985. This is inadequate for domestic consumption which is around 100 mill.kg.

Feed grain was affected by the most significant changes. The area under barley in particular was reduced substantially (7.5 %). As the yield of oats was lower than in the previous year (and also below the trend yield), the yield of feed grain was 134.3 mill.kg less than in the previous year. The surplus of feed grain is estimated to be 510 mill.kg, of which 70 mill.kg is for domestic consumption, being used for feed for fur-bearing animals or for the needs of industry. The export requirement is then 440 mill.kg.

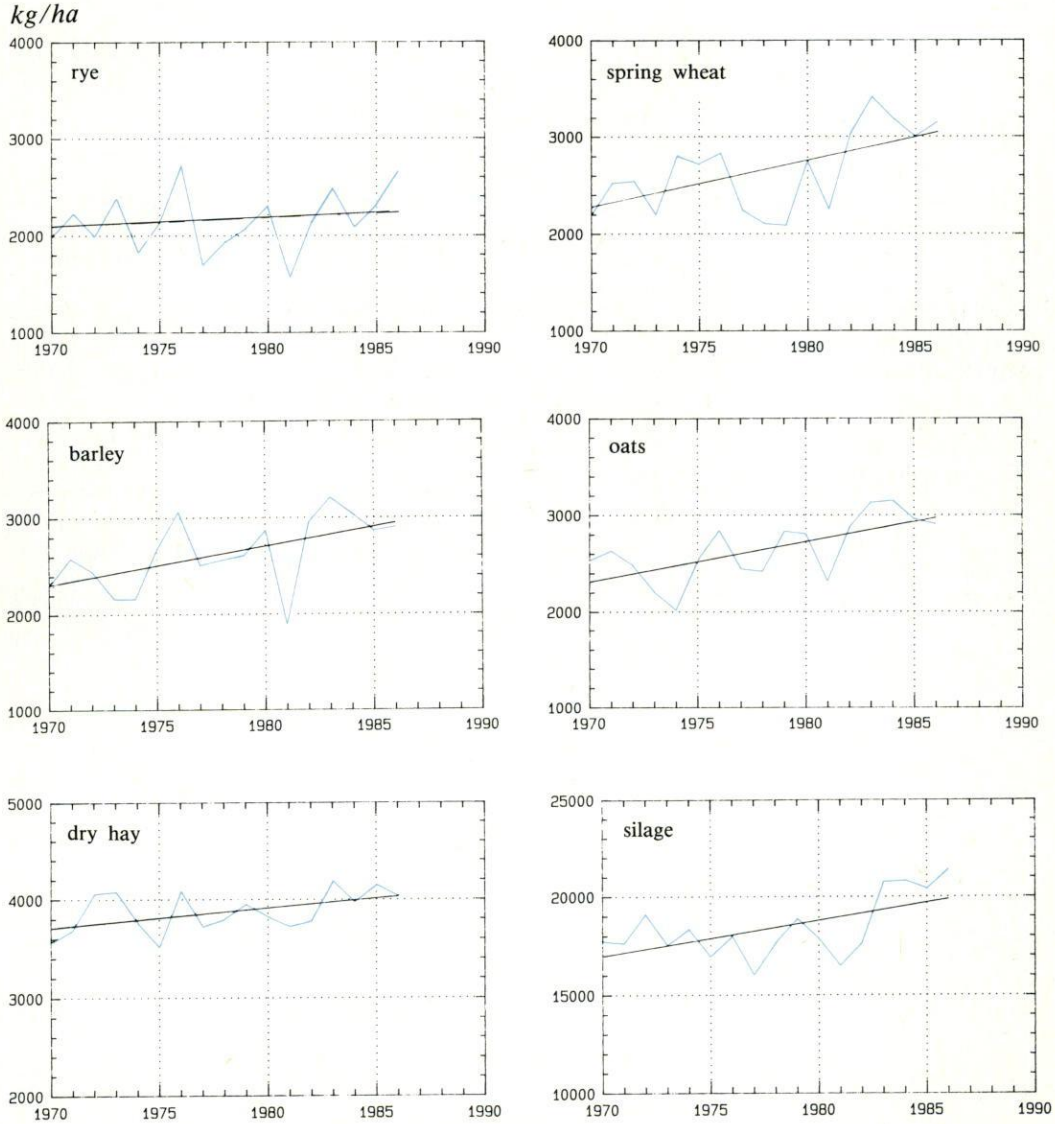

Figure 4. Yields of main crops in 1970—86.

The average yield per hectare of *potatoes* was considerably higher than it has been for years. Consequently, the total yield increased to 773 mill.kg, which is more than enough for domestic consumption. The yield of sugarbeet was also good, even though the area under cultivation decreased slightly.

The area under *oil plants* increased by 30% in 1986. The average yield per hectare almost equalled the long term trend, and so the production of oil plants reached an all time record. The volume of vegetable oils exceeds domestic need, but all the oil seed meal can be consumed in Finland.

Measured in feed units, the *total yield* was 5310 mill. f.u. (without straw), or about the same as the previous year. The total figure was raised slightly since the compilation of statistics for silage was revised. The average yield per hectare was 2663 f.u., which is somewhat greater than in 1985. As a whole, the yield was normal or in accordance with the long term trend (see Figure 3).

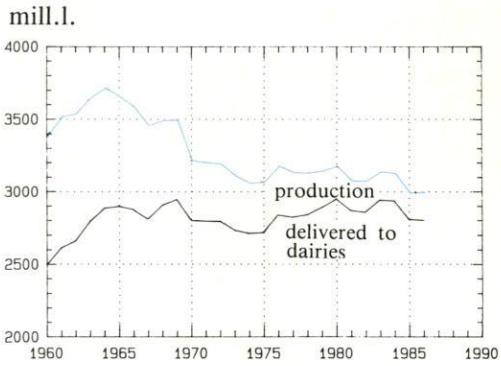

Figure 5. Milk production and the quantity of milk delivered to dairies in 1960—86.

3. Animal production

Every effort was made to restrict animal production in order to reduce exports. Production figures thus show a downward trend.

Milk production decreased slightly in 1986. At the beginning of the year production decreased by slightly less than 2% but at the end of the year production was above the level of the previous year. Because there are milk quotas for each farm (see section 10.2) production cannot really be increased, but reduction is not necessarily very fast either. Milk production is, however, expected to decline slightly in 1987. The production ceiling is also forcing production in this direction.

The limits for milk production have been set on the basis of the amount of milk delivered to dairies. Because consumption of milk on farms is very small, the variations in both total production and the amount of milk delivered to dairies are the same size and vary in the same direction. The production ceiling was still exceeded by 75 mill. litres last year. Consequently, pressures to decrease production are still in operation.

Beef production has been rising continuously in recent years in spite of a

Table 5. Animal husbandry in 1979—86.

		1979	1980	1981	1982	1983	1984	1985	1986[e]
Milk,	mill.l	3141	3174	3073	3068	3136	3124	2990	2970
Dairy milk,	"	2891	2949	2868	2858	2943	2935	2805	2803
Beer,	mill.kg	110	114	122	117	118	124	126	124
Pork	"	164	169	180	181	177	171	173	173
Eggs	"	76	79	80	82	83	88	87	84
Poultry	"	14	15	17	17	18	20	21	22
Other meat	"	2	2	2	2	2	2	2	2

decline in the number of dairy cows. Exports also clearly exceed the export ceiling. Last year, production began to fall. This trend is expected to continue in 1987. In the long run, production can be expected decline to a level of 100—110 mill.kg.

Pork production remained at the same level as the previous year. The need for exports has been low and, so far, the market situation has been good. Contracts for reducing pork production are in force to some degree but they will be annulled during 1987. Pressures to increase production are noticeable even though the growth in consumption allows only a slight production increase.

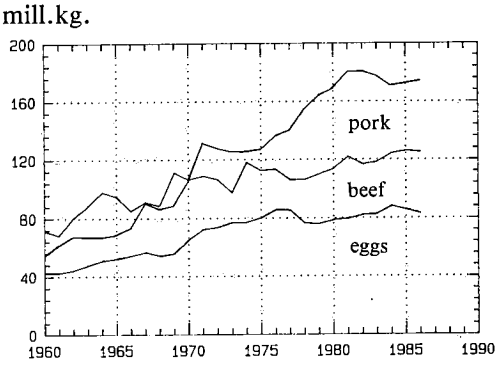

Figure 6. Production of beef, pork and eggs in 1960—86.

Egg production declined by about 3 mill. kg, or 4%, last year. This is probably due to the dual price system (see section 10.3), which came into effect at the beginning of 1986 and makes production above quota levels unprofitable. Because the establishment of new production units is prohibited and some old ones are closing down, the result will be a reduction in production. This trend is expected to continue in 1987, though at a slower rate.

Poultry production remained at the level of the previous year. Growth in production has generally been steady and markets have been in equilibrium. Production is based on contracts and thus can be regulated according to growth in demand. This is a good example for decision makers of how markets can be balanced. Foreign competition has certainly been curtailed, but probably for good reason.

The *other meat* produced consists of mutton, reindeer and horsemeat. Production of mutton in Finland is small in spite of all efforts to stimulate it. The influx of elk meat confuses the meat markets each autumn to some extent. Last year the supply was 7.6 mill. kg of meat.

4. Consumption

Consumption of agricultural products does not fluctuate greatly. Consumption cannot grow in terms of energy, rather it tends to decrease. In this respect the Finnish consumption is astonishingly low, being about 2,900 kcal/day (12,000 kJ/day). In other European countries this figure is about 3,000—3,200 kcal/day. Finns hardly eat less than people in other industrialized countries do so the difference is probably caused by the method used to compile the statistics. Certainly, efforts are made to use the same standards in drawing up consumption figures in all countries.

Dairy products are generally consumed less, as far as butter and liquid milk products are concerned, whereas consumption of cheese is growing. This applied to last year as well. Consumption of butter declined by approximately 7% and is now 11 kg/capita. This figure includes the butter fat from butter mixes.

The consumption of margarine, which competes with butter remained at the previous level, or 7.2 kg/capita.

Consumption of milk decreased by 2%. The use of milk as a table drink is diminishing as canteen meals grow in popularity. It seems probable that other farm products will substitute for milk as an energy source, and consequently the decrease in milk consumption will not have an adverse effect on agricultural production in general.

Cheese consumption increased considerably (by about 8%), and this development is supposed to continue in the future, too. Cheese is still a product whose income elasticity is high.

Table 6. Milk consumption per capita in 1975—86.

	Liquid milk litres	Butter kg	Cheese[1] kg	Margarine kg
1975	282.4	12.9	6.1	8.5
1976	278.6	12.7	6.2	8.3
1977	273.4	12.2	6.2	8.0
1978	270.0	11.9	6.5	8.3
1979	266.9	12.5	6.8	7.9
1980	263.3	11.8	7.2	7.8
1981	255.3	12.4	7.4	7.5
1982	253.1	12.3	8.2	7.7
1983	243.8	11.9	8.3	7.1
1984	240.5	11.4	8.6	6.8
1985	235.8	12.2	8.9	7.1
1986[e]	231.3	11.4	9.6	7.2

[1] *Without curd*

Table 7. Consumption of meat and eggs in 1975—86, kg/capita.

