FINNISH AGRICULTURE IN 1994

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MAATALOUDEN TALOUDELLINEN TUTKIMUSLAITOS
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Abstract. Finnish agriculture in 1994

The summer 1994 was favourable for farmers. The average hectarage yield was 3,201 f.u./ha, and the total yield was 5,260 mill. f.u., which is 3 % smaller than in 1993, but clearly above the trend value. The cultivated area was 1.67 mill. ha, i.e. 1.0 % larger than in the previous year. About half a million hectares of arable land was under set-aside.

Livestock production started to increase slightly in 1994. The amount of milk delivered to dairies grew by about 2 %. Beef and pork meat production stayed at about the earlier levels. Egg production grew slightly whereas poultry meat production increased considerably.

Farm income settlements aroused very little interest in 1994. The new Act on Marketing Systems, which replaced the earlier Farm Income Act, was applied for the first and last year. The new marketing system resembles the price system of the EU.

According to the new act, the cost compensation was not as automatic as earlier, but the decisions on this were left to the negotiators. As the economic situation is very difficult and wages were not raised in the other sectors of the national economy, incomes were not raised in agriculture, either. Price policy support was raised slightly.

In 1994, agricultural income rose by about 26 %, mainly as a result of the increase in the cereal quantities coming into the market. The growth in milk production also had a favourable impact on income development. A slight decrease occurred in the price of production inputs.

The most important issue during the year was the membership in the EU. The negotiation outcome was the main topic in the early part of the year. According to the Accession Treaty, Finland is allowed to pay national support north of the 62nd parallel and in adjacent areas to the south.

In the beginning of the transitional period, compensation is paid for the reduction in the value of stocks. In addition, costs resulting from earlier investments are compensated for during a couple of transitional years.

Agriculture started the year 1995 with feelings of expectation and uncertainty. During the first days of the year, market prices dropped even more than was expected. In most studies, it has been estimated that milk producers would cope the best in the EU, whereas in pigmeat and egg production profitability seems now very poor. A dramatic income drop is to be expected in cereal production, too.

Index words: Finland, agriculture, production, price, income, policy

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Preface

The integration of Finland in the European Union was a major concern for agriculture during the whole year 1994. Agriculture is against the integration because it fears that the decrease in the price level will reduce incomes so much that it is no longer possibly to continue agricultural production. Waiting for the negotiators to reach an agreement at the beginning of the year caused a great deal of anxiety, and when the Accession Treaty was completed, the interest shifted to the contents of the national support package and forms of support during the transitional period.

Agriculture began the adjustment to the common agricultural policy of the EU already in 1994. The price system was revised at the beginning of the year to correspond to the EU price system. For the part of agriculture proper, the adjustment meant getting prepared for the new situation. Production was continued as before, but investments remained small. The future involves a great deal of uncertainty, which was reflected in the caution in the decision-making.

This publication presents a survey of agriculture in 1994: production, consumption, prices, and incomes. Many figures are still preliminary, and the final statistics will be available in the early part of 1995.

The publication also includes an overview of the most central aspects of agricultural policy. There are some preliminary statistical data in this section, too. The year 1994 was the last year of independent agricultural policy, and for this part the publication of 1995 will be completely different.

The main outline of the publication is the same as in earlier years, and thus some of the text has also remained unaltered. However, an attempt has been made to bring the statistical data up to date as far as possible.

The staff of the Agricultural Economics Research Institute has contributed to the preparation of this publication in many ways. I wish to thank, in particular, Jaana Ahlstedt, Ossi Ala-Mantila, Marja Hokkanen, Xavier Kawula, Jussi Lankoski, and Hannu Linjakumpu for their support and assistance in the finishing the text and the acquisition of the statistics. I also thank Jaana Kola, who has translated the publication into English.

The author alone is responsible for the possible mistakes and defects. Also, the conclusions and viewpoints presented here are those of the author, and do not represent the views of the Research Institute or the official agricultural policy.

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Lauri Kettunen

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I
OVERVIEW OF AGRICULTURE IN FINLAND

1. Agriculture and the national economy

In 1993 the share of agriculture of the gross domestic product was 3 %. The share has increased slightly as a result of the economic depression, but it can be expected to decrease again when the growth of the economy has continued for a few years. The drop in the share of agriculture has been caused by the fact that in agriculture the production has grown more slowly than in other sectors of the national economy. The amount of purchased implements and services in agriculture has also increased, i.e. part of the value added of agriculture has shifted to other sectors.

The significance of the total food chain in the national economy is much greater than the share of agriculture in the gross domestic product alone indicates. The sectors providing production inputs, transportation, and processing increase the share of food economy in the whole national economy considerably.

In 1992, the total food expenditure amounted to FIM 56 bill., and its share of the consumer expenditure was 16 %. This does not include restaurants or alcoholic beverages. The food sector employs about 300,000 people, when the production input industry, services, and food industry are included, in addition to agriculture, but the retail trade is left out.

In recent years investments in agriculture have dropped to about half of the level of the end

Table 1. Gross domestic product (at factor cost) and investments in the whole national economy and in agriculture.

Year	Gross domestic product			Investments		
	total FIM bill.	agriculture FIM bill.	%	total FIM bill.	agriculture FIM bill.	%
1984	275.24	12.44	4.5	73.43	4.61	6.3
1985	298.67	12.43	4.2	80.05	4.80	6.0
1986	315.90	13.05	4.1	83.51	4.59	5.5
1987	344.93	10.93	3.2	93.27	4.25	4.6
1988	384.46	11.01	2.9	111.05	4.54	4.1
1989	422.53	14.19	3.4	136.15	5.06	3.7
1990	448.11	15.18	3.4	139.14	5.08	3.7
1991	427.78	13.09	3.0	110.06	3.75	3.4
1992	415.49	10.90	2.6	87.95	2.28	2.6
1993[e]	417.51	11.51	2.8	71.27	2.08	2.9

Source: Statistical Yearbook of Finland from various years.

of the 1980s. The trend has been similar in the whole national economy. Uncertainty about the future has made farmers cautious. In 1993 the share of agriculture of the investments of the whole national economy was only 3 %.

Agriculture is a very capital intensive industry. One job in agriculture costs much more than in the whole national economy on the average. A modern farm requires a lot of land, buildings and machinery, but employs only a couple of people. It is obvious that farmers are not prepared to make investments, especially due to the uncertainty caused by the accession into the EU. The overall economic depression has also affected the production and investment decisions in agriculture.

The share of the employed labour force of agriculture in the whole national economy is about 7 % (Appendix 2). This is considerably larger than the share of agriculture in the gross domestic product. It would seem that the productivity of labour is not as good in agriculture as in other sectors of the national economy. However, the compilation of statistics on the labour force and labour input in agriculture is difficult. Members of a farm family often work outside agriculture as well, which means that the statistics may overestimate the share of agriculture in the employed labor force. Only about half of the incomes of farm families come from agriculture.

Economic situation

A turn for the better can be observed in Finnish economy. In 1994 the gross domestic product grew by about 4 % compared with the previous year, whereas in 1993 it still decreased by about 2 %. The turn occurred in the middle of 1993, and after that the growth has accelerated. Economic recovery is a fact, and the growth is rapid. In 1995 the growth is expected to be 5 - 6 %. However, the level of production at the turn of the year 1989-90 is not likely to be reached until 1997.

Foreign trade has been the driving force of the economy, but the domestic markets have also recovered gradually. At the end of 1993 private consumption and investments started to increase as well. Building activity has also increased after the middle of 1994.

The public sector will continue the cuts, which slows down the recovery. The deficit in the state economy is still considerable. In 1994 the net borrowing was about FIM 60 bill., and the state debt is as high as FIM 325 bill, which is 61 % of the gross domestic product. In 1995 the borrowing will continue at the same pace, and the share of the debt will continue to increase. Stopping the borrowing will take many years, and after that the debt will burden the state economy for a long time. The interest expenditure alone will amount to over 10 % of the state budget in the next few years.

Exports have been the main factor behind the economic growth. The increase in the volume of exports was 17 % in 1993, about 15 % in 1994, and it is expected to be 10 - 11 % in 1995. Instead, imports have remained at about the same level for many years, even if some increase occurred in 1994, which was to be expected due to the economic growth. The trade balance has shown a considerable surplus, and the balance of current payments was positive, FIM 15 bill., in 1994.

Thus the increase in foreign indebtedness has stopped. Confidence in Finnish economy has been restored, which can be seen, in particular,

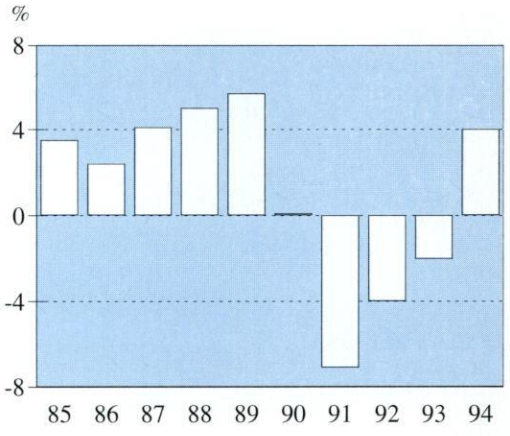

Figure 1. Growth in the volume of market price GDP in 1990 prices (%/year).

in the strengthening of the Finnish markka. Especially in the latter part of 1994 the value of markka increased very strongly. From the beginning till the end of 1994 the value of markka increased by about 9 %. The value of markka has returned nearly to the level of September 1992, when markka was left floating.