	Beef	Pork	Poultry	Eggs
1975	24.2	26.7	2.4	10.9
1976	23.7	25.9	2.4	11.0
1977	22.7	27.3	2.7	10.9
1978	22.1	27.8	2.5	11.6
1979	23.4	28.9	2.9	11.6
1980	23.2	29.5	3.2	11.7
1981	22.4	29.3	3.5	10.7
1982	22.0	29.6	3.4	10.6
1983	21.1	30.9	3.8	10.6
1984	21.7	31.0	4.0	10.9
1985	21.3	32.0	4.2	11.1
1986[e]	21.2	32.8	4.5	11.7

Pork consumption increased by about 3% last year, which was in accordance with forecasts. Pork consumption is expected to grow close to 40 kg/capita in the future. *Beef consumption* remained at the earlier level, but it is forecast to fall because the domestic supply will probably decline sligtly as a consequence of the decreasing number of dairy cows. *Poultry consumption* is steadily growing, but the level of consumption is still very low compared with the international level. Finns are not yet used to eating chicken, and, furthermore, consumer habits are changing slowly.

Egg consumption increased considerably (by about 6%) in 1986, counter to the forecasts of stagnation. The increase in consumption is a result of strong marketing and a decrease in prices due to the introduction of the dual price system for eggs. From now on, however, consumption is supposed to remain at the present level, unless some powerful means to increase consumption are brought into use. Among all farm products the overproduction of eggs is the largest. Thus, in addition to restrictions on production, and attempt should be made to increase consumption in order to reach the market equilibrium.

5. Foreign trade

Although agricultural overproduction is the most problematic aspect of agricultural policy, the value of agricultural imports is twice the value of exports (Table 8). There is no need to import basic food. Imports consist of various items, of which coffee, fruits and tobacco are the most significant. Protein feed is also imported since not all the high quality protein can be produced domestically. Some of the imports are for feed for fur-bearing animals and some are raw material for export industries such as the tobacco and confectionary industries.

The value of exports fell in the first nine months. Exports of eggs decreased considerably, by about 24%. Exports of pork declined to some extent, too, whereas the exports of milk products remained at the previous year's level. Exports of grain have grown considerably in recent years. About 650 mill. kg of feed grains were exported last year.

Table 8. Exports and imports of agricultural products in 1975—86, FIM mill.

	Exports	Imports			
	Total	Total	Coffee and tea	Fruits	Beverages and tobacco
1975	719.8	2472.3	368.5	341.4	184.9
1976	921.4	2332.4	692.3	366.0	155.7
1977	1303.3	2899.9	1012.9	404.1	166.0
1978	1127.3	3107.2	904.4	447.1	226.9
1979	1284.2	3679.9	932.7	533.9	226.7
1980	1669.9	4598.1	1097.1	638.0	255.6
1981	2639.4	4462.2	825.4	688.9	335.1
1982	2151.9	5308.9	990.5	710.6	286.0
1983	2673.4	4888.2	1065.7	752.2	332.7
1984	2994.1	5226.5	1360.5	775.1	342.3
1985	2876.2	5388.9	1125.5	814.0	358.9
1985[b]	2156.7	4145.9	1003.8	596.8	266.4
1986[b]	1636.9	4237.9	1106.0	591.2	302.2

a) January—September

Table 9. Exports of some agricultural products in 1975—86, mill. kg.

	Butter	Cheese	Milk powder	Pork	Beef	Eggs	Grains
1975	11.9	19.9	20.1	2.1	1.6	28.1	
1976	21.2	28.6	22.0	12.1	2.4	34.4	367.5
1977	15.6	32.8	29.1	11.1	0.5	33.8	693.1
1978	14.9	36.1	27.4	22.2	0.8	22.2	148.4
1979	17.4	40.3	28.1	27.2	0.3	21.0	39.8
1980	9.8	40.3	30.1	25.9	0.9	25.8	—
1981	14.7	36.8	28.0	40.6	16.0	27.5	—
1982	8.8	33.3	22.6	34.4	8.5	30.1	—
1983	26.6	32.3	39.1	26.6	16.7	32.2	20.0
1984	20.0	37.0	41.6	20.8	19.2	35.4	781.1
1985	18.6	37.0	40.1	17.8	21.5	32.9	596.4
1986[e]	18	38	40	13	18	25	650

As world prices have been low, export subsidies increased last year; this is putting heavy pressure on domestic agricultural policy, and thus, supply control is dominating policy measures and hampering other necessary actions such as structural policy.

6. Agricultural incomes settlement

Agricultural producer prices are set twice a year in connection with farm incomes negotiations. These negotiations are ba-

sed on the Farm Incomes Act, which defines the general rules for the setting of prices. According to the law, the negotiations are held between the State and the producers' organizations.

There are two phases in the negotiations. In the *first phase* farmers are compensated for the increases in costs caused by higher input prices. In order to determine the size of this compensation, the agricultural price council prepares a total calculation of the returns and expenditure in agriculture based on the average quantities of the last three calendar years. The prices used are those of the lst settlement and those current at the moment of price setting.

The law states that farmers shall be fully compensated for this increase by a rise in the target prices, thus ensuring that their additional returns correspond exactly to the increase in costs.

Target prices are set for milk, pork, beef, mutton, eggs, rye, wheat, feed barley and feed oats. Producer prices for other products may fluctuate freely, but changes in the prices are taken into account in the total calculation. Target prices should be fully realized. In connection with the spring settlement a calculation is made showing deviations in producer prices from the target prices; shortfalls are credited or excesses subtracted. The following year this correction is returned (in reverse of course) to the prices. The procedure means that, in the long run, farmers receive exactly the prices set. Retroactive accounts at the end of the year are also included in the price settlement. Thus, it is not possible for farmers to receive additional income in that way.

In the *second phase* of the negotiations farm income is raised. The farm income is the compensation a farmer gets for his own work and capital (interest on debts is included in the cost calculation). In earlier legislation the increase in farm income was linked to trends in general earnings or in the income of rural employees. Farm income is no longer linked to any particular indicator, but negotiators can freely decide upon a suitable increase. In practice, the general labour market settlements are still followed in such a way that agriculture is considered a kind of low wage sector, and increases in income have been determined in the same way as in other sectors of the economy. The decision is usually based on a calculated hourly wage. The overall increase in farm income is then determined for all branches of agriculture by taking into account the total labour input into the sector. Since the settlement is always an outcome of negotiations it cannot be described later by any particular formula.

6.1. Spring price settlement

General two-year agreements on wages and salaries have been made in Finland in recent years. In 1986 new agreements were negotiated in most sectors of the economy. It was difficult for the labour organizations to accept the low agreements which were considered necessary to keep inflation low. Negotiations were slow and there were many strikes during the spring before a final two-year agreement was reached. Wages and salaries were raised by 2.4% for 1986 and 2.6% for 1987. Sectoral wage increases are usually higher than the framework agreements described above. Actual increases in wages and salaries depend on wage drift.

Agriculture has usually been tied to general wage negotiations since the main labour organizations want to know what the inflationary pressures will be after all the agreements have been concluded. On the other hand, farmers do not want to make a worse agreement than the others and so favour the general agreements. The price agreement for agriculture is usually made at the same time as the other agreements or after them.

Changes in costs are reviewed twice a year. The increase in the prices of inputs was so small in autumn 1985 that no adjustments in producer prices were made. Therefore, the cost compensation calculation in spring 1986 concerned the whole price year from January 1985 to

Table 10. Income and cost calculation for the spring decision 1986.

	Price level in spring 1985 FIM mill.	Price level in spring 1986 FIM mill.	Change %
Gross return			
Target price products	16 664.8	16 664.8	
Other products	1 943.2	2 150.6	10.7
Rent incomes	583.2	611.4	4.8
Retroactive payments	570.1	593.9	4.2
Price support	2 049.3	2 062.3	0.6
Total	21 810.6	22 083.0	1.2
Excess over target prices in 1984, repayment	15.9		
Total return	21 826.5	22 083.0	
Costs			
Fertilizers	1 590.8	1 626.9	2.2
Purchased feed	3 061.4	2 961.4	—3.3
Wages	406.5	454.0	11.7
Machinery and implements	3 417.6	3 581.7	4.8
Buildings	1 383.1	1 444.0	4.4
Interest payments	1 114.6	1 050.5	—5.8
General	1 125.5	1 130.0	4.0
Rent	518.1	539.5	4.1
Miscellaneous	2 327.1	2 299.1	—1.2
Total	14 944.7	15 087.1	1.0
Farm income	6 881.8	6 995.9	1.7
Change in farm income		114.1	

Other items and the summary:	mill.FIM
Change in base level	—114.1
Excess over target prices	—116.7
Increase in grain prices in 1985	— 49.8
Others	+ 50.7
Cost calculation, total	—229.9

January 1986. The rise in input prices was relatively low or about 1.0% (FIM 142.4 mill.). The prices of feeds had fallen by 3.3%, the drop in interest rates was small and energy costs had fallen slightly, too.

The actual prices of purchased feed and fertilizers paid by farmers differ markedly from the prices given in price lists and from those used in cost calculations. Therefore, the price commission decided to use the wholesale price for feed and the new basic price for fertilizers. These prices are 6—10% lower than the previous prices. This has an effect on cost compensation.

The prices of products other than target price products are freely determined by market forces, but these changes are taken into account in the

total calculation, the costs of which concern the whole of agriculture and not just target price products.

The increase in the total revenue from non-target price products was FIM 256.5 mill. which had to be deducted from the price increase. Since the producer prices had exceeded target prices by FIM 116.7 the total cost calculation showed that the target prices had to be lowered by FIM 230.8 mill. (142.4—256.5—116.7 mill.).

Some other items still had to be taken into account, all these items together indicated a decrease of FIM 229.9 mill. in target prices.

The cost calculation indicated a slight decline in producer prices. This was a new situation for the farmers' organizations: should they accept a fall in prices? It would have been difficult to explain a solution of that kind to farmers. Even a zero solution, i.e. no increase in prices, would have been unusual, since other sectors obtained an increase in wages and salaries.

After long negotiations farm income was raised by FIM 417.3 mill., which meant an increase in farm income of 6.1%. This figure is higher than the general agreement of 2.4%. There is, however, no wage or price drift in agriculture as in other sectors, since the excess of producer prices over target prices is subtracted in the following price solution. Therefore, the formal increase in farm income may be higher than the general wage agreement even though an increase in productivity may also raise farm income. In any case the solution was quite good for agriculture.

Some social policy measures were taken in connection with the price solution. These included lengthening the summer holiday and substitute help the costs of which are covered partly by the state and partly by the farmers themselves. Since, in practice, the state pays these benefits, the contribution by farmers is taken into account by lowering target prices by FIM 55.4 mill. Thus, target prices and price policy support could be raised by FIM 132.0 mill.:

	Mill. FIM
farm income increase	417.3
cost calculation	—229.9
social costs	— 55.4
total	132.0

This is only 0.6% of the total value of agricultural production. The increase was achieved by raising target prices by FIM 123.3 mill. and the price policy support by FIM 8.7 mill. Target prices were raised by 0 - 2.3% except the producer price of mutton which was lowered by 3.8%, since its actual price had persistently been far below the target price (see table 11).

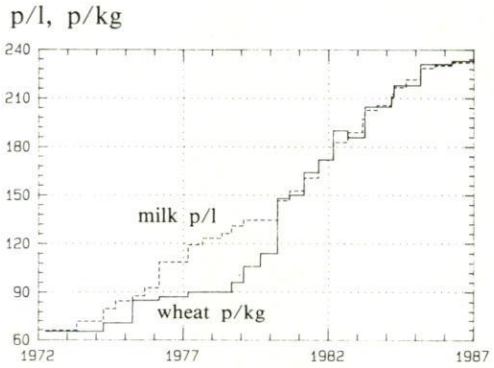

Figure 7. Target prices of milk and wheat in 1971—86.

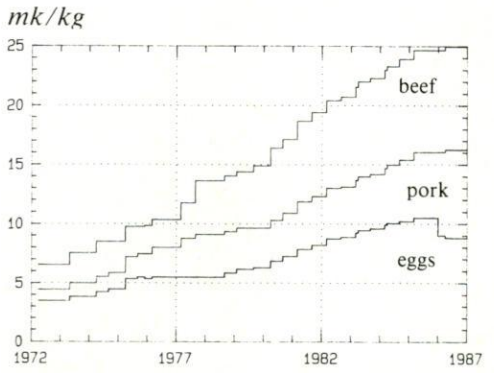

Figure 8. Target prices of beef, pork and eggs in 1971—86.

The price agreement includes an index clause as do the agreements for other sectors. If the consumer price index were to rise by more than 2.1% between February 1986 and December 1986, farm incomes would be raised by the excess percentage. However, no excess did occur. There is a corresponding index clause for 1987. If consumer prices rise by more than 3.4% between December 1986 and December 1987, farm incomes will be raised accordingly.

Table 11. Target prices 1984—86[1)].

		1.4.84	1.9.84	1.3.85	1.4.86	Change %
Rye	mk/kg	2.45	2.45	2.64	2.70	2.3
Wheat	"	2.18	2.18	2.31	2.33	0.9
Feed barley	"	1.61	1.61	1.70	1.70	0
Feed oats	"	1.50	1.50	1.58	1.58	0
Milk	p/l	2.167	2.216	2.286[2]	2.32	1.5
Beef	mk/kg	23.31	23.91	24.67	24.97	1.2
Pork	"	14.98	15.38	16.05	16.25	1.2
Eggs	"	10.05	10.20	10.50	8.80[3]	
Mutton	"	25.60	26.15	26.15	25.15	—3.8

1) Also see appendix 7. 2) The subsidy on milk was reduced by 1.5 p/l from Sept. 1, 1985, when the target price was raised correspondingly by 1.5 p/l. 3) The target price of eggs was reduced by 1.5 mk/kg when the dual-price system for eggs was adopted (see section 10.3).

6.2. Autumn price settlement

The autumn price settlement has usually involved an increase in target prices. This time the cost calculation (which strictly speaking also includes items other than merely cost items) indicated a drop which approached the limit of 2% set by the Farm Incomes Act. Target prices are not adjusted if costs change by less than 2% of the total value of the target price products and the price policy support. In the previous act the limit was 1%, but since labour market organizations wanted to avoid any increase in prices due to the index clause on wages and salaries, the limit was raised to 2%. The decline in oil prices also pushed down fertilizer prices by about 7%, and since the wholesale price index, which is applied for several cost items, also fell by about 5% (obviously owing to the price of oil), the prices of inputs fell, according to the cost calculation of the price council, by 2.3%, which is 1.92% of the price level implied by the act.

The cost calculation to be made by the price council is quite well defined in the act, but in some cases the content of the act is not clear. The act cannot be fully implemented because of a shortage, lack or late compilation of statistics. Any errors are corrected in due time, since changes in costs are calculated on the basis of the prices used in the previous calculation, whether they were right or wrong. However, a completely inaccurate price level or calculation principle would lead to incorrect implementation of the act.

Small errors are not usually so critical, except for the 2% limit. Here, a small error may cause or prevent a change in target prices. It has, however, a sizeable effect on farmers' incomes. A decline in costs by 2% represents a drop of FIM 359 mill., or about 5% of farmers' incomes. A decline in costs of somewhat over 2% would represent a 5% drop in incomes for six months, or 2.5% at the annual level. This figure is the same as the general increase in wages and salaries

in the spring. When the act was changed, or the limit raised from 1% to 2%, the decision was based on general considerations of economic policy, but the effect on farmers' incomes was totally neglected. General economic policy may sometimes overlook the requirements of sectoral policy. This time, however, farmers gained from the change in the act, even though the intention was to protect wage earners.

6.3. Producer prices

The target prices (see Appendix 7) do not give a fully accurate picture of the price farmers receive for their products, when all the price subsidies are included. The average production subsidy on milk in 1984, for instance, was 20 p/litre, and other price policy support 8 p/l. The price paid for milk was, therefore, 2.60 mk/l.

The producer prices, including all subsidies, of the main products in 1975—86 are presented in Table 12. Export fees have been subtracted from the figures. Exact figures for 1986 are not yet available.

Table 12. The producer prices paid for the most important agricultural products, including all subsidies, in 1975—86.

Year	Milk p/l	Beef mk/kg	Pork mk/kg	Eggs mk/kg
1975	115.0	11.15	7.60	5.25
1976	137.1	11.50	7.90	5.53
1977	144.8	14.27	8.75	5.40
1978	155.3	14.66	9.07	5.78
1979	167.8	15.54	9.42	6.42
1980	184.5	17.69	10.13	7.34
1981	202.4	19.59	11.42	8.48
1982	228.5	22.22	12.68	9.33
1983	247.0	24.01	13.68	9.99
1984	259.8	25.84	14.98	10.30
1985	272.8	27.62	16.17	10.73
1986[c]	271.8	28.30	16.50	10.74

7. Income trends in agriculture

7.1. Income disparities

Farmers' incomes can be monitored using two different statistical sources: the national incomes account and tax statistics. The former describes income trends in the whole agricultural sector, and if it is divided by the total labour input, the wage per hour can be calculated, albeit with many reservations.

Tax statistics include more detailed information on incomes for various types of farms, from which either yearly earnings or hourly wage can then be calculated. The statistics on labour input are, however, insufficient for a detailed analysis of this case. Nevertheless, despite the difficulties, estimates have been made of the incomes various lines of production.

The Agricultural Economics Research Institute has continued its study of comparative incomes, and the figures for 1984 are now available (see Table 13).

Table 13. Distribution of income of farming families according to source of income in 1984.

	Income FIM/farm	%
Agriculture	49 172	60.9
Forestry	8 706	10.8
Wages	18 842	23.3
Other	4 016	5.0
Total	80 736	100.0

Source: Agr. Econ. Res. Inst.

According to this study, which is based on tax statistics, farming families received 61% of their income from agriculture in 1984 (Table 13), 23% as wages and 11% from forestry. This calculation includes 131,000 farms. The labour input in agriculture was 2,935 hours per farm. The farms had an average of 14.4 ha of

arable land and 35.5 ha of forest land. Incomes from forestry are calculated according to the forest taxation figures, so they are not real incomes.

In the aforementioned study the classification of farms is made in many different ways. One main classification method is based on distribution of taxable net incomes. A farmer is considered a full-time farmer, if his income from agriculture and forestry is at least 75% of all income. About 53,300 farms belonged to this category in 1984 and they had on the average 19.3 ha of arable land. The farm income was FIM 42,826 per person on those farms whereas an industrial worker received at the same time FIM 61,494 as wages. In general, the farm income rises as the farm size increases. The income level of industrial workers is reached on farms with about 30 ha of arable land in the case of full-time farmers and 30—50 ha of arable land if all farmers are considered. It is noteworthy that in agriculture an annual labour input is more than 2,050 hours per person, whereas in industry it has remained below 1,700 hours per worker.

7.2. Income in 1986

It is still difficult to make any reliable statistical estimates of the income trends of farmers in 1986; all the information on quantities and prices needed for this purpose is still preliminary. If this information is used to calculate incomes and costs, an error may accumulate in the part referring to farm income. Since farm income is the difference between gross returns and costs, a calculational error in this is relatively greater than in either component separately. Nevertheless, in the following a rough preliminary estimate of trends in farm income is given according to the overall calculation of the institute. Table 14 gives two figures for 1985 owing to the revision of the total calculation. The input prices for fertilizers and feed used to be their list prices. In fact, farmers get a sizeable discount on these prices, which has now been taken into account in the calculation.

According to the preliminary estimate, farm income rose by about 8% in 1986. The favourable trend in incomes thus continued, albeit at a slower rate than in

Table 14. Trends in farm incomes in 1975—86, FIM mill. and as an index.

	Gross return	Total costs	Farm income	Index
1975	8 099.4	4 978.0	3 121.4	100.0
1976	9 727.1	5 763.8	3 508.3	112.4
1977	9 977.2	6 234.7	3 742.5	119.9
1978	10 246.2	7 199.0	3 047.2	97.6
1979	11 147.4	8 166.6	2 980.8	95.5
1980	13 176.1	9 803.4	3 372.7	108.1
1981	14 760.4	11 345.7	3 414.7	109.4
1982	17 594.1	13 222.1	4 372.0	140.1
1983	19 911.5	13 897.3	6 014.2	192.7
1984	21 011.1	14 637.5	6 373.6	204.2
1985	21 919.8	15 186.8	6 733.0	215.7
1985[1]	21 919.8	14 865.6	7 054.2	100.0
1986e	22 535.9	14 955.2	7 578.1	107.4

[1] *New procedure for cost calculation*
Source: Agr. Econ. Res. Inst.

the preceding years. The producer prices rose at an annual level by 1.5%, but the prices of production inputs fell by 1.9%. Changes in quantities of both production and costs were small. Animal production decreased slightly whereas the quantity of grain delivered to markets grew somewhat. Of the costs it is worth mentioning that purchases of feed and fertilizers increased slightly last year.

The increase in gross returns was 2.9% but in costs only 0.6%, and consequently farm income rose by 7.6%. As it is earlier mentioned, this is a very preliminary estimate, which is likely to change as statistics become more accurate.

III
AGRICULTURAL POLICY

8. General

One characteristic of discussions on agricultural policy during the past year has been the strong attack on agriculture, especially against the high prices of agricultural products. The discussion started when the Ministry of Trade and Industry published its report on price relations. Efforts have been made in the national economy to achieve freer price determination and, at the same time, to do away with all kinds of dependences. Control of price determination was started during the high inflation period in the 1970s. Prices were frozen or made subject to supervision. The current trend is to get rid of these dependences; free competition is considered the best way of regulating prices.

In this context agricultural price mechanisms were also criticized for being too inflexible and leading to unnecessary price rises. Apart from agriculture, the food processing industry was also criticized. The report claimed that production margins were too high because of lack of competition. It was proposed that the whole agricultural income system should be reorganized.

The debate on food prices continued throughout the year. Naturally, agriculture was forced onto the defensive. In the agricultural income negotiations, however, it was able to extend the agricultural incomes act by two more years, and thus it will remain in force until the end of the 1980s. The debate went on until the end of the year but criticism of the price mechanism ended when the extension of the law made it clear that nothing could be done for a long time. However, agriculture had to "pay" for keeping the income act in force by lowering production ceilings. This will, of course, have an effect on the development of agricultural income.

Restrictions on production were also discussed throughout the year. Overproduction did not increase this year, but the drop in world market prices has increased the need for export subsidies. Attempts have been made to increase restrictions. A dual price system for eggs came into effect at the beginning of 1986. Other measures have been made more effective. An attempt was made to introduce legislation allowing land clearing only with a special permit, but this law will probably never come into force.

International attitudes have also been to the fore during the year, but they have affected decision-makers more than farmers. The pressures against protective agricultural policy have increased. Within GATT the feasibility of removing obstacles to trade has been discussed for many years. The big exporting countries such as the USA, Canada and Australia, in particular, but also some other exporting countries, have requested liberalization of trade. They suggest that export subsidies should be abolished and import protection reduced. So far there has been no progress in these negotiations, but discussion will continue in the next round of GATT talks, which has already begun. The main topic has not changed, but the inclusion of other sectors and issues may lead to some progress in the negotiations on agricultural trade.

These issues are continuously present in the planning of agricultural policy. Long term agricultural policy is being prepared by the Agriculture 2000 Com-

mittee, which was supposed to complete its report by the end of 1986. It did not do so, however. From what the representatives of agriculture have said it is clear that agriculture is worried about both the internal and external pressures, and that it is prepared to accommodate itself to them, as long as the proper means and a suitable schedule are agreed on.

In the following, some of the most important aspects of agricultural policy are dealt with in brief. No attempt has been made to take all the issues into consideration, and thus other sources or earlier annual reviews should be consulted for further information. Pricing has already been partly dealt with in Chapter 6.