The rapid growth in foreign trade has led to a strong growth in the manufacturing industry. Industrial production increased by about 12 % from the previous year. In wood processing and metal industry the growth has been around 10 %. The growth has been particularly strong, about 20 %, in the fields of electricity and electronics.

There is an urgent need for an increase in investments, because their level has dropped to about half of the level before the depression. The growth of production cannot continue without a considerable increase in investments. In 1995, no shortage of capacity is to be expected, but the limit is not very far away. With respect to economic growth, investments would also be an important stimulant for the domestic markets. They grew by 5 % already in 1994, and the forecast for 1995 is about 15 %.

The growth of the economy has been supported by the low inflation. At the annual level, the consumer prices rose by only about 2 %. Finland shifted into a value added tax system in the beginning of June, 1994, but the price level rose by only about 1 % as a result of this. Even if wages were raised to some extent at the end of 1994, the effects of this are likely to remain small, and inflation is not expected to increase yet in 1995.

The high unemployment is going to keep consumer demand low for some time, which for its part helps to keep inflation low. In 1994 the growth in private consumption was 2.5 %, when in 1993 it still decreased by 4 %. Available income was at the same level as in 1993, but the degree of saving decreased slightly, which explains the increase in the consumption.

The enormous debts from the years of depression will slow down the growth in the private consumption. The payments of these debts will continue for years.

The negative aspects in the economy include the high unemployment and state debt. In both 1993 and 1994 the average rate of unemployment was 20 %. Unemployment reached its peak at the end of 1993, and now it has started to decrease clearly. In 1995 the unemployment rate is expected to be about 16 %. Usually the improvement in employment is somewhat behind that of economic growth, which explains the high unemployment figures. Even more rapid growth in the economy would be needed to reach an at least tolerable situation, compared to the unemployment rate of 4 % at the end of the 1980s.

The deficit in the state economy is a consequence of the economic recession. The growth of unemployment has resulted in a decrease in the tax revenue in many ways. The accrued income tax has decreased and consumption has dropped, which has led to a decrease in the value added tax revenue, etc. On the other hand, the unemployment benefits have skyrocketed. Increase in the interest expenditure is an enormous burden in the budget, and this makes it necessary to cut the state expenditure very strongly in the years to come, too, which naturally slows down the growth of the economy to some extent.

The state economy is considered to have a considerable impact on the money markets, especially the interest level, because the state is the main borrower in the domestic markets as well. The short-term interest rates remained at the European level of 5 - 6 % throughout the year, but the long-term rates have been clearly higher than in the EU countries on the average.

The main consequence of the depression to agriculture has been that an increasing share of the export costs of overproduction is covered by agriculture. Thus, the average producer prices in agriculture have decreased, and farmers' incomes have dropped. However, very dramatic consequences, e.g. a wave of bankruptcies, have been avoided.

Although forestry income, on the average, accounts for only about 15 % of the incomes of farm families, the positive development in the forestry sector is very important for agriculture.

Exports of forestry products have increased very strongly, and along with this the stumpage prices have risen by about 15 %. Felling has increased by as much as a third from the previous year. This has made it possible for farmers to obtain additional income to compensate for the possible income losses in agriculture proper.

Finland became a member of the European Union on January 1, 1995. The Accession Treaty was approved by the Finnish Parliament on November 18, after 57 % of those who voted in the consultative referendum on October 16 had supported its approval. The national economy is already quite well adapted to the EU because of earlier agreements and the EEA agreement that came into force in 1994, but the full membership was still considered necessary for the credibility of the economy and the possibility to participate in the decision-making. However, agriculture faces a new situation because of the membership, which is going to have an enormous impact on the whole food sector.

2. The Finnish farm

Finland is located between the 60th and 70th latitudes. Practicing agriculture is possible due to the Gulf stream, which causes the temperatures in Finland to be 3 - 4°C higher than usually in these latitudes in other parts of the world.

Finland is about 1,100 km long from south to north, and the climatic conditions vary considerably. In Southern Finland, the growing season is 170 days, but in the north it is only 100 days. There is a lot of variation in the effective temperature sum, too: in the south it is 1,300 and in the north 500 degree-days. From time to time there is frost even in the middle of the summer in all parts of the country.

The amount of light in summer reduces the differences in the growing conditions in different parts of the country to some extent. Nights are short, especially in central and northern parts of the country. On the other hand, the radiation conditions restrict the selection of the plant varieties. Breeding of plant varieties that

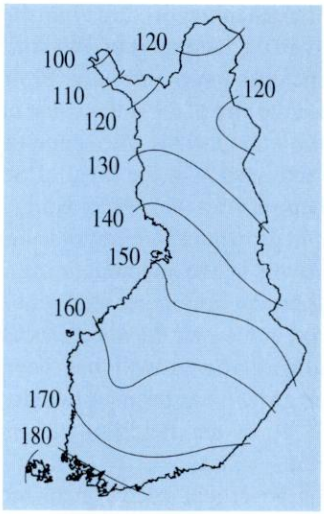

Figure 2. Growing seasons in Finland.

are suited for the Finnish conditions is needed.

Climatic conditions are decisive for the location of crop production. Cultivation of wheat and oil-seed plants is restricted to Southern Finland. Instead, barley, oats, grass, and potatoes can be cultivated in all parts of the country. In many parts of Finland livestock production, especially dairy production, is the only profitable form of production.

Finnish agriculture is based on family farms. State and municipal institutions like schools and research institutes own a few larger farms, but their significance in Finnish agriculture as a whole is very small.

In 1993 private persons owned 78.2 % of farms, heirs and family companies 20.6 %, limited companies and cooperatives 0.4 %, and the state, municipalities, and congregations 0.7 %. The share of farms owned by heirs has increased slightly. This is significant for agricultural policy because these farms have the lowest productivity, and their existence slows down structural development. In 1993 17.6 % of farms owned by private persons were owned by pensioners.

According to the Farm Register of 1993 there were altogether 191,853 farms with over 1 hectare, and the average farm size of these was

Table 2. The distribution of all farms and active producing farms into farm size classes and the average farm size (over 1 ha).

	1993		1993[1)]	
	1,000	%	1,000	%
1 - 4.9	65.3	34.4	17.6	15.1
5 - 9.9	40.3	21.0	22.2	19.1
10 - 19.9	44.5	23.2	36.3	31.2
20 - 49.9	36.3	18.9	34.9	30.0
50 -	5.5	2.9	5.4	4.6
Total	191.9		116.3	
Arable land area 1,000 ha	2,582.5		2,183.9	
Farm size, ha	13.46		18.78	

[1)] Producing farms
Source: The Yearbook of Farm Statistics 1994.

13.5 ha. However, agricultural production was practiced on only 116,281 farms, and their average farm size was 18.78 ha. The small farms in the statistics often distort the discussion on the structure of Finnish agriculture. If only the active, full-time farms are considered, the number of farms is much smaller and, correspondingly, the average farm size is larger. However, even in this case the farm size is quite small, especially in cattle production.

Every year a good number of small farms quit production, but in other respects structural development is slow. The number of large farms has not increased very much, and there is very little amalgamation of farms. In practice, it is possible to increase the farm size through renting arable land. This has been on the increase, and in 1993 altogether 401,529 ha, i.e. 15.5 % of the arable land area was rented. The average rented area was 9.1 ha.

Forest is an integral part of a Finnish farm: an average farm has 13.5 ha arable land and 49 ha forest. However, the regional distribution varies. In general, the arable land area is larger and, correspondingly, forest area is smaller in the south than in the north (Table 3).

Finnish agricultural production is mainly based on livestock. Only 15 % of arable land area is used for crop production for human consumption. Milk production accounts for about 30 % of the total return of agriculture, and the share of cattle production rises to about half of the total agricultural production when beef production is taken into account. Consequently, the share of hay, silage, and pasture is about a third of the total arable land area.

Production structure has changed in the course of time so that the share of milk has decreased, whereas that of meat has increased. The specialization of agriculture accelerated especially in the 1960s and 1970s. Earlier almost all farms produced milk, but in June 1994 there were only 33,700 milk suppliers (Appendix 2). About half of the farms are engaged solely in crop production.

Finnish farms are highly mechanized. There is usually a tractor and other machines necessary for the production line on the farm. According to an estimate, there are about 234,000 tractors and 49,000 combine harvesters. Calculated per hectare, the level of mechanization is quite high. Almost all dairy farms have a milking machine.

Table 3. Arable land and forest areas in different parts of Finland in 1980 and 1993 (ha/farm)[1)].

	Arable land and garden		Forest land	
	1980	1993	1980	1993
Uusimaa	18.2	20.9	28.2	31.1
Häme	14.1	15.3	31.0	37.0
Kuopio	9.4	20.0	37.2	45.5
Vaasa	11.3	14.1	26.4	29.6
Oulu	9.2	11.2	45.8	85.3
Lappi	6.1	7.0	78.8	121.8
Whole country	11.0	13.5	35.5	48.7

[1)] The statistics have changed in 1992. Includes part of forestry farms.
Source: The Farm Register of 1980 and the Yearbook of Farm Statistics 1994.

Table 4. Capital stock of agriculture in 1992, FIM bill.

	All farms
Arable land	31
Production buildings	23
Machinery and implements	17
Livestock	10
Stocks	4
Total	85

Source: Pyykkönen 1994

The total capital stock of agriculture has been estimated at FIM 85 bill. (of which the share of active farms is estimated at FIM 77 bill.). The share of land is about FIM 31 bill., in which case FIM 13,400/ha has been used as the price of arable land. The price of arable land, which in Table 4 has been estimated by means of various sources, varies according to the economic situation, and it is difficult to prepare the estimates for the whole country. The number of land transactions per year is about 1,000, and part of them concern small land areas. Evaluation of the production buildings and other property items is somewhat easier.

The debts of farmers amount to about FIM 28 bill. In the distribution of the debt between the farms, about a quarter of farms have no debts at all. On the hand, the 10 % of farms that are the most indebted have about half of the debt. In a survey made in 1991 it was noted that on about 8,000 farms the amount of debts is alarming. A reorganization programme was prepared for these farms, and by means of this they can continue their production without any immediate threat of going bankrupt.

The value of forests owned by farms is about FIM 49 bill., when the hectarage price of FIM 7,200 is used, and the value of other assets is FIM 58 bill., of which the share of residential buildings is FIM 27 bill. Consequently, according to the survey, the total assets of all farms were FIM 193 bill., and that of active farms FIM 156 bill.

3. Other rural industries

In addition to agriculture and forestry, farmers practice many other industries, e.g. horticulture, fishing, fur farming, farm holidays, etc. An overview of these industries is presented in the following. No all statistics from 1994 are available, and, on the whole, the statistics on these industries are incomplete.

This publication is mainly concerned with agriculture proper, which in Finland includes only outdoor garden production, and greenhouse production is excluded. In 1993 the value of *greenhouse production* was about FIM 1.27 billion, the share of vegetables (mainly cucumber, tomatoes, and lettuce) being about FIM 585 million and that of flowers about FIM 681 million. About 3,000 entrepreneurs were engaged in greenhouse production, and the greenhouse area was 465 ha. Thus the average greenhouse area was about 1,450 m^2. The labour requirement of this field is about 20,000 man years.

Greenhouse production does not receive any actual state support. However, imports have been regulated through import levies and licences. The prices of cucumber, tomatoes and lettuce stayed almost at the same level or decreased slightly in the 1980s, which means that the real producer prices have decreased considerably.

In 1993 there were about 4,100 *professional fishermen* in Finland (1,300 full-time and 2,800 part-time). About 67 % practice their trade at sea. The number of fishermen has been decreasing rapidly. Most fishermen are part-time farmers.

In 1993 the value of the catch of fish was estimated at FIM 194 million. In addition, *aquaculture produced* fish (mainly rainbow trout) for about FIM 375 million in 1993. Occasionally rainbow trout is also an important export article. In 1993 1.1 mill. kg was exported, and the value of this was FIM 33 mill. The value of roe of rainbow trout export alone was FIM 22 mill. The value of planting production, which is important for improving the stock of fish, was FIM 81 mill. in 1993. The increased

Table 5. Some figures on side-line production.

	Number of enter-prices	Value of production FIM mill.
Greenhouse production	3,000	1,780
Fishing	..	650
Fur farming	2,200	..
Reindeer herding	7,100	84
Horse husbandry	6,000	230
Beekeeping	4,500	56
Farm holidays	2,000	130

management of water courses has probably also improved the catch of fish. Many farms are located close to a lake, which makes fishing for household use possible.

An especially important side-line for agriculture is *fur farming*, which is also practiced on its own. It employs about 5,000 people. There are about 2,200 fur farms. Fur production is mainly concentrated in Ostrobothnia, from where about 85 % of all production comes. The share of Finland of the total fur production in the world is 70 % in the case of fox, but only 10 % in the case of mink.

However, the past few years have been very difficult for fur farming. The collapse of the world market prices has forced many fur farms to stop their production. In 1993/94 prices rose considerably and profitability improved particularly for fox. The price of mink is still below the profitability level.

The use for furs has moved to new markets, like to the Far East, where economic growth has been fast. In Europe and America the demand has fallen, the reason for which has been the economic recession and warm weather.

The field is sensitive to business fluctuation and it has to adapt itself to the changes in the world market, which may be great. However, Finnish producers have tried to adapt themselves to international competition through breeding.

Reindeer herding is the main source of livelihood for about 800 households in Lapland. In addition, in about 1,500 households it is a very important secondary occupation. In the herding year 1993/94 there were about 7,100 reindeer owners. At reindeer round-ups in 1993/94 there were about 346,000 animals, of which 131,000 were slaughtered. Meat production was 3.2 mill. kg, and its value was about FIM 84 mill. Reindeer meat has mainly been consumed in Finland, and hardly any is exported.

In 1994 there were about 49,000 horses in Finland, and about half of them were on farms. The number of horses has increased in the past few years, although they are very rarely used in farm work. *Horse husbandry* is practiced on about 6,000 farms. Horses are mainly used for riding and trotting. On the farms horse husbandry employs 1,300 people full-time and about 5,000 part-time. The value of the production of horse husbandry on farms was estimated at about FIM 230 mill.

Beekeeping provides additional income to about 4,500 beekeepers. In 1993 altogether 2.1 mill. kg honey was produced, and its value was about FIM 56 mill.

Wild berries (cloudberry, blueberry and lingonberry) are an important source of income for many people, especially in northern Finland. In 1990 this income amounted to about FIM 52.1 million. In addition, there is the value of the berries used in households. The income from picking *mushrooms* was about FIM 6.8 million in 1990. In 1991 10 mill. kg berries and 0.5 mill. kg mushrooms were sold.

Farm holidays have also become an important side-line industry to agriculture. About 2,000 entrepreneurs are offering farm or summer cottage holidays, and about half of them are farmers. This activity includes restaurants and feasts, and has expanded year by year. The return of all holiday and traveling services is estimated at FIM 130 million/year. Compilation of statistics is difficult because this field is very heterogenous.

II
PRODUCTION, PRICES AND FARM INCOME

4. Crop production

4.1. Weather conditions

Weather conditions in winter are not very significant for agriculture as a whole in Finland, because the area under winter cereals (rye and winter wheat) is only about 1 - 2 % of the total cultivated area. However, the wintering of these varies according to the amount of snow, and this also determines, to some extent, when the spring sowing can be started.

The winter of 1993-94 was the first proper winter for a long time: the amount of snow was normal, and the temperatures remained well below zero in the middle of the winter. Snow melted at the usual time and spring sowing could be started in the first weeks of May, a little later in the north.

Early summer was cool and rainy, which is favourable for sprouting. Thus, the crop outlook was very good in mid-summer. However, July was very dry and quite warm; it was perfect for the holidays, which usually means that it was not so good for agriculture. Agriculture suffered, because in some places the grains remained small.

In August, the precipitation was again close to the normal or slightly higher. In spite of this the harvesting of cereals was started about a week ahead of the normal, and it was completed in all parts of Finland without any major problems.

For the cultivation of field crops, summer 1994 was quite normal, despite the long dry period in July. On the basis of the temperature sums, the early part of the summer was normal, in mid-summer the growth was slightly behind the normal, but the normal schedule was reached again when harvesting was started. For whole of the growing season, precipitation was in accordance with the long-term averages.

Fall sowing was completed in satisfactory conditions. Because of overproduction, only about 20,000 ha of rye was sown, which is clearly less than would be needed to meet consumption (about 50,000 ha). The area of winter wheat was about 15,000 ha.

4.2. Areas and yields

The total arable land areas was at the same level as in the previous year, or, rather, there was a slight increase. Part of the arable land area is permanently uncultivated, and set-aside accounts for a large share to restrict agricultural production. In 1994 the cultivated area was 1.67 mill. ha, which is 72 % of the total arable land

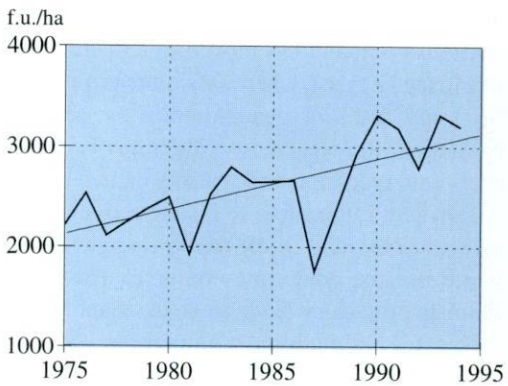

Figure 3. Total yield without straw in 1975 - 1994, f.u./ha.

area. Cultivated pasture is included in this figure. There are very few natural pastures.