9. Revision of Farm Incomes Act

The revision of the Farm Incomes Act was included in the overall agricultural settlement in spring 1986, together with the agricultural incomes settlement and the restrictions on land clearance. However, no final decisions have been made on the restrictions on land clearance.

It made sense to deal with all these issues together because in this way at least an attempt was made to achieve an integrated agricultural policy, instead of dealing with one act at a time, as is usual.

Actually, the Farm Incomes Act covers most aspects of agricultural policy because, in addition to income targets, it also includes production and export ceilings, which in fact determine the goals for production. Of the important aspects of agricultural policy only structural policy remains outside the scope of the law: unfortunately, it is also difficult to integrate the goals of structural policy with the other goals.

The new law will be in force during the pricing years 1986/87—1989/90. The previous law was still to have been in force in 1987/88, and thus it was extended for two more years, but it came into effect, with some alterations, in autumn 1986.

To compensate for the revision of the law, agriculture was forced to accept a lowering of production ceilings. The state will curtail its responsibility for the cost of exports, or at least for the volume of exports (Table 15, Chapter 10.). The volume of the reduction in FIM depends on the development of world market prices as compared with producer prices in Finland.

The production ceiling for milk will be lowered by 105 million litres over four years. According to a rough estimate, if production remains at the present level, exceeding the production ceiling by 105 million litres, agriculture will suffer a loss of about FIM 210 million. Likewise, lowering the production ceilings for meat and eggs will cause a loss of about FIM 100 million. The production ceiling for feed grain will be raised slightly.

According to the previous law, the marketing fees collected from agriculture could not exceed 10% of agricultural income. In the new law this ceiling has been raised to 13% in 1988 and 1989. Last year it looked as if the ceiling would be reached, but the latest figures show that marketing fees did not even come close to the limit. In spite of all the doubts, the means of restricting production have been effective.

A further change was the paragraph on the implementation of the autumn price settlement. According to the previous law, the target prices should not be changed, if the need for the change, according to the cost calculation, remained below 1%. In the new law the threshold is 2%.

10. Regulation of supply

In the following, the regulation of supply means directing, restricting and supporting production. During the past few years the focus has been on restricting production. Production has clearly exceeded domestic consumption and has even exceeded the production and export ceilings set for agriculture. A consider-

Table 15. Production ceiling for dairy milk (mill. litres) and export ceilings for other products (mill. kg) in 1982—89.

	1982	1983	1984	1985	1986	1987	1988	1989
Dairy milk	2675	2790	2760	2730	2710	2695	2660	2625
Pork	13	18	16	14	14	13	12	11
Beef		14	12	12	12	12	10	9
Eggs	12	17	15	13	12	11	10	9
Wheat	100	125						125
Feed grain	200				480	480	510	510

able amount has been collected in export cost charges from agriculture, which has lowered the income level of farmers by 5—7%.

The actual means of directing production are the price settlements made in the negotiations on agricultural income. However, these have been of very little importance, since price relations are hard to change because of the internal pressures within agriculture. In the following the focus is primarily on measures for reducing production and then on production support, which has also been implemented to some extent.

Table 15 presents the production ceilings for agriculture. Strictly speaking, they consist of the production ceilings for dairy milk and the export ceilings for meat, eggs and grain. For milk it is possible to talk about production ceilings, whereas for the other products domestic consumption and the export ceiling together constitute the production ceiling, up to which level farmers receive a full producer price. It would be profitable for agriculture if domestic consumption of grain, meat and eggs were as high as possible. This does not apply to milk because only the state would benefit from an increase in milk consumption. In fact, setting a production ceiling for milk is profitable for agriculture, as the total consumption of milk tends to decrease all the time. Consequently, the proportion of milk export costs for which the state is responsible may increase, whereas the state's responsibility for other products is determined solely by export ceilings.

The revised Farm Incomes Act determines the proportion of the export of overproduction which is to be paid by agriculture up to 1989. The ceilings for animal products will be slightly lower, but those for grain will be higher because there is to be a separate export ceiling for wheat. In terms of total agricultural production the ceilings are slightly higher.

As Table 16 shows, the production ceilings for milk, beef and eggs have been exceeded. Altogether, 650 mill.kg grain had to be exported last year, which means that the export ceiling was exceeded by 170 mill.kg. For the first time agriculture was strained by the export of the overproduction of grain. In the last few years the state has also been forced to subsidize the export of grain much more than previously. This is a result of the good harvests of recent years.

Table 16 also gives an estimate of the proportion of export costs for which agriculture is responsible. In 1986 this was FIM 550 million, although the figure is probably too low. Estimating export cost charges is usually very difficult because they have to be settled at the beginning of each year or even at the end of the previous year on the basis of production forecasts. Consequently, the export cost charges of agriculture have to be corrected during the year, but they may still be too high or too low. The excess or shortfall will, however, be taken into account in the following year. In 1986 the collected charges corresponded to requirements fairly exactly, and thus the amount transferred to the next year remained small.

Table 16. Excess surpluses over export ceilings and the proportion of export costs borne by agriculture in 1981—86.

		1981	1982	1983	1984	1985	1986[e]
Dairy milk,	mill.l.	193	183	153	175	78	90
Pork	mill.kg	26.7	21.4	8.6	4.8	3.4	—1
Beef	"	—	—	2.7	7.2	8.9	6
Eggs	"	15.5	18.1	15.2	20.4	20.1	13
Bread grain	"	—	—	—	—	—	—
Feed grain	"	—	—	—	—	—	170
Export costs,	mill. FIM	229	206	380	452	482	550

The most important measures in reducing production are the *dual price systems for milk and eggs*. The former came into effect in 1985, the latter in 1986. They will be dealt with later.

In addition to these, there are various *voluntary systems*, for which an act was passed in 1983 (the Act on the regulation and balancing of agricultural production). On the basis of this act the government makes its annual decisions on measures to restrict production. These measures, formulated over a period of years, are:

— contracts to reduce agricultural production
— —"— animal production
— —"— milk production
— —"— pork production
— —"— egg production
— fallowing contracts and
— beef production contracts.

In 1986 the only new contracts made were those to reduce agricultural production and those for fallowing, whereas in animal production some earlier contracts are still in force.

Apart from the aforementioned acts and contracts, the Act on the *soil bank system* as well as the Act on *regulation of the establishment of large production units* were still in force. *Export cost charges* and the *tax on fertilizers and feed concentrates*, which are collected to finance excesses over production ceilings, should also help to curb overall agricultural production.

These measures are briefly reviewed below.

10.1. Restrictions on production

Record number, about 1,400, of *contracts to reduce agricultural production* were made in 1986. Contracts were made with older farmers, whereby the farmer had to stop agricultural production for five years for compensation amounting to about 20—35% of his previous income. The contracts made in 1983 and 1984, of which these are few, are still in force. Not many contracts of this kind have been made. Similar contracts were made in 1977—82 on the basis of paragraph 4 of the production change Act, many more of these have been made than of the aforementioned contracts. Altogether these contracts have reduced the total field area by 30,000 hectares and the number of dairy cows by 15,000, the milk production of which would have been about 83 million litres in 1986.

Contracts to decrease animal production are more limited than the aforementioned contracts, which concern overall production. These contracts were made in 1984. To join the system a farmer had to give up all animals causing overproduction for five years. In compensation he received 20—35% of his previous

income; 1380 contracts of this kind were made in 1984. In 1980—82 similar contracts were made on the basis of paragraph 4a of the production change Act. The effect of these contracts on production is estimated to be 3 mill.kg of pork, 1.3 mill.kg of eggs and 64 mill. litres of milk in 1986.

Contracts to decrease milk production (the milk bonus system) require a decrease in production of at least 15% (or 5000 litres) a year. The contract is made for three years, and in 1985 the compensation to farmers was 75—90 pennies per litre. At the end of 1986 these contracts covered 30,000 cows and 145 million litres of milk. The present drop in milk production is primarily a result of the milk bonus of 1984, whereas milk quotas have not been quite as effective as was expected (see Chapter 10.2.).

Contracts to decrease pork production were only made in 1983 for four years and they applied only to large pork producers, who had paid marketing fees. The contracts covered pork production of 7.6 million kg, which was also reflected as a reduction of almost corresponding size in total production. The compensation was paid in relation to previous income.

Contracts to decrease egg production, made in 1984, covered about 300,000 chickens. Their effect on production is almost 5 million kg a year. The contracts were made for four years, and farmers committed themselves to stopping production completely. Together with the contracts to decrease animal production, the measures to reduce egg production are estimated to decrease production by about 6 mill. kg a year.

Egg production is also reduced by *restricting hatchings*. For this purpose, general instructions on the number of hatching chickens have been issued. In 1986, hatchings were allowed to remain at the same level as the year before. During the past few years, expansion of hatcheries and setting up of new ones have been prohibited.

Fallowing contracts were again made in 1986. The area affected had to be at least one third (or at least 4 ha) of the total arable land of the farm and the contracts were made for one year. The compensation was FIM 1,100—1,500/ha. If the fallowed area was over 3/4 of the total area, the compensation was increased by FIM 300 ha. Contracts made in 1984 for three years were still in force in 1986. These covered about 60,000 ha. This can be compared with the total area in fallow, which was 103,700 ha in the summer 1986.

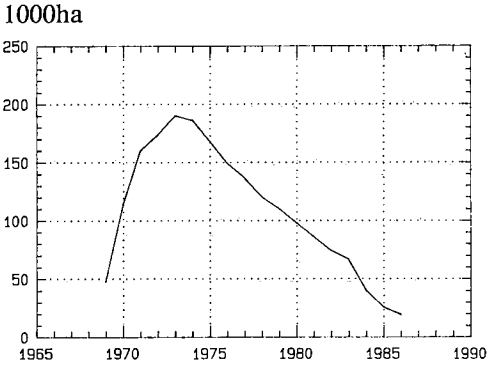

Figure 9. Field area in the soil bank at the end of June in 1970—1986.

The soil bank system was launched in 1969. At the peak in 1973, 205,000 ha were taken out of production. Last June the system covered only 19,100 ha. The maximum compensation was FIM 380/ha; this has not changed since 1981. The remaining area does not presumably have any potential use for production. In recent years uncultivated areas have expanded considerably, probably as a result of annulled contracts in the soil bank system. The system will be abolished in 1989.

Regulation of the establishment of large production units was continued in 1986. If applied strictly, this might become the most important means of curtailing production. A permit from the Board of Agriculture is required if a production unit is to accommodate more than 200 pigs, 1,000 hens, 30,000 chickens or 60 beef animals. In addition, a permit from the local authorities is required for the establishment of a production unit for 25 pigs, 100 hens or over

15,000 chickens. In 1986 permission was granted on condition that self-sufficiency in feed were 3/4 for larger farms, which apply for the permit from the Board of Agriculture, 2/3 for smaller farms and 2/5 for chicken production. These restrictions do not apply to milk production, because the establishment of dairy farms is regulated by the quota system. Very few permits were granted in 1986: the number of pig places was 5,000; egg production units could only be established in a few exceptional cases and beef production units only in the northern and eastern parts of the country. One condition for being granted a permit was a change in the ownership of the farm, and even then production could not be expanded.

Table 17. Summary of the effects of restrictions on production in 1986.

	Contracts	Field area 1000 ha	Cows 1000	Hens 1000	Pigs 1000
Soil bank	4 248	19.1			
Decreasing production	4 100	30.0	15.0	18.0	6.0
Milk bonus[1)]	7 700	30.0			
Decreasing animal prod.[1)]	3 750		14.2[2)]	94.0	30.0
Pig bonus[1)]	360				28.0
Decreasing egg production	500			296.0	
Fallowing	8 890	59.7			
Total	29 548	108.8	59.2	408.0	63.0
Corresponding production		Grain mill.kg 270	Milk mill.l 290	Eggs mill.kg 6	Pork meat mill.kg 10

1) plus 8800 sows, 2) plus 4900 beef cows, which produce about 1 mill.kg beef a year.
Source: The National Board of Agriculture.