The area under cereals grew by about 2 %. The areas of bread cereals (rye and wheat) decreased considerably as a result of the attempts to reduce the cultivation of rye, in particular, because large stocks. The area under barley increased correspondingly. The areas under oats and grass did not change very much.

The cultivation of sugar beets and oil-seed plants is mainly based on contracts, and the extent is regulated by means of general price agreements. Thus there are no major changes from one year to another.

The hectarage yields of cereals were good: in the case of almost all crops they were above the normal. The hectarage yield of spring wheat was 3,800 kg, which is 15 % above the normal yield, and the highest hectarge yield of all times. The hectarage yield of winter wheat was also very good. The quantity of the total yield of bread cereals was smaller than in the previous

Table 6. Harvested areas and yields of main crops in 1993 and 1994[1].

	1993			1994		
	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg
Winter wheat	18.1	34.3	62	11.3	37.4	42
Spring wheat	80.9	36.6	296	77.6	38.0	295
Rye	22.7	27.7	63	8.6	25.8	22
Barley	457.7	36.7	1,679	504.9	36.8	1,858
Oats	330.6	36.4	1,202	332.5	34.6	1,150
Potatoes	36.4	213.5	777	36.5	198.8	726
Sugar beets	32.9	302.7	996	33.9	323.6	1,097
Hay	228.9	40.1	918	259.0	39.2	1,016
Green fodder	37.9	178.4	676	32.7	158.4	518
Silage	280.2	190.5	5,337	257.8	167.2	4,309
Oil-seed plants	69.4	18.4	127	67.1	16.1	108
Other crops	56.6			51.3		
Total	1,652.3	3,316[2]	5,403[3]	1,673.2	3,201[2]	5,260[3]
Pasture	131.7			123.6		
Premium set-aside	452.9			464.2		
Other set-aside	40.8			40.9		
Other arable land area	225.8			203.8		
Arable land, total	2,503.5			2,505.7		

[1] A general agricultural census was made in 1990, and this has caused some changes in the statistics. The total area is larger than the area based on sampling: the earlier figure for 1990 was 2.436 mill. ha, and the new figure based on the census is 2.544 mill. ha. This must be noted when comparisons are made with the statistics from the 1980s.

[2] f.u./ha without straw. Feed unit norms changed at the beginning of 1990 for the part of cereals. The average raise was about 2 %.

[3] mill. f.u. without straw.

year due to the decrease in the cultivated area.

The yield level of fodder cereals was also good. The hectarage yield of barley was 3,680 kg, and that of oats 3,460 kg. Both are higher than the long-term trend values, and the yield of barley was an all-time record. The quantity of fodder cereals was 2 % larger than in 1993. The production of fodder cereals exceeded the domestic need again clearly, even if an attempt has been made to reach the balance through set-aside systems. The quality of both bread cereals and fodder cereals was very good.

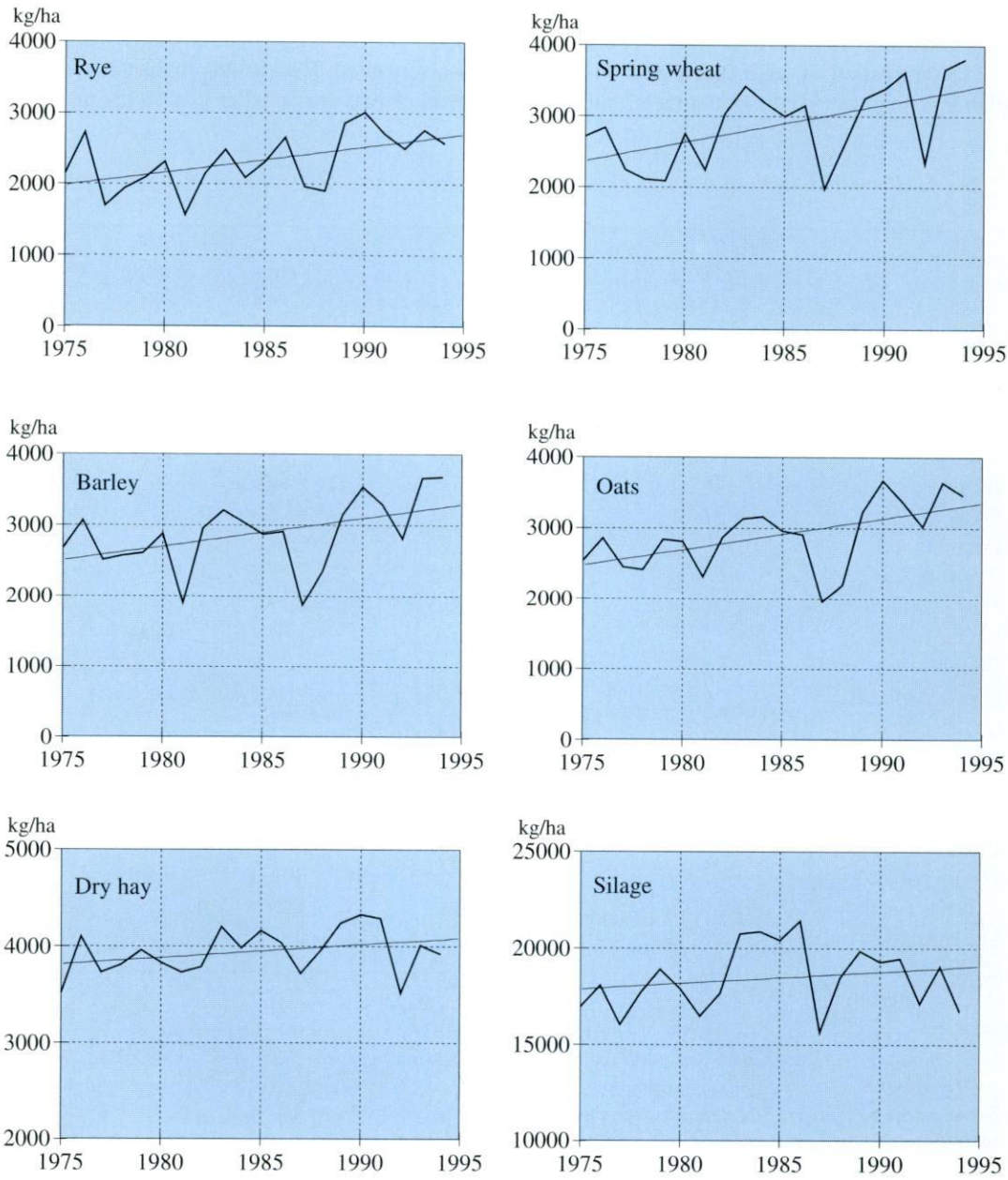

Figure 4. Yields of main crops in 1975 - 1994.

The yields of dry hay and silage remained clearly below those of the previous year and the long-term trends. The weather conditions in the early part of the summer were not favourable for them, and the drought in July, in particular, affected the yield level of silage.

The hectarage yield of potatoes was slightly smaller than in 1993, but the quality was good, and the yield was adequate to meet domestic consumption. The hectarage yield of sugar beets was very good, and the quantity was about 10 % larger than in the previous year. The yield level of oil-seed plants formed an exception in the otherwise good crop year. The yield level remained clearly below the normal.

Measured as fodder units the yield was 3,201 f.u./ha, which is clearly above the trend value. The total yield of 5,260 mill. f.u. was about 3 % smaller than in 1993.

5. Livestock production

The production of all livestock products increased in 1994, but the increase remained quite small. No active production restriction measures were in use, although the measures started earlier influenced the production still in 1994.

The most significant increase occurred in *milk production*, which grew by about 51 mill. litres, i.e. 2.2 % compared with 1993. The amount of the increase was surprising, and there are various reasons for it. No new contracts to reduce production were made in 1994. The reduction of the number of milk suppliers has slowed down. At the turn of the decade 3,000 - 4,000 farmers gave up milk production. In 1993 under 2,000 milk producers quit production, and in 1994 this number was only slightly over 1,000.

The number of cows decreased slightly in 1994, but the average yields increased correspondingly. In the early part of the year, in particular, but also in the latter part the yields of milk were clearly at a higher level than in the previous year. The Finnish quota period came to an end at the end of August, 1994, and the quota period in accordance with to the EU will begin at the beginning of April, 1995. The quotas were exceeded by about 55 mill. litres, but the quota charge of FIM 1.65/l was lower than earlier (FIM 2.05/l). This is likely to have reduced the need to curtail production. In the EU the quota charge is FIM 2.30/l.

One reason for the increase in milk production may also be the attempts to use all fodder in stocks as efficiently as possible during the autumn, when the market price was still high, compared to the EU market prices.

The total quota of 2,342 mill. kg, which is based on the quantity of production in 1992, will be problematic for milk producers. The production has usually remained below the quota. Farmers' quota exceeds it.

Milk production is clearly higher than the domestic demand. Consumption has decreased, and in 1994 the self-sufficiency calculated according to the liquid was about 112 %. The self-sufficiency in fats is even higher than this.

In 1994 *beef production* was about 107 mill. kg, which was slightly larger than in 1993. The increase in the slaughter weights has slowed down the decrease in the production resulting from the decrease in the number of slaughter animals due to the reduction of milk production. Beef production is likely to stay at the same level in 1995.

At the moment there is still oversupply in beef, because consumption has decreased. However, it is to be expected that, as the production

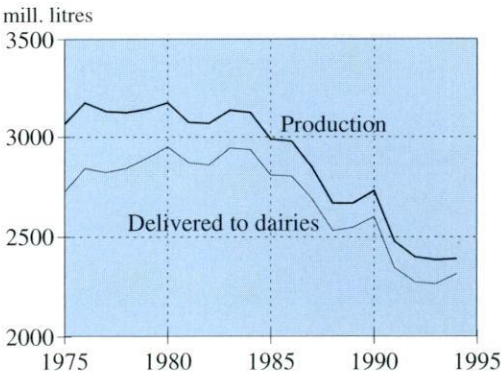

Figure 5. Milk production and the amount of milk delivered to dairies in 1975 - 1994.

Table 7. Livestock production in 1988 - 1994.[1)]

		1988	1989	1990	1991	1992	1993	1994[e]
Dairy milk	mill. l	2,531	2,547	2,600	2,345	2,274	2,264	2,315
Beef	mill. kg	111	107	118	122	117	106	107
Pigmeat	"	169	174	187	177	176	168	168
Eggs	"	77	76	76	67	67	70	71
Poultry meat	"	28	30	33	37	36	35	39

[1)] *The hot weight reduction of meat was abolished at the beginning of March 1990. As a result, the quantities are 3 % bigger than earlier. The prices were dropped correspondingly by 3 %.*

will continue to decrease, there will be a shortage of beef when the demand picks up, as the depression gives way.

The decrease in *pigmeat production* stopped in 1994, but it stayed at the earlier level. The production has been restricted by an Act on the Export Fee, which made it necessary to keep the slaughter weights under 74 kg. If the slaughter weight was higher, the producer had to pay a marketing fee of FIM 1.00/kg for the whole carcass. However, the slaughter weights have risen slightly, which explains the growth in the production. Production is expected to stay at the present level or to decrease slightly in 1995.

Egg production increased by about one mill. kg in 1994. Production decreased considerably in 1991, but after that it started to grow, and this trend has continued for a couple of years. No measures to restrict production were in use, and earlier contracts were discontinued, which explains the growth in the production. The self-sufficiency level in eggs has risen to 133 %. 1995 will be a difficult year for egg producers, because the market prices are going to fall considerably.

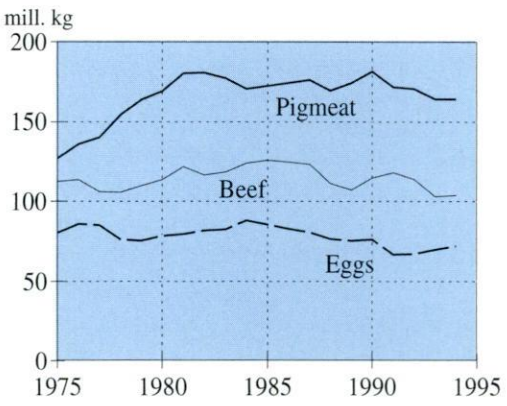

Figure 6. Production of beef, pigmeat and eggs in 1975 - 1994.

Poultry meat production has increased quite steadily for a long period of time. The consumers have favoured broiler, and the prices have been competitive compared with the other meats. Both production and consumption increased again in 1994, and this trend is likely to continue in the future.

The production and consumption of *other meats* (mutton and horse meat) is very small in Finland, about 2 mill. kg. An attempt has been made to stimulate the production of mutton through various means, but so far there has been very little success. Some mutton is imported to Finland, which shows that there would be some possibilities to increase production. However, the producer price of mutton has remained below the target. The production of reindeer meat is about 3 - 3.5 mill. kg a year. Other meats also include venison, the amount of which is about 5 - 6 mill. kg every year.

6. Consumption

The economic depression has affected consumption. Available incomes have decreased in real terms and, on the other hand, the degree of

saving has increased due to the repayment of debts. Thus the amount of money spent on consumption has been a lot smaller than earlier. This can also be seen in food consumption.

Food prices have been quite steady in the past couple of years. This resulted from both the lowering of the producer prices and the decrease in the margins of trade. Special prices have become more and more common in the retail trade. The official consumer price index shows that food prices decreased by about 0.2 % in 1994.

The consumption of *dairy products* continued to decrease in 1994. The consumption of liquid milk products has decreased for some time, especially that of milk with a fat content of 2.9 %. Instead, the consumption of skim milk increased somewhat. The consumption of other liquid milk products stayed about at the same level as before.

The consumption of dairy butter decreased in 1994. The amount of butter consumed in the butter-vegetable oil mixes is about 2 kg/capita. The consumption of butter-vegetable oil mixes is altogether about 3 kg/capita. Their consumption has reached quite a steady level.

Cheese consumption has been growing steadily year after year. Calculated per person, the consumption is nearly 14 kg, which is the same as in many European countries.

Table 8. Consumption of dairy products and margarine/capita in 1986 - 1994.

	Liquid milk litres	Butter kg	Cheese kg	Margarine kg	Butter mixes[1] kg
1986	235.7	8.8	10.3	7.2	1.7
1987	232.8	8.2	11.5	7.1	2.2
1988	228.9	7.0	11.7	7.3	2.1
1989	224.7	6.5	12.5	8.0	2.1
1990	222.9	5.5	12.7	7.6	2.2
1991	215.7	6.2	12.8	7.9	2.6
1992	214.7	5.8	13.1	8.5	2.8
1993	214.5	5.7	13.5	8.6	2.9
1994[e]	211.0	5.1	13.7	8.0	2.7

[1] butter-vegetable oil mixes
Source: MTTL, Food Balance Sheets, ETT

Table 9. Consumption of meat and eggs in 1986-1994, kg/capita[1].

	Beef	Pigmeat	Poultry meat	Eggs
1986	21.1	32.7	4.5	11.7
1987	20.9	32.6	5.2	11.8
1988	20.8	32.7	5.6	11.6
1989	20.4	31.6	6.2	11.1
1990	21.6	33.0	6.5	11.1
1991	21.3	32.9	7.2	10.7
1992	19.7	32.4	7.4	10.9
1993	18.8	30.5	7.2	10.9
1994[e]	19.0	29.7	7.8	10.8

[1] Since 1990 the consumption figures for meat are about 3% higher than earlier as the hot weight reduction was left out.

Pigmeat consumption fell by almost 5 % in 1993 to only 30 kg/capita, when only a few years earlier it had been 33 kg/capita. Consumption was expected to stay at least at the current level or even to increase somewhat. It can be assumed that the increase in the purchasing power and decrease in the retail prices after joining the EU would cause the consumption to start to grow again.

Beef consumption has been on the decrease for several years. This has been caused by the change in the price relations in favour of pigmeat and poultry meat, but in the past couple of years the main reason has probably been the decrease in the purchasing power due to the depression.

The consumption of *poultry meat* has been on the increase for some time, at the cost of other meats. However, in the 1990s, the growth has stopped almost completely, probably due to the depression. Even some decrease occurred in 1993, but, according to a preliminary estimate, the consumption increased again in 1994. Changes in the stocks confuse the calculation of the consumption figures to some extent. It is likely

that the growth in the consumption will continue, but it will remain slow.

Egg consumption became established at the present level of about 11 kg/capita in 1989, after a slight increase when the prices fell as a result of the dual price system. With regard to eggs, consumer habits are not likely to change very much, which means that no major changes are to be expected in the consumption. In 1994, egg consumption increased slightly.

The consumption of meat and eggs is internationally quite low in Finland. This is the case in Sweden, as well. Consumer habits have been formulated in the course of time, and they do not change very rapidly. Instead of meat, Finns consume fish and milk, and thus the share of animal protein in the consumption is at about the same level as in the industrialized countries in general. Internationally the consumption in Finland as calories (2,800 kcal or 11.7 MJ) is low.

7. Foreign trade

As self-sufficiency has been set as the objective for Finnish agriculture and the borders have been closed against foreign competition, the main function of exports and imports has been to balance the variations in demand and supply. Consequently, the task of foreign trade has been to export overproduction in order to keep the domestic prices at the set level. There has been very little import of basic foodstuffs. Only cereals have been imported in larger quantities when the domestic crop has remained small as a result of weather conditions. This was the case e.g. in 1987 and 1988.