10.2. Dual price system for milk

The dual price system for milk came into effect at the beginning of 1985. A quota for milk production was levied on each farm according to the level of production in either 1981/82 or 1982/83 (whichever was the higher). Each farm that produced milk in 1984 could, however, produce up to 30,000 litres a year without a permit. Additional quotas were granted for 55 mill. litres in 1985 and for 18 mill. litres in 1986 to correct for the most unfair quotas.

At the end of 1985 about 7,400 farms exceeded their quotas. Farmers had to pay a marketing fee of 1.60 mk/litre for this excess. In 1986 exceedings decreased, as farmers were able to plan their production better. In 1986 the marketing fee was 2.00 mk/litre, but it was raised to 2.05 mk/litre at the beginning of 1987. Some excess can always be expected, especially on smaller farms, where it is enough for one cow to produce extra capacity for part of the year for the quota to be exceeded.

In 1986 milk production fell slightly. For the time being, no final judgements can be made as to the degree to which

quotas have helped to curtail milk production. Naturally, they have prevented production increases on some farms, and since some farms have evidently had to cut production, the final result is reduced production. However, the milk bonus system has also reduced milk production, and it is not clear which effects are due to which system. Evaluation of the quota system is hampered by the fact that the total volume of the quotas is currently around 3,650 million litres because of the small farms with a free quota. Some of these quotas will evidently be unused.

10.3. Dual price system for eggs

At the beginning of 1986 a dual price system for eggs came into effect. Each egg producing farm was allocated a quota, which was determined according to the largest quantity of eggs sold in 1982, 1983 or 1984. In special circumstances, the quota can be altered.

In this system regulation of production is based on an additional price, which is paid according to production quantities as follows:

The provinces of Oulu and Lapland	Additional price mk/kg	
	Jan. 1.	April 1.
0— 10 000 kg	2.20	2.60
more than 10 000 kg	1.50	1.50
Other parts of the country		
0—10 000 kg	1.95	2.30
more than 10 000 kg	1.50	1.50

To prevent the additional price from causing a rise in the producer price, the target price was reduced by 1.50 mk/kg at the beginning of 1986. If the quota is less than 10,000 kg, the producer receives the additional price in full for the whole quota. But if the quota is more than 10,000 kg, the additional price is only paid for 90% of the amount exceeding 10,000 kg, and only the reduced target price is paid for the rest. This price discrimination is regarded as being so great that it is not profitable for farmers to exceed their production quotas.

The dual price system functioned as well as was expected: production decreased by about 4% in 1986, and this trend is expected to continue in 1987. At the same time the consumer price was reduced considerably (1.50 mk/kg, i.e. by about 8%), egg consumption increased by about 6% and, consequently, the export of eggs was down by 8 mill.kg.

10.4. Export fees

Last year agriculture was estimated to account for FIM 550 million of the export costs (subsidies) of surpluses. According to preliminary estimates, the export cost charges will amount to about FIM 219 million in 1987.

In 1986 export cost charges were collected as follows:

Milk: 5.5 p/l January 1-July 31, 2.5 p/l August 1-September 30 and 0.5 p/l October 1-December 31. (altogether FIM 105 million).

Pork: 5 p/kg January 1-June 30 and 1 p/kg July 1-December 31.

Tax on fertilizers: 23 p/kg July 1, 1985-August 31, 1986 and 19 p/kg September 1-December 31.

Tax on feed concentrates: 16—12 p/kg January 1-August 31, 9 p/kg September 1-September 30 and 7.5 p/kg October 1-December 31.

At the beginning of 1986 a tax on protein feed came into effect. According to this, a tax of FIM 1.50 kg is collected on all raw protein feed except for protein from grain. The final tax on each feed mix will be determined by its protein content. This measure was introduced because the price of protein was relatively low compared with other components of feed mixes, which probably led to overuse of protein in feed mixes.

The estimated totals for export cost charges in 1986 were:

	FIM million
Milk	105
Quota charge	25
Pork	5
Tax on fertilizers	256
Tax on feed concentrates	105
Tax on protein	65
Tax on oilseed feed concentrates	5
Additional marketing fees	30
Total	596

Since pork production remained at 1 mill.kg below the export ceiling, FIM 11 million was saved, which was made over agriculture. The law allows this kind of transfer in animal production. Should this happen in grain production, it would not be taken into account as a reducing factor for export fees. The collected charges exceed the share (FIM 550 million) for which agriculture is responsible in export costs, and consequently this will reduce marketing fees in 1987.

10.5. Production support

Finnish production policy is characterized by supply control measures. There are, however, also some measures aimed at increasing production. The most important of these is *support for beef production*, the aim being to increase carcass weights. This was considered necessary to secure self-sufficiency in beef in the mid-1970s. The number of slaughter animals falls along with the drop in milk production, and consequently beef production is expected to fall as well. Production can only be increased, or the fall in production reduced, by raising carcass weights.

At the moment, production support seems to be too high, overproduction having become a permanent problem. A temporary decrease in support might be justified. In fact, it is not very economical to raise slaughter weights, either.

Production support is implemented through a premium system, whereby a premium is paid for beef if the slaughter weight is above 160 kg, and for heifers above 130 kg (see Appendix 7). Additional *production support* is paid *for mutton*. These supporting measures are all implemented as an internal income transfer within agriculture, i.e. they are included in the agricultural income settlement.

Beef production is supported by what are known as *beef cow premiums*. In 1986 the premium was FIM 850 per cow and the programme covered about 4,900 cows. No new contracts were made in 1986.

There is no *production support for grain*. However, the production of rye and feed grain is supported in northern Finland by a special regional subsidy, which was FIM 210 per hectare in 1986.

11. Price policy support

Of the total returns on agriculture, FIM 2 billion comes from price policy support, which is paid out of the state budget, and consequently forms the consumer subsidy. The amount is always discussed in the agricultural incomes settlement, in which it is gradually worked out and then increased. One part of the increase in prices has been transferred to target price products, and another part to price policy support. This support aims at balancing incomes within agriculture. However, in the mid-1970s, it also served attempts to slow down inflation, when part of the increase in the price of milk was transferred as an "additional price" to be paid through the budget. Ever since, this has been a routine procedure for the additional price of milk.

The most important items of price policy support are the regional and hectarage subsidies, and the additional price on milk and meat. In the last agricultural incomes settlement a total of FIM 2071.0 million was allocated to price policy support. Of this amount, FIM 576.7 million was for regional subsidy, FIM 583.8 million for hectarage subsidy, FIM 877.5 million for the additional price on milk, meat and eggs, and FIM 33.0 million for compensation for crop damages.

Hectarage subsidies are paid to farmers whose incomes fall below a set minimum level. This subsidy is tied to the farm's hectarage and the number of domestic animals, i.e. to production units (one hectare and one dairy cow equals one production unit, one pig equals 0.2 units, etc.). Farms of 7—8 hectares receive the biggest subsidies. The hectarage subsidy was FIM 584 per production unit in 1986. The subsidy is up to 50% higher in northern Finland.

The *regional subsidy* is paid to milk and meat producers as a production subsidy per production unit. For this purpose the country is divided into eight regions, and milk and meat production subsidies are determined for each separately. The regional subsidy is of great importance to farmers in northern Finland. For example, in the province of Oulu, the regional subsidy for milk is 15—29 p/l. In the northernmost parts of Finland the subsidy for milk is 63 p/l, for pork 75 p/kg and for beef 8.70 mk/kg. This subsidy has proved very effective in balancing incomes within agriculture. It is estimated that the production subsidy is up to 75% of agricultural income in northern Finland.

The price of feed is reduced in northern Finland by paying a special reduction subsidy, which can be up to 45% of feed bought from outside the farm, the maximum amount being FIM 9,450 a year.

The *additional price on milk* was introduced in 1974 to slow down inflation. At first it was the same for all farmers, but later it was graded on the basis of the quantities of milk produced (see Appendix 7). Consequently, it has become a means of balancing incomes within agriculture.

12. Investment support

The state subsidizes investments by granting *low interest loans* and *subsidies* through the Agricultural Development Fund. The majority of these have gone to developing areas to improve the structure of agriculture.

In 1986, FIM 455 million was transferred to the Fund from the state budget. In addition, the Fund had at its disposal FIM 440 million of interest and amortization payments. The total amount available for loans was FIM 895 million. FIM 737 million was used for loans, FIM 171.5 million for land purchases and the rest for subsidies to farmers. In addition, FIM 138.5 million was reserved in the state budget for *interest subsidies* for commercial loans in order to bring their interest rate to the same level as that of the loans granted by the Fund. The total value of these interest subsidy loans was estimated to be about FIM 765 million. Most of the loans from the Development Fund have gone to developing areas, so farmers in southern Finland have to rely on interest subsidy loans or on commercial loans with high interest rates.

The "*start money system*" is also part of the investment support system. Young farmers (under 35 years of age) can apply for a state subsidy when they start to run farm. The maximum subsidy has been FIM 50,000 and the subsidy may be used for buying machines, fertilizers, etc. This subsidy aims to help young farmers so that they do not run into debt, which might lead to financial problems during their first years of farming. A total of FIM 142.5 million was available for this purpose. According to estimates, 2,800 farmers received this subsidy in 1986. In the budget of 1987 there is FIM 155 million available for the start money system.

In 1983 an Act on *investment reserve* came into force and it was slightly revised in 1986. According to this a farmer can make an investment reserve which is up to 30% of the farm income, but for no more than FIM 40,000. This amount will be tax deductable but it is taken into account later on when depreciations are determined. The farmer also has to deposit half of the reserve in a bank. The purpose of this system is to improve the timing of investments.

The indebtedness of agriculture and forestry has increased rapidly, growing

from about FIM 17,830 million in 1984 to about FIM 20,150 million in 1985, i.e. by about 13%. In 1980 the total debt of agriculture and forestry was only about FIM 10,460 million. This trend is clearly too sharp. It may cause problems in financing, especially on farms that are just getting started.

13. Social policy

During the past few years the social security of farmers has been improved to some extent, but much remains to be done. The key areas are pensions, compensation in case of sickness or accidents, annual leave and the days-off scheme.

Farmer's pensions are prescribed by law and are comparable with pensions in other sectors. The farmer make his pension payments according to his labour income, but the state also pays a part of the pension costs. The farmer gets his pension at the age of 65, the amount being determined by the contributions he has made. He is also entitled to disability pension.

Farmers engaged in animal production are entitled to an *annual leave* of 16 days. According to the agricultural incomes settlement this leave will be one day longer from the beginning of holiday years 1987/88 and 1988/89. The local municipality hires a worker for the period of the holiday. The costs of this system are mainly paid by the state. The contribution of agriculture is achieved by lowering agricultural incomes in the agricultural incomes settlement.

A farmer may receive *outside help* for the duration of a disability caused by illness or some other factor. At the beginning of 1987, some improvements to this system came into effect. The costs are mainly paid by the state, but a part of the costs is charged to agriculture in the agricultural incomes settlement. In the last settlement these costs were FIM 9.5 million.

Animal husbandry does not allow week-ends off as most other jobs do, and thus these producers have a seven-day working week. To correct this, a *days-off scheme* is being devised, through which farmers engaged in animal husbandry can get a worker for their days-off. Farmers pay part of these costs, the state the remainder. The contribution from farmers is, however, counted as agricultural costs (FIM 12.7 million in the last settlement), which will be compensated for in the agricultural incomes settlement. The part paid by the state is counted as agricultural income. A farmer can have a maximum of 12 days off a year, but only one day at a time. The system has not been taken advantage of as was expected.