Fruits and vegetables are imported according to demand because there is little domestic production. Coffee is one of the most important free import articles, and the import of certain tropical fruits is also relatively free. The monetary value of imports is higher than that of exports (Table 10), although overproduction is considered the greatest problem in agriculture.

The decrease of agricultural production has reduced the amount of exports to some extent. Decrease in milk production has led to a reduction in the production of milk powder, in particular, and the export has stopped almost completely in the past couple of years (Table 11). The export of butter has also decreased to some extent, but last year it started to increase again slightly because of the increase in milk production. The export of cheese has continued at a quite steady level, based on various contracts. It

Table 10. Exports and imports of agricultural products in 1985 - 1993 (FIM mill.).

	Exports total	Imports total	Imports Coffee, tea and spices	Fruits	Beverages and tobacco
1985	2,876.2	5,388.9	1,125.5	814.0	358.9
1986	2,256.3	5,713.2	1,376.9	855.2	405.0
1987	2,074.7	5,798.1	990.9	978.7	401.7
1988	1,815.8	5,705.2	787.6	915.4	372.6
1989	2,098.5	6,111.3	825.5	942.1	494.3
1990	2,508.7	5,613.9	562.5	963.3	537.8
1991	2,375.1	5,794.5	562.1	1,016.4	561.4
1992	2,796.1	6,488.4	526.2	1,132.7	613.9
1993	4,298.8	7,545.3	814.1	1,239.1	717.5

Source: Official statistics of Finland. Foreign trade.

Table 11. Exports of some agricultural products in 1985 - 1994, mill.kg.

	Butter	Cheese	Milk powder	Pig-meat	Beef	Eggs	Cereals
1985	18.6	37.0	40.1	17.8	21.5	32.9	561.0
1986	14.9	34.5	33.9	10.2	21.3	25.1	664.3
1987	21.3	34.4	31.7	17.3	22.0	21.6	294.9
1988	19.2	32.5	18.4	9.2	10.5	18.6	25.0
1989	20.3	26.3	8.0	14.0	5.5	19.1	334.8
1990	35.9	28.9	25.9	22.7	10.0	20.4	513.6
1991	22.7	27.8	16.5	14.5	18.5	12.9	1,113.8
1992	17.3	24.9	7.8	13.4	16.2	11.9	717.8
1993	16.6	24.9	3.3	16.0	14.7	15.1	762.2
1994[e]	23	25	3	19	11	18	991

Source: Official statistics of Finland. Foreign trade.

would be desirable to continue the export of cheese in its present extent, because Finnish cheeses have a very high reputation in the international market. However, the shortage of raw material makes it necessary to reduce cheese production, and thus it is to be expected that the export of cheese will decrease in the future. According to an agreement made with the EU, about 3 mill. kg cheese has been imported to Finland every year, and the import from Sweden has also started.

The export of meat varies according to the amount of overproduction. Pigmeat exports amounted to 19 mill. kg, and beef exports to about 11 mill. kg in 1994. An attempt has been made to cut exports by reducing production, but the consumption has decreased correspondingly, and it has not been possible to abolish overproduction.

Egg exports have been about the same in the past few of years, but last year there was some increase due to the growth in the production.

Cereal exports have caused a heavy burden on the economy of both the government and farmers in the past few years. In 1994 cereal exports amounted to 991 mill. kg. In addition, in 1994 256 mill. kg cereals were used for domestic purposes at world market prices.

The EEA agreement negotiated between the EFTA and the EU came into effect in 1994. Its significance remained very small. The GATT agreement was ratified in 1994, and it came into effect at the beginning of 1995. The Accession Treaty with the EU includes the adjustment of Finland into the GATT agreement, so that it will no longer influence Finnish agriculture.

8. Price development

The price system in Finland changed considerably at the beginning of 1994 when the new Farm Income Act or, more precisely, the Act on the Market System for Agricultural Products came into force. The Farm Income Act had been the most important means of Finnish agricultural policy. By means of the act, the formation of producer prices had been regulated, and, indirectly, it had determined the production objectives of agriculture. The first Farm Income Act was passed in 1956, and since then it remained in force, in revised forms, until the end of 1994.

Producer prices have been regulated in negotiations between the state and farmers, in which the target prices and the means through which the account prices paid to farmers have been kept close to the target prices. The final objective of the price system was to develop the income level of farmers. The objective varied according to the Price Act, but, in general, it can

be noted that the objective was to raise farmers' incomes to the same level as incomes in other sectors, and to keep them at that level.

8.1. Market system for agricultural products

The Farm Income Act followed in 1994 stayed in force for only a year. Its task was to contribute to the adjustment of agriculture as well as the authorities to the EU membership. The most important points of the act are presented in the following.

Like earlier Farm Income Acts, the act of 1994 was a negotiation act. Its objective was to "guarantee a just income level to agricultural producers, secure the marketing of agricultural products and develop their quality, promote the productivity of agriculture and lower the cost level, as well as to secure the food supply and achieve reasonable consumer prices".

The target and minimum prices, price and income support, as well as the measures needed to secure the markets had to be decided in the negotiations. The target price was the price agricultural producers had to get during the pricing year. Target price was set for wheat, rye, barley, oats, milk, beef, pigmeat, mutton, and eggs.

As a concept, the minimum price corresponded to the intervention price in the EU. It formed the basis for calculating export support or purchasing agricultural products into stocks.

The most central point in the earlier Farm Income Acts was the compensation for the rise in costs. For this purpose, a detailed calculation on the rise of costs due to the rises in the prices of production inputs was made, and the rise was compensated in full to farmers by raising the target prices and/or support.

The compensation for the costs was not included in the new act. It was naturally possible for the negotiators to ask for the kind of calculations used according to earlier acts, and this was also done, but the calculations were not as binding as earlier.

The new act no longer included the production and export ceilings or detailed instructions on the responsibility of the state and agricultural producers for the export costs. These were decided on in connection with the state budget when the amount of export support was prescribed.

In 1994 import protection was realized as separate import fees, which were passed in the Parliament at the end of 1993. It included import fees for individual products and the procedure for changing the fees as the domestic and world market prices fluctuate.

Thus the price system lacked exact threshold prices, through which the domestic price level would have been protected against the pressures caused by imports, but in principle the system is similar to the threshold price system followed in the EU.

8.2. Income negotiations

The farm income negotiations of 1994 attracted very little attention. There were no causes for major conflicts, because the outcome of the negotiations with the EU was the main concern. Agriculture also launched an active campaign against the Accession Treaty. On the other hand, there were hardly any possibilities for an increase in farm income in spring 1994, as the wages had not been raised in the other sectors of the national economy, either.

The farm income negotiations should be completed by the end of February, because the pricing year starts at the beginning of March. However, the negotiations were completed at the end of April, but this did not have any great significance as no changes in the prices were to be expected. In years with a high inflation it was naturally important to bring the new prices into force as soon as possible.

As a result of the negotiations, the price and income support were raised by FIM 300 mill. It was noted that changes in all items regarded as farm income, as well as changes in the return, costs, and incomes of agriculture had been taken into account in the settlement.

The compensation according to the earlier cost compensation calculation would have been about FIM 300 mill. The increase in the costs

was about 1.1 % (FIM 167 mill.). The return on non-target price products had declined by FIM 148 mill., which according to the earlier act should have been compensated to farmers. The net effect of the other items was small.

The income formation of farmers is also largely dependent on various compensations paid through the state budget, like employee pension payments, farmers' holidays, etc., which the farmers should pay for themselves, but it has been agreed in the negotiations that they are paid directly from the state funds, and the payments are deducted from the support or target prices. In recent years, one significant amount has been the participation of farmers in the measures to restrict production. In the pricing year 1993/94, agriculture participated in these costs by FIM 245 mill. This amount must be returned to the target prices and/or support. When all correction amounts were taken into account, the amounts returned were a little under FIM 300 mill.

The total settlement remained at FIM 300 mill., which can be interpreted as the compensation for the change in the aforementioned correction amounts. Thus there would have been no cost compensation, and this is not required by the act, either.

The decision on prices was made for the first time on the basis of the new stipulations so that target prices and minimum prices were set for the products (see Appendix 7). The determination of the cereal prices was changed so that in 1994 it was done at the stocks of the receiver. The quality classification was also revised, which means that the new cereal prices are not directly comparable with the earlier target prices.

In the price settlement the cereal prices were lowered by FIM 0.20/kg. Instead, the target prices of livestock products stayed at the earlier level.

It was also agreed that the export cost fees for cereals were abolished, and no marketing fee was collected for the rye crop of autumn 1994, either. The additional marketing fees were not realized. However, according to the price settlement, FIM 150 mill. of price and income support is used to cover the share of agricultural producers in the export costs in 1994. The tax on fertilizers was abolished at the beginning of July, 1994.

The price negotiations in the autumn did not arouse very much interest, either. The costs were not monitored. The negotiations mainly concerned the share of agricultural producers in the marketing costs. The amount in question had already been raised to FIM 420 mill. in the negotiations held in early July, and in the negotiations in August it was raised further to FIM 680 mill. Correspondingly, the support to farmers was reduced by this amount.

8.3. Producer prices

Target prices (see Appendix 7) do not give a fully accurate picture of the return farmers get for their products, including all subsidies. For example, in 1994 the production support for milk was, on the average, 33 p/l.

Table 12 presents the development of the producer prices of the most important products in 1980 - 1994. Export cost charges have been subtracted from these prices.

It is remarkable that the producer prices of meat have been on the decrease since 1989. The

Table 12. The paid producer prices of the most important agricultural products in 1985 - 1994 including all subsidies (export cost fees and milk quota payments have been subtracted).

Year	Milk p/l	Beef FIM/kg	Pigmeat FIM/kg	Eggs FIM/kg
1985	273.9	27.62	16.17	10.72
1986	276.4	28.28	16.49	10.68
1987	283.3	28.77	16.52	10.71
1988	292.6	30.62	17.28	11.06
1989	312.6	32.86	18.02	11.76
1990	316.5	32.11	17.66	11.81
1991	321.2	29.44	16.62	11.86
1992	317.2	30.04	16.30	11.95
1993	328.3	29.32	16.25	11.58
1994[e]	324.0	30.40	16.20	11.05

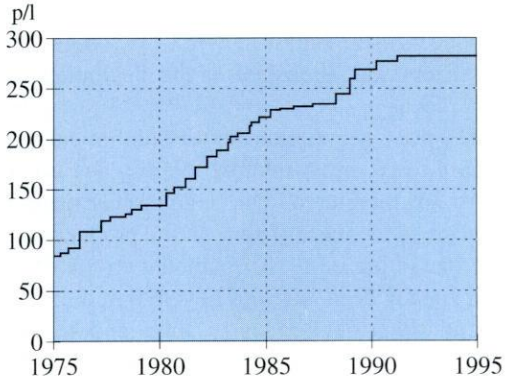

Figure 7. Target price of milk in 1975 - 1994.

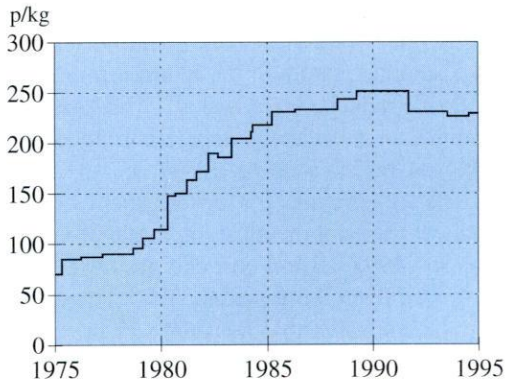

Figure 8. Target price of wheat in 1975 - 1994.

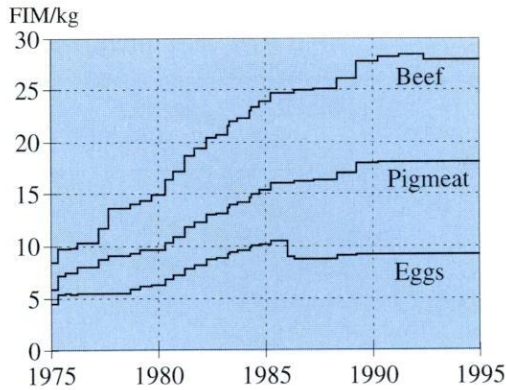

Figure 9. Target prices of beef, pigmeat and eggs in 1975 - 1994.

Table 13. Producer prices in some European countries in 1993, according to December 29, 1994 exchange rates.

	Milk p/l	Beef FIM/kg	Pigmeat FIM/kg	Eggs FIM/kg
Denmark	204.68	15.22	6.45	5.54
Germany	191.72	16.39	-	7.54
France	176.36	17.47	-	5.11
Italy	184.09	13.32	8.67	6.01
Sweden	183.00	16.40	9.38	7.92

decrease has been caused by the difficult market situation.

From 1990 to 1994, the producer price index decreased by 5 %. Increases in target prices have remained small, and in the case of meat they have not even been realized. On the other hand, hectarage subsidies and hectarage support have risen. The share of these of all returns is about 7 %, but it is not possible to divide these among the different products

Producer prices have been considerably higher in Finland than in the EU. Production costs are high as a result of the natural conditions. The yield level remains low in Finland, and this affects livestock production, too. The closed economy may be one reason for the high production costs. The structure of agriculture is not good enough for the tough competition in the EU.

The remote location gives Finnish agriculture a small border protection. Transportation costs make it possible to maintain a slightly higher price level than in continental Europe. The small size of the markets may also reduce the competition from the outside. On the other hand, prices vary in the present EU countries, too. However, it is uncertain whether the Finnish producer price level could deviate very much from the average price level in the EU. The prices the Finnish food industry is capable of paying to Finnish producers is largely dependent on its competitiveness.

8.4. Production costs

The production costs of agriculture are calculated in various ways. The total calculation presents the costs in the whole agriculture, but the production costs of individual products cannot be calculated on the basis of this. Thus the costs of individual products must be calculated on the basis of model calculations or bookkeeping results.

In model calculations a schematic calculation of the production costs of a product is made. In this, so-called norm figures and figures from the production in practice are used. The model is based on an enterprise of a given size, and it is assumed that the most recent production technology is used. The best applications of model calculations are e.g. setting up new enterprises.

Real data for calculating the costs is obtained from farms keeping detailed accounts. The results cannot always be generalized to the whole country. This is the case in the bookkeeping in Finland. Bookkeeping data is obtained from about 1,100 farms every year. These farms have volunteered to participate in this activity, and they do not constitute any random sample of all farms. On the average, they are larger than all active farms in Finland. Bookkeeping farms are located in different parts of the country, but not in a way that would be required from a random sample that would meet the scientific criteria.

However, data from the bookkeeping farms can well be used for various purposes, and it does not necessarily deviate very much from average results. This has been noted by means of comparisons made on the basis of less detailed statistics based on e.g. taxation data.

In practice, farms are often engaged in the production of more than one product, which means that the distribution of the costs among the products is difficult. This problem can be alleviated by selecting from the bookkeeping farms those that are specialized in a certain production line. Thus, by choosing farms on which the share of e.g. milk production is at least 50 % of all returns it is possible to arrive at a group of farms from which an estimate on the production costs of one litre of milk can be made by means of some correction calculations. The unit costs presented in the Table 14 were arrived at through this procedure. They give a picture of the level of the production costs in different production lines in 1993. Since then the prices of production inputs have not changed very much, so that the figures also indicate the situation at the end of 1994. The costs can be expected to be considerably different in 1995.

Table 14. Unit cost on dairy farms (20-30 cows) and on cereal farms (30-50 ha) in 1993.

	Milk FIM/l	Cereals FIM/kg
Purchased fodder	0.79	-
Fertilizers	0.28	0.30
Machinery and implement cost	0.49	0.35
Other costs	1.12	0.85
Wage demand	1.59	0.48
Interest demand on capital	0.37	0.50
- Secondary return	0.72	0.34
Unit cost	3.92	2.14

The distribution of the costs reveals that capital costs are high in cereal cultivation. In livestock production labour costs and the interest demand on own capital accounts for half of the unit costs. This means that ordinary farms are not in any immediate danger of going bankrupt, even if the labour income seems to decrease as a result of the membership in the EU.

Membership in the EU brings along cost savings especially on livestock farms that use a lot of purchased fodder. The prices of fodder are expected to decrease by about 40 %. In pig and poultry production, in particular, where the share of fodder is about 70 % of the production costs, the costs are going to decrease considerably. It is estimated that capital costs will decrease by about 7 % as a result of the reform

of the value added tax. Fertilizer prices dropped already in the middle of 1994 when the taxes on fertilizers were abolished. The costs originating within agriculture, like prices of piglets and calves, are going to decrease as well.

8.5. Retail prices

It has been estimated that the membership in the EU will lower the retail prices of food by about 10 %. This estimate is based on the lowering of the market prices and the increase in the value added tax. In this case the margins of processing and trade are assumed to remain unchanged, and the imports have been assumed to have no direct effects on the prices. According to a rough calculation, the effect of the decrease in the price of the raw material would be somewhat greater, but the value added tax, which would be 17 % for food in the beginning, increases the prices to some extent.

The taxation system that was still in force in 1994 was based on deductions on primary products, which influenced the taxation in many different ways. For example, the value added tax on dairy products was only a few percentages (the price of butter was actually lowered), but the tax on highly processed food was close to the general value added tax rate of 22 %. The average value added tax on food in 1994 was estimated at 15 %, so that the increase would be about 2 % in 1995.

Table 15. Some retail prices in September in 1992 - 1994.

Product	1992 FIM/kg	1993 FIM/kg	1994 FIM/kg
Milk (FIM/l)	4.04	3.90	3.94
Butter	32.70	32.14	31.50
Emmental-cheese	49.99	49.69	49.38
Beef (ground)	47.93	45.68	47.18
Pigmeat (flank)	35.61	35.24	35.84
Eggs	17.14	16.77	16.74
Wheat flour	5.83	5.51	5.45
Sugar (lump)	7.52	7.38	7.19
Potatoes	3.54	2.78	3.81

Source: Consumer price statistics of the Central Statistical Office.

The new tax system will cause considerable changes in the price relations. The price of whole milk is going to increase, but the prices of butter and cheese are going to decrease. A considerable decrease should occur in meat prices, and the prices of flour and bakery products are also likely to decrease clearly. However, it is also possible that the price development is not as favourable as is expected. The boom in the economy may raise the margins, and, in general, there is a temptation to increase the prices in the present situation. The prices of some imported products, like fruit, will increase as the duties increase as a result of the EU membership.

At the end of 1994, food prices in Finland were slightly higher than in the EU on the average. The differences are caused by e.g. differences in the value added tax rates. The increase in the value of markka by about 9 % in a year has influenced the price comparisons a great deal. Along with the membership in the EU the position of Finland in the price comparisons is likely to improve, unless the development of the retail prices deviates considerably from the estimates, or the value of markka will not continue to increase.

9. Income trends in agriculture

9.1. Sources of income

About half of the incomes of farm families come from agriculture. This data is based on the Enterprise and Income Statistics of Agriculture and Forestry, the basic sample of which includes 113,000 farms owned by natural persons in 1990. The average arable land area of these farms was 17.5 ha and forest area 38.1 ha.

The average calculation distorts the picture of income formation to some extent. Pension incomes are one factor causing distortions. Over 11% of farms included in the statistics are owned by farmers over 65 years old.

Table 16. The taxable income of farmer and spouse according to source of income in state taxation in 1991.

	Income FIM/farm	%
Agriculture	61,700	42.6
Forestry	10,700	7.4
Wages	46,100	31.9
Other	9,500	6.6
Pensions	16,700	11.5
Total	144,700	100.0

Source: Income and tax statistics of agriculture and forestry 1991.

Forestry incomes are based on taxation, i.e. they do not correspond to the real incomes. On many farms wages and salaries are an important income source. One of the spouses may work full-time outside the farms, but it is also possible for both to have wage incomes.

Income comparisions between agriculture and other sectors are interesting, but difficult to make, because farmers have income from various sources. Members of a farm family may also participate in farm work part-time, which makes it almost impossible to divide the incomes from farms among the family members.

One possible solution is to pick out full-time farmers, i.e. farmers and spouses whose farm income accounts for over 75 % of all incomes of the farm, for price comparisons. In 1990 the number of these farms was about 40,000, and their average arable land area was 21.4 ha. On these farms farm income was FIM 52,430/ person. In the same year the wage income of a skilled industrial worker was FIM 83 860.

9.2. Farm income in 1994

According to a preliminary estimate, farmers' incomes rose by 26 %. This development was mainly caused by the increase in the cereal quantities that came into the markets by about 25 % as a result of two good crops in a row, as well as a slight increase in livestock production. Milk production was about 2 % higher than in the previous year.

Producer prices stayed at the same level as in 1993. The target prices of livestock products were not altered in the spring price settlement, and the targer prices of cereals were lowered by FIM 0.20/kg. Price and income support was raised by FIM 300 mill. in the settlement.

The prices of production inputs decreased by about 6 %. Fertilizer and fodder prices decreased considerably as the taxes were abolished, but the prices of other inputs remained almost at the earlier levels.

Table 17. Development of farm income in 1985 - 1994, FIM mill. and as an index.

	Gross-return	Total costs	Farm income	Index
1985	22,526.3	15,156.6	7,369.7	100.0
1986	23,273.4	15,626.0	7,647.4	103.8
1987	22,486.1	16,291.7	6,194.4	84.1
1988	24,027.5	16,469.2	7,558.3	102.6
1989	25,830.1	17,780.6	8,049.5	109.2
1990	27,525.5	18,168.0	9,357.5	127.0
1991	25,756.8	17,785.7	7,971.0	108.2
1992	24,989.9	17,460.5	7,529.4	102.2
1993	23,494.3	17,719.7	5,774.6	78.4
1994[e]	24,634.9	17,331.4	7,303.5	99.1

Table 18. The development of the real net value added at factor cost per annual work unit AWU in agriculture in 1985 - 1994 (1984 - 1986 =100).

Year	Net value[1)] added	Work[2)] input	Income[3)] development
1985	97.3	100.5	96.8
1986	100.6	96.3	104.4
1987	76.5	91.9	83.2
1988	79.2	89.7	88.3
1989	99.3	82.3	120.5
1990	101.6	75.4	134.5
1991	90.5	71.0	127.4
1992	73.9	69.7	105.9
1993	74.8	66.1	113.1
1994[e]	73.6	64.4	114.2

[1)] The real net value added at factor cost in agriculture minus depreciations deflated by the price index of the GDP.
[2)] Total labour input in AWU in agriculture according to the National Income Statistics
[3)] The real net value added at factor cost per AWU (EU indicator 1).

The EU follows the income development of agriculture by calculating the real net value added of the whole agriculture per annual work unit. Table 18 presents a corresponding calculation for the part of Finland. The share of the whole agriculture in the GDP according to the national accounting forms the starting point. In addition to agriculture proper, garden production, fur farming, reindeer herding, hunting, and picking berries and mushrooms are also included. The depreciations of the sector are deducted, and thus we arrive at the share of agriculture in the GDP. This is deflated by the price index of the GDP. In the case of Finland, the production price index of the whole national economy, which is almost the same as the price index of the GDP, is used. Thus we arrive at the real net value added at factor cost of agriculture.

The EU employs an annual work unit (AWU), the length of which varies from country to another, as a labor input unit. In Finland, 1,860 hours is commonly used as the annual labor input in agriculture. The Central Statistical Office prepares the labour input statistics of agriculture as hours per year. When this is divided by 1,860, we arrive at the annual labor input in AWU. However, if the divisor is the same in the whole period under consideration and only indices are used, the definition of the AWU is of no significance.

There are great variations in the real income development, mainly resulting from the variations in the yield levels. According to a rough estimate, the income level has increased by about 40 % from the beginning of 1980 till the beginning of 1990.

9.3. Taxation

Farmers pay income taxes according to their real income. For this purpose, each farmer keeps simple accounts, including sales income and the expenditure on production inputs. Direct support is taxable income. Capital assets like machinery and buildings are depreciated. The difference between the income and expenditure is taxable income, and taxation is carried out according to the same provisions and tax tables as in the case of income earners.

The depreciations of machinery and implements can be maximum 25 % and those of production buildings maximum 10 % of the expenditure balance.

The value of own products used on the farm is not counted as taxable income. An attempt is made to separate the private household completely from production. Especially the use of energy is problematic in this respect: oil and electricity are bought for both household use and production. Tax authorities have special instructions in order to be able to take this into account. The division of the interest on loans between production and the household is also problematic.

Finnish taxpayers pay both state and municipal taxes. In the municipal tax the percentage is the same for everybody (15 - 20 %), but the state tax is progressive.

Tax deductions can be made on various

grounds, and the income actually taxed may be considerably smaller than the taxable income. In 1992, the average taxable income of farmer and spouse was FIM 142,000, and the tax on this was about 29 %.

There is a separate progressive tax on property, which amounts to the maximum of 2% of the value of the property. In agriculture the property used in production (except for animals and stocks) is liable to taxation, unlike in other enterprises. In practice, only large farms pay property tax because the value of farms used in taxation is clearly below their real value.

In 1993, significant changes occurred in the taxation of capital income. The tax is 25 % of the capital income, independent of the source. There is also capital income in agriculture, but estimating this is very difficult. Consequently, the capital income in agriculture is calculated so that half of the debts are first deducted from the taxable assets, which results in net assets. The capital income in agriculture is 15 % of the net assets, and the tax on this is the aforementioned 25 %.

The taxation of forestry was also revised at the beginning of 1993. The owner may choose between the direct taxation of sales income and the earlier taxation based on the area. The transitional period is 13 years, and after this the taxation will be based on sales income, which is regarded as capital income.

9.4. Value added tax

Finland shifted to the value added tax system in the beginning of June, 1994. The overall tax rate is 22 % of the tax-free price. However, there are many exceptions to this.

Agriculture shifted to the new tax system in the beginning of 1995. At first the tax rate is 17 %, but it will be lowered to 12 % in the beginning of 1998. The buyer of agricultural products and timber pays the value added tax to the farmer, and the farmer accounts this further to the state. However, the farmer may deduct the value added tax he pays in the production inputs from this. The payments are made once a year by the end of February in connection with income taxation. If the value added tax the farmer has paid exceeds the tax he has received, the state refunds the difference in April-May.

If the sales according to the Act on the Value Added Tax without the sales of capital assets (e.g. machinery) remains under FIM 50,000 a year, the farmer is exempt from the value added tax.

During the transitional period, farmers have the right to make deductions for the part of investments purchased after July 1, 1994.

The shift to the value added tax caused great changes in the taxation of farmers. In