The accident insurance Act, which came into effect in 1982, compensates farmers for costs caused by accidents. Farmers pay half of the extra insurance (FIM 25.4 million in the last price settlement). This will, however, be taken into account as agricultural costs in price settlements, i.e. farmers will receive corresponding compensation in prices.

14. Is food expensive?

The discussion on food went on throughout the year. It has been claimed, and also shown, that food is expensive in Finland. No unambiguous reports are available, but the prices paid by consumers, for example, have been compared using the prices of "food baskets". Although this reveals trends, it is not adequate for a completely objective scrutiny.

Both producer prices and retail prices have to be taken into account when price comparisons are made in order to include price margins, i.e. the share of the processing and retail business, in the scrutiny. Agricultural support has also been widely discussed.

By international standards, producer prices are high in Finland, and are at the same level only in Norway and Switzerland. There are two explanations for the

high prices: natural conditions and the production structure. The climate in Finland is very unfavourable to agriculture. The growing season is short and only very little winter grain can be cultivated. In central Europe, for example, winter grains are very common. Maize, which is a spring grain with a high yield, cannot be cultivated in Finland. The yield in Finland is lower than that in the other countries being compared, although the production costs per hectare are the same. Consequently, the production costs of each kilogram of grain produced are high. This affects animal production, too. According to one report, the production costs of pork would be the same in Finland as in Denmark, if we could buy feed at the world market price. But we would still not be able to compete on export markets, where exports are subsidized and prices are at very low levels because of "dumping".

The Finnish production structure is another cause of high prices. Production cost calculations show that when the size of the farm grows, the costs per unit decrease considerably. At the moment, the average field area of a Finnish farm is 12 hectares, with, for example, nine cows on a dairy farm. Doubling or tripling farm size would lower production costs by 10—20%, and a farmer would then be paid the same amount for his work as a hired farm labourer. There is no doubt that it is only through external rationalization, i.e. by expanding farms, that production costs, but not necessarily the price of food, can be lowered, if farmers are to receive a proper wage.

We cannot do anything about natural conditions. What we can change, if we want to, is the production structure. Structural changes are going on all the time. They are slow, however, and some aspects of agricultural policy, such as restricting the size of production units, make it even slower. Attempts to slow down structural changes are also made to secure habitation in rural areas. In addition to this, overproduction usually prevents increases in production on every farm.

The Finnish price system may also be partly to blame for high prices. Producer prices are, or seem to be, high, which increases interest in agriculture. Consequently, the price of production factors tends to rise too much. The price of land, in particular, is clearly too high. Even if the price of land is not taken into account in production cost calculations, it is reflected in food prices through the interest on loans. The fact that farmers automatically receive compensation for increases in production costs may also encourage retail businesses to maintain high price levels for production inputs, because farmers seem to receive compensation for high costs in the form of higher producer prices. This is naturally difficult to prove, especially as there is also competition for farmer customers within the retail business.

There has also been some discussion on the operating margins of the processing industry and retail businesses, i.e. on processing and delivery costs. A closed economy like the market in Finland may lead to ineffective use of resources and, as a consequence, to excessively high prices. Dairies and slaughterhouses continually rationalize their production, which has reduced costs, and will continue to reduce them in the future. The fact that Finland has a very small population naturally limits this rationalization. The effects on employment are the same as in agriculture. Rapid rationalization leads to regional unemployment, at least.

Consumer prices can naturally be lowered through direct subsidies to producers, but this does not lower production costs. The idea behind direct subsidy may be to guarantee the present producer price level to some farmers only, whereas the others would receive the world market price or have to give up production completely. This situation requires the lowering of production targets. Restricting production lowers export costs, for example, but this is not enough to lower production costs.

The next question is, whether production targets should be dropped below the self-sufficiency level. If we want to maintain 100% self-sufficiency in food,

there is no need for considerable reductions in production on the present level. Agriculture would remain about the same size as it is at the moment. Could it produce cheaper food, if it were subsidized directly? Hardly. The only solution is a radical rationalization of production, but even then prices would not be appreciably lower. The fact is that no other enterprise is willing to function under the same conditions as farmers: low pay and no interest on own capital. At present, even large farms seem to be run mainly as a hobby, made possible by other, better sources of income. Losses from agriculture can be deducted from other forms of income for state taxation purposes.

If direct subsidies were only paid to some farmers, and the others were to get the world market price, production would probably fall well below the self-sufficiency target, and we would be forced to import the rest. From the viewpoint of the overall national economy, the only way to avoid high production costs is to deregulate imports and to let domestic production decrease. This would undeniably lead to lower producer prices.

Under free trade some of the products would be imported in Finland in processed form at "dumped" prices, which would make for a big reduction in consumer prices. Retail business margins would, of course, remain, and might even grow, at least at first, if the general price level of food were lower. At least initially the consumer would not get the full benefit of the lower producer and wholesale prices. Retail prices would, however, be lowered through foreign competition.

The fact that transportation and other costs also increase food prices has to be taken into account, thus not all consumers in Finland would be able to get food at the world market price. What would the price of milk be in Lapland, if free trade were to prevail in Finland!

IV SUMMARY AND CONCLUSIONS

Development in agriculture continued rather stable and satisfactory in 1986. In spite of the drought in the early summer, the yield was normal. The average yield was slightly higher than in the previous year and in accordance with the long-term trend. Grain yield was a little smaller than in 1985 owing to the 49,000 hectares smaller area cultivated; however, there was still a surplus in feed grains. Yields of potatoes and sugar beet were rather good.

Animal production decreased slightly last year. Milk production remained at approximately the earlier level, although a great deal of attention has been paid to its lowering. The dual price system for milk has not had any considerable effect on production yet.

Only small changes occurred in meat production. Pork production remained at the same level as the previous year. The export ceiling for pork was not exceeded last year. Since consumption is still growing, there is some scope for increases in production. Beef production, however, exceeded the ceiling even though production fell by 2 million kg in 1986.

Egg production fell considerably, or about 4%. This was obviously a result of the quota system, which was introduced at the beginning of 1986. Since the target price was reduced by 1.50 mk/kg by simultaneously paying a corresponding subsidy to producers, the retail price of eggs fell, too, thus pushing up consumption by 6%. The drop in production and the increase in consumption reduced exports of eggs by a quarter.

There was practically no inflation in agriculture in 1986. The rise on costs was small and the raise in farm incomes by FIM 417.3 mill., or about 6%, allowed an increase in target prices of a mere 1%. Target prices were close to being lowered in the autumn, as costs had fallen by a little more than 2%. No big changes can be expected in producer prices in 1987.

According to a preliminary estimate, farm incomes rose by 8% in 1986. Incomes grew rapidly in 1982—83, but since then the pace has evened out. Production is not growing any more. So, incomes can only be increased by raising target prices and lowering costs.

Agriculture, and particularly food prices, were criticized heavily in 1986. Nevertheless, the Farm Incomes Act was renewed, after slight revision, until the price year 1989/90. The increase in export subsidies also prompted criticism. The volume of exports has not grown, but since world market prices have fallen, export subsidies have grown. Production and export ceilings have been lowered, but the state still pays the main part of export costs.

Supply control dominated agricultural policy last year. Attempts were made to bring land clearance under control, but the new act passed by parliament will obviously not be very effective.

In spite of heavy criticism, agriculture has good reason to be satisfied with 1986. Excess supplies were reduced

slightly. The spring price solution was satisfactory and so income trends were also normal. The revised Farm Incomes Act is effective until the end of the 1990s which should guarantee that no big surprises need be expected in the near future.

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Appendices

Appendix 1. Cost price index in agriculture with subsidies.

	Producer price index of agriculture	Cost price index	Requisites and tools	Machines	Buildings
1970	100.0	100.0	100.0	100.0	100.0
1971	103.7	107.9	103.6	109.2	109.2
1972	115.0	116.9	107.6	120.2	123.6
1973	129.4	135.6	122.2	133.4	155.5
1974	150.2	167.9	154.6	162.7	201.4
1975	188.2	205.9	188.4	208.3	230.2
1976	213.6	238.4	255.3	231.2	255.4
1977	229.4	273.6	267.3	258.1	281.4
1978	242.5	285.4	273.8	282.2	294.9
1979	257.2	304.3	282.8	308.7	325.6
1980	288.2	341.7	318.0	341.2	372.1
1981	324.5	394.0	384.9	374.6	400.8
1982	370.0	427.5	423.2	404.0	424.2
1983	394.8	464.2	461.3	445.7	454.3
1984	419.6	501.7	504.0	474.1	479.2
1985	448.4	527.0	531.4	495.9	499.6
1986[e]	455	517	502	516	517

Appendix 2. Some figures of the agricultural structure.

	Number[1)] of farms 1000 pcs	Average[1)] size of farms, hectares	Number of milk suppliers 1000 pcs	Employed persons in agriculture 1000 persons	% of total labour force
1970			190	404	19.0
1971			175	374	17.6
1972	274.4	9.31	163	339	16.0
1973	265.9	9.54	151	304	14.0
1974	258.2	9.79	140	303	13.6
1975	248.7	10.05	128	277	12.5
1976	242.7	10.26	119	244	11.3
1977	237.7	10.43	112	223	10.6
1978	232.8	10.60	104	208	10.0
1979	229.3	10.78	98	200	9.4
1980	224.7	10.96	91	200	9.1
1981	218.9	11.16	85	200	8.9
1982	212.6	11.42	78	206	9.0
1983	208.2	11.63	74	246[2]	10.3[2]
1984	203.9	11.85	70	242	10.0
1985			66	228	9.4
1986[e]			63		

[1)] *Over 1 hectare.* [2)] *The method of data collection has been revised in 1983. The data are not comparable with previous data.*

Appendix 3. Number of animals in June and the average yield per cow.

	Dairy cows 1000 pcs	Yield per cow, litres	Pigs 1000 pcs	Hens 1000 pcs
1970	889.1	3677	1002.4	4470.9
1971	849.3	3806	1129.3	5249.0
1972	836.5	3889	1045.7	5963.7
1973	823.6	3839	1139.3	5869.0
1974	818.5	3856	1048.9	5803.2
1975	773.2	3997	1036.1	5943.3
1976	763.1	4200	1053.9	6333.2
1977	751.6	4197	1143.3	6245.1
1978	742.0	4260	1244.7	6046.4
1979	730.1	4336	1288.7	6029.4
1980	719.5	4478	1410.2	6040.7
1981	700.8	4450	1467.1	5200.2
1982	689.2	4493	1475.3	5291.5
1983	663.1	4778	1440.7	5440.4
1984	659.5	4799	1381.8[1]	6025.3
1985	627.7	4834	1295.2[1]	5922.4
1986	606.8	4854	1322.7[1]	5532.1

[1] *Including the pigs of dairies.*

Appendix 4. Sales of fertilizers (kg/ha).

	N	P	K
1969—70	58.3	27.2	40.0
1970—71	63.7	29.4	43.5
1971—72	68.5	30.5	46.5
1972—73	69.4	30.8	47.4
1973—74	78.2	33.9	52.0
1974—75	85.8	34.2	53.9
1975—76	79.6	29.5	47.6
1976—77	65.4	25.0	41.1
1977—78	69.1	25.8	43.3
1978—79	76.9	27.8	47.4
1979—80	83.3	28.0	50.2
1980—81	82.4	27.8	49.3
1981—82	78.7	26.8	47.5
1982—83	91.4	29.9	53.8
1983—84	90.7	30.9	55.9
1984—85	88.9	30.5	55.3
1985—86	92.6	30.7	55.4

Appendix 5. Agricultural gross return in current prices, mill. mk.

	1980	1981	1982	1983	1984	1985
Crop production						
Rye	148.8	121.3	67.2	184.4	220.8	195.1
Wheat	310.9	345.8	544.3	901.8	902.9	988.7
Barley	572.5	644.1	826.2	1338.5	1347.4	1451.9
Oats	308.1	350.9	488.2	779.9	746.1	606.6
Potatoes	216.5	198.8	362.3	205.6	221.8	290.7
Potatoes of processing	98.6	102.5	110.6	182.0	211.7	209.5
Sugar beets	286.3	253.5	349.6	454.0	425.3	373.1
Oil plants	116.7	182.1	264.3	288.0	294.5	343.6
Peas	10.3	20.1	33.7	51.5	72.7	22.7
Grass seeds	26.4	42.5	45.6	43.5	60.7	36.2
Total	2145.1	2261.6	3092.0	4529.2	4503.9	4518.1
Garden production						
Vegetables	261.8	369.7	373.4	381.4	338.8	453.9
Root crops	47.5	36.1	51.3	57.9	37.8	50.5
Fruits	40.3	46.9	30.3	50.6	43.4	40.3
Berries	71.0	142.1	173.6	153.0	190.8	239.7
Total	420.6	594.8	628.6	642.9	610.8	784.4
Animal production						
Milk	5762.5	6119.2	6881.9	7604.3	7955.5	7948.4
Beef	2007.8	2380.2	2586.4	2836.8	3204.2	3480.1
Veal	2.5	4.1	4.2	2.9	3.0	1.6
Pork	1711.0	2057.9	2290.0	2422.3	2552.4	2787.7
Mutton	19.6	23.9	28.4	31.3	34.3	42.6
Horse meat	11.4	12.8	12.5	13.4	14.9	18.7
Poultry	114.3	147.7	156.4	182.1	213.0	234.9
Wool	1.7	2.1	2.3	1.7	3.5	—
Eggs	577.7	674.2	764.2	826.0	908.5	918.5
Export of animals	5.4	7.4	9.4	10.3	12.1	12.5
Total	10213.9	11429.5	12735.7	13931.1	14901.4	15445.0
Subsidies						
by farm size	283.2	351.3	426.8	500.4	560.4	567.8
by number of cows	40.5	42.6	48.4	53.7	63.2	67.1
for purchased fodder	27.4	34.3	44.6	49.4	49.8	52.3
Premium on bread grains	—	—	79.5	16.8	—	—
Premium on feed grains	—	—	28.7	30.3	31.7	41.9
Premium on beef	3.6	3.0	5.2	6.0	6.1	5.1
"Start money"	—	—	0.0	10.0	57.2	110.5
Total	354.7	431.2	633.2	666.6	768.4	844.7

Appendix 5. continued. Costs in current prices. mill.mk.

	1980	1981	1982	1983	1984	1985
Compensations						
for crop damages	7.9	2.3	426.8	19.1	7.0	33.0
Production guiding	2.8	20.5	48.7	66.1	69.4	65.1
Egg bonus	—	11.9	5.0	5.5	15.2	—
Milk bonus	—	8.6	24.1	49.5	88.8	157.2
Pork bonus	—	—	—	1.5	13.2	13.2
For decreas.anim.prod.	—	—	—	—	5.0	32.8
Fallowing payments	31.1	—	—	—28.0	26.3	
Total	41.8	43.3	504.6	141.7	226.6	327.6
Gross return total	13176.1	14760.4	17594.1	19911.5	21011.1	21919.8
Index (1980 = 100)	100.0	112.0	133.5	151.1	159.5	166.4
Change %	+18.2	+12.0	+19.2	+13.2	+5.5	+4.3
Costs						
Fertilizers	1232.3	1333.9	1635.8	1745.9	1744.4	1949.5[1]
Lime	69.8	41.7	72.8	130.7	89.7	140.2
Feed concentrates	2416.6	3097.5	3752.4	3419.1	3468.2	3249.4[2]
Feed conserving chemicals	86.5	95.8	93.6	126.9	140.7	155.1
Pesticides	134.4	141.4	140.7	192.5	221.9	229.4
Equipment	77.8	85.2	96.7	112.4	120.2	128.6
Skimmed milk	20.7	20.5	24.4	21.3	18.6	17.1
Whey	2.4	3.0	3.7	4.6	6.3	8.0
Fuel and lubricants	609.8	701.9	866.9	833.6	931.6	921.7
Electricity	209.2	243.7	273.7	274.9	292.8	311.7
Purchased seeds	237.3	274.7	378.2	398.1	395.5	492.6
Hired labor	271.7	278.9	304.7	299.4	317.8	311.6
Social expenses	122.1	130.8	142.5	146.4	161.1	158.9
Machinery and equipment expenses	2210.7	2526.5	2764.4	3104.5	3359.4	3531.1
Building expenses	870.8	969.5	1096.2	1287.8	1310.7	1395.6
Interest payment	505.8	590.5	686.3	769.0	919.1	976.2
Imports of animals	0.6	0.8	0.3	1.3	1.1	1.4
Overhead costs	724.9	809.4	888.8	1028.9	1138.4	1208.7
Costs total	9803.4	11345.7	13222.1	13897.3	14637.5	15186.8
Index (1980 = 100)	100.0	115.7	134.9	141.8	149.3	154.9
Change %	+20.0	+15.7	+16.5	+5.1	+5.3	+3.8
Farm income	13176.1	14760.4	17594.1	19911.5	21011.1	21919.8
Costs	9803.4	11345.7	13222.1	13897.3	14637.5	15186.8
Farm income	3472.7	3414.7	4372.0	6014.2	6373.6	6733.0
Index (1980 = 100)	100.0	101.2	129.6	178.3	189.0	199.6
Change %	+13.1	+1.2	+28.0	+37.6	+6.0	+5.6

[1] According to the new calculation 1855.4 mill.mk
[2] " " " 3022.3 mill.mk, whereby costs total 14865.6 mill.mk and farm income 7054,2 mill.mk

Appendix 6. Agricultural gross return in fixed prices, mill.mk.[1]

	1980	1981	1982	1983	1984	1985
Crop production						
Rye	148.8	111.3	55.1	128.4	139.3	115.7
Wheat	310.9	330.8	447.6	630.9	621.6	635.7
Barley	572.5	509.9	566.5	836.1	795.8	818.7
Oats	308.1	286.3	343.5	499.2	446.7	343.8
Potatoes	216.5	190.6	221.0	216.4	254.0	224.8
Potatoes of processing	98.6	89.2	81.4	129.8	140.2	125.9
Sugar beets	286.3	215.0	251.2	337.1	290.7	223.8
Oil plants	166.7	164.5	198.9	249.0	190.0	197.4
Peas	10.3	11.6	16.2	21.5	26.2	12.9
Grass seeds	26.4	28.0	37.7	34.3	46.1	23.6
Total	2145.1	1937.2	2219.1	3082.7	2950.6	2722.2
Garden production						
Vegatables	261.8	271.0	289.1	325.8	279.5	282.6
Root crops	47.5	32.8	25.1	48.6	33.5	38.9
Fruits	40.3	56.5	32.6	53.7	44.5	48.1
Berries	71.0	122.4	152.4	133.0	116.2	130.9
Total	420.6	482.7	499.2	561.1	473.7	500.5
Animal production						
Milk	5762.5	5577.7	5557.4	5679.3	5649.8	5395.6
Beef	2007.8	2150.1	2059.8	2039.4	2194.3	2229.7
Veal	2.5	3.7	3.7	2.5	2.5	1.2
Pork	1711.0	1825.4	1829.5	1795.0	1727.2	1746.4
Mutton	19.6	21.8	24.0	26.2	28.3	32.7
Horse meat	11.4	11.4	10.1	10.1	10.1	11.4
Poultry	114.3	128.7	124.9	138.5	149.1	155.2
Wool	1.7	1.6	2.0	1.4	3.0	—
Eggs	577.7	583.5	565.2	606.3	647.4	628.3
Export of animals	5.4	6.5	7.5	7.3	8.3	8.0
Total	10213.9	10310.4	10184.1	10306.0	10420.0	10208.5
Subsidies						
by farm size	283.2	309.2	349.6	386.8	408.4	394.1
by number of cows	40.5	37.5	39.6	41.5	46.1	46.6
for purchased fodder	27.4	30.2	36.5	38.2	36.3	36.3
Premium of bread grains	—	—	65.1	13.0	—	—
Premium of feed grains	—		23.5	23.4	23.1	29.1
Premium of beef	3.6	2.6	4.3	4.6	4.4	3.5
"Start money"	—	—	0.0	8.1	41.7	76.7
Total	354.7	379.5	518.6	515.6	560.1	586.3

[1] *1980 prices*

Appendix 6, continued. Costs in fixed prices, mill.mk[1]

	1980	1981	1982	1983	1984	1985
Compensations						
for crop damages	7.9	2.0	349.6	14.8	5.1	22.9
Production guiding	2.8	18.0	39.9	51.1	50.6	45.2
Egg bonus	—	10.5	4.1	4.3	11.1	—
Milk bonus	—	7.6	19.7	38.3	64.7	109.1
Pork bonus	—	—	—	1.2	9.6	9.2
For decreas.anim.prod.	—	—	—	—	3.6	22.8
Fallowing payments	31.1	—	—	—	20.4	18.3
Total	41.8	38.1	413.3	109.7	165.1	227.5
Total	13176.1	13147.9	13834.3	14575.1	14569.5	14245.0
Index (1980 = 100)	100.0	99.8	105.0	110.6	110.6	108.1
Change %	+4.5	—0.2	+5.2	+5.4	0.0	—2.2
Costs						
Fertilizers	1232.3	1091.3	1247.5	1310.2	1211.5	1246.7
Lime	69.8	39.2	59.9	102.5	68.8	102.3
Feed concentrates	2416.6	2530.3	2720.7	2185.2	1983.7	1860.9
Feed conserving chemicals	86.5	89.2	87.9	115.2	117.8	124.4
Pesticides	134.4	129.9	124.2	146.4	150.6	155.6
Equipment	77.8	77.3	82.2	86.9	87.2	90.0
Skimmed milk	20.7	17.2	13.6	10.9	8.5	7.1
Whey	2.4	2.6	2.6	2.6	2.7	2.4
Fuel and lubricants	609.8	564.2	679.4	611.1	663.1	650.0
Electricity	209.2	208.6	219.1	229.3	248.5	255.0
Purchased seeds	237.3	233.0	270.6	261.8	242.5	285.7
Hired labour	271.7	249.6	242.7	223.4	213.7	191.7
Social expenses	122.1	117.1	113.5	109.3	108.3	97.7
Machinery and equipment expenses	2210.7	2299.1	2342.6	2385.0	2420.1	2453.4
Building expenses	870.8	891.7	956.3	987.7	992.2	1008.0
Interest payment	505.8	511.6	542.4	594.9	636.7	720.2
Imports of animals	0.6	0.7	0.2	1.0	0.8	0.9
Overhead costs	724.9	712.5	728.0	805.7	840.8	850.0
Costs total	9803.4	9765.1	10433.4	10169.1	9997.5	10102.0
Index (1980 = 100)	100.0	99.6	106.4	103.7	102.0	103.0
Change %	+4.4	—0.4	+6.8	—2.5	—1.7	+1.0

[1] *1980 prices*

Appendix 7. Target prices of agricultural products in 1960—86.

	Rye[1] (South area)	Wheat[1]	Milk[2]	Beef (all)[3]	Pork	Eggs	Feed barley[1]	Feed oats[1]	Mutton
	p/kg	p/kg	p/l	mk/kg	mk/kg	mk/kg	p/kg	p/kg	mk/kg
1.9.1960	47.50	50.00	30.65		2.75	2.60			
1.9.1961			30.82		2.72	2.55			
1.9.1962	49.50		31.85	(2.73)	2.80	2.45			
1.3.1963			132.70		2.98	2.57			
1.9.1963	52.00	54.00	34.13	(2.80)	3.05	2.60			
1.3.1964			36.06	(2.90)	3.21				
1.9.1964	58.00	60.00	38.14		3.36	2.70			
1.3.1965			40.79		3.46	2.80			
1.9.1965			40.34	2.95	3.36				
1.3.1966				3.44					
1.9.1966	58.00	60.00	41.98	4.05	3.45	3.00			
1.9.1966	58.00	60.00	41.14	4.05	3.45	3.00			
1.9.1967			45.16	4.13					
1.3.1968			48.95	4.53	3.60				
1.6.1968	61.00	63.00	49.32	4.63	3.80	3.15			
1.1.1969				5.06	4.00	3.20			
1.4.1970	63.00	62.00	49.57	5.71	4.20	3.35			
1.1.1971	64.00		51.52	5.93	4.42				
1.9.1971			52.79	6.08					
1.4.1972	66.00	62.00	59.00	6.48	4.42	3.50			
1.4.1972[5]	68.85	65.00	65.67	6.54	4.44	3.50	(44.09)	(39.89)	(5.23)
1.5.1973	72.85		71.67	7.54	5.01	3.85	46.09	41.89	7.54
1.4.1974	78.85	70.50	80.00	8.51	5.55	4.25	53.09	48.89	9.04
1.9.1974			84.67		5.88	4.48			
1.4.1975[6]	94.85	85.00	87.67	9.76	7.21	5.38	68.09	63.89	11.04
1.9.1975			92.67		7.46	5.52			
1.12.1975				9.85		5.38			
1.3.1976	97.85	87.00	108.70	10.35	8.01	5.52	72.09	65.89	12.04
1.3.1977[7]		90.00	119.20	11.75	8.78		76.09	69.89	14.04
1.9.1977			123.20	13.65	9.11				15.94
1.5.1978			126.20						
1.9.1978	104.85	96.00	130.90	14.05	9.36	5.87	78.59	72.39	16.54
1.2.1979[8]	114.85	106.00	134.60	14.40	9.66	6.17	83.59	77.39	17.04
1.9.1979	124.85	114.00		14.90		6.30			17.54
1.4.1980	159.00	148.00	146.60	16.40	10.31	6.85	101.00	94.50	19.10
1.9.1980	161.00	150.00	152.60	17.14	10.91	7.25	103.00	96.50	20.00
1.3.1981	177.00	164.00	160.60	18.69	11.86	7.85	123.00	114.50	21.50
1.9.1981	187.00	172.00	171.90	19.44	12.31	8.20	128.00	119.50	22.30
1.3.1982	207.00	190.00	182.90	20.44	13.01	8.75	142.00	133.50	23.40
1.9.1982	207.00	190.00	188.90	20.73	13.14	8.88	142.00	133.50	23.80
1.9.1982[9]	202.70	185.80	188.90	20.73	13.14	8.88	138.00	129.50	23.80
1.3.1983			197.20	21.56	13.68	9.23			24.80
1.4.1983	220.70	204.80	202.70	22.01	13.98	9.46	151.00	141.50	25.30
1.9.1983	220.70	204.80	205.70	22.31	14.18	9.60	151.00	141.50	25.30
1.3.1984	231.00	211.00	212.70	23.01	14.68	9.90	156.00	146.00	

1.4.1984	245.00	218.00	216.70	23.31	14.98	10.05	161.00	150.00	25.60
1.9.1984	245.00	218.00	221.60	23.91	15.38	10.20	161.00	150.00	26.15
1.3.1985	264.00	231.00	228.60	24.67	16.05	10.50	170.00	158.00	26.15
1.9.1985	264.00	231.00	230.10	24.67	16.05	10.50	170.00	158.00	26.15
1.1.1986	264.00	231.00	230.10	24.67	16.05	9.00	170.00	158.00	26.15
1.4.1986	270.00	233.00	232.00	24.97	16.25	8.80	170.00	158.00	25.15

Footnotes for appendix 7.

1) The price of grain beginning from 1.4.1972 is the price of January, before that the price of September. It comes into force from the beginning of the growing period. From the crop year 1983/84 the target prices of grain are on farm level. Before that they are wholesale prices for purchases of the Finnish State Granary.
2) The price of milk 1960-62 with 4 % fat p/kg and due to the new fixing of fat, from 1963 milk with 3.9 % fat which corresponded to the earlier 4 % fat milk including production support. From 1967 without production support and from 1973 milk with medium fat p/l without production support.

The additional price of milk is paid as follows:

1.4.1974—31.3.1975	7 p/l	
1.4.1975—28.2.1977	22 p/l	
from 1.3.1977	15 p/l	
from 1.9.1981	15 p/l	up to 200 000 litres
from 1.3.1982	16 p/l	up to 200 000 litres
from 1.4.1983	15 p/l	up to 200 000 litres
from 1.3.1984	13.5 p/l	up to 200 000 litres
from 1.9.1985	12 p/l	up to 150 000 litres

and in addition step-up additional price

1.2.1979—31.3.1980	2 p/l	up to 24 000 litres
1.4.1980—31.8.1980	7.5 p/l	up to 30 000 litres
from 1.9.1980	8.3 p/l	up to 30 000 litres
from 1.3.1981	9.8 p/l	up to 30 000 litres
from 1.9.1981	10.5 p/l	up to 30 000 litres
1.9.1983	11.5 p/l	up to 30 000 litres

The volume of milk which gives the base for the payment of the step-up additional price is counted on an annual basis starting from 1.9.

The additional price for eggs paid for beginning from 1.1.1986 is following:

Production quota	Oulu and Lapland mk/kg		The rest of the country mk/kg	
	1.1.86	1.4.86	1.1.86	1.4.86
0-10 000 kg	2.20	2.60	1.95	2.30
over 10 000 kg	1.50	1.50	1.50	1.50

3) In addition a production premium for beef is paid:

1.4.1974—31.3.1975	1.00 mk/kg	bulls and heifers over 160 kg
1.4.1975—31.8.1979	1.30 mk/kg	bulls and heifers over 160 kg
from 1.9.1979	1.30 mk/kg	bulls and heifers 160—210 kg
	2.00 mk/kg	bulls and heifers over 210 kg
from 1.4.1980	1.30 mk/kg	bulls and heifers 160—210 kg
	2.20 mk/kg	bulls and heifers over 210 kg
from 1.4.1981	1.30 mk/kg	bulls 160—210 kg
	2.20 mk/kg	bulls over 210 kg
	2.20 mk/kg	heifers over 160 kg
from 1.9.1981	1.50 mk/kg	bulls 160—210 kg

	2.50 mk/kg	bulls over 210 kg
	2.50 mk/kg	heifers over 160 kg
from 1.3.1982	1.90 mk/kg	bulls 160—209 kg
	2.90 mk/kg	bulls over 210 kg
	1.00 mk/kg	heifers 130—159 kg
	2.90 mk/kg	heifers over 160 kg

4) In addition a production premium for mutton is paid:

1.8.1977—31.8.1980	1.30 mk/kg	
1.9.1979—31.3.1980	2.00 mk/kg	
from 1.4.1980	2.20 mk/kg	
from 1.9.1981	2.50 mk/kg	
from 1.3.1982	2.90 mk/kg	
from 1.9.1983	3.20 mk/kg	
from 1.3.1984	3.70 mk/kg	
from 1.3 1985	5.20 mk/kg	over 16 kg
	4.70 mk/kg	12—16 kg
from 1.4.1986	6.20 mk/kg	over16 kg
	5.70 mk/kg	13-16 kg

5) New statistical basis for beef and pork
6) Target prices for meat were applied from 1.3.
7) Target prices for meat were applied from 1.2. and for eggs from 1.4.
8) Target prices for meat were applied from 12.1.
9) Grain prices on farm level from 1982.

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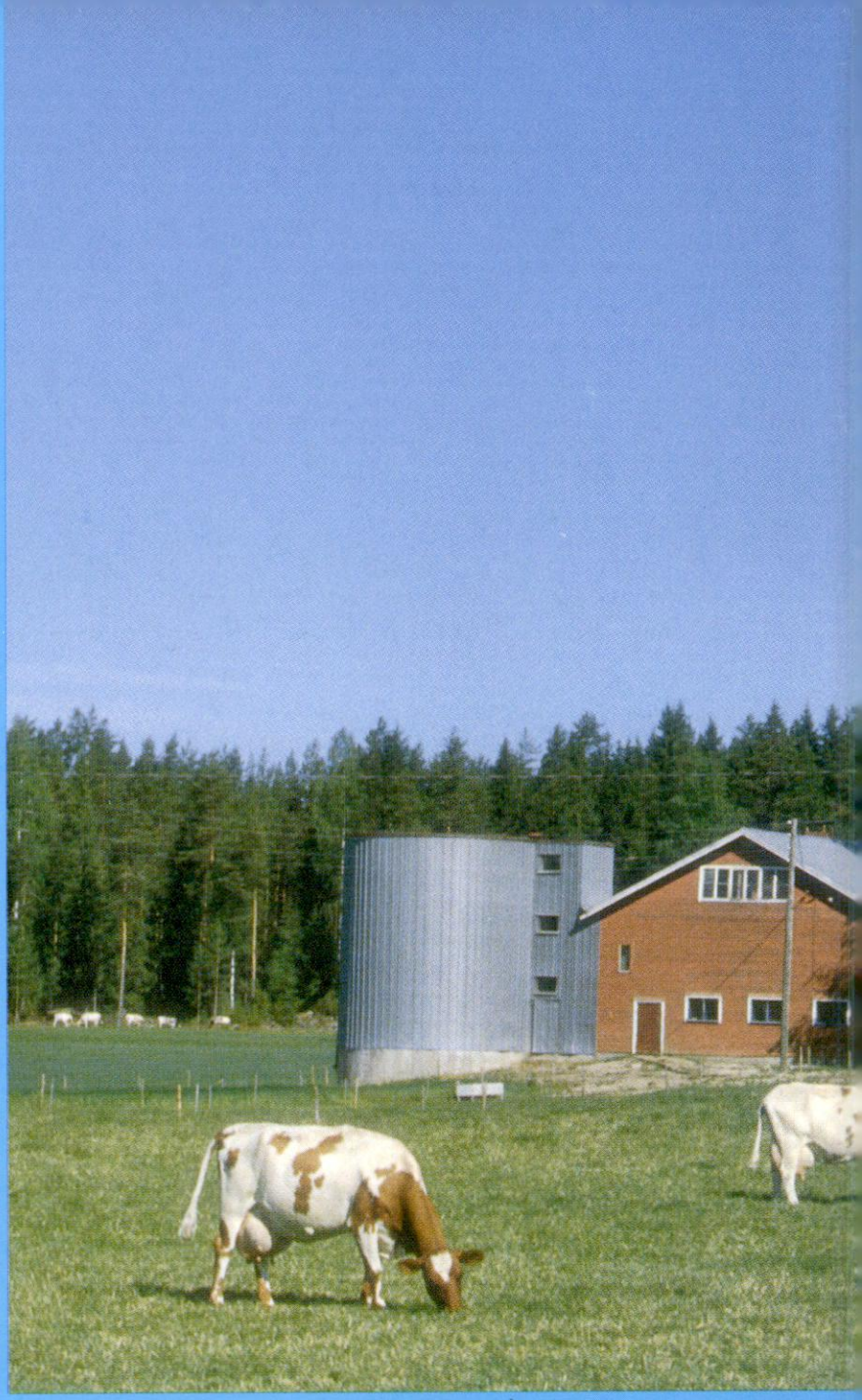

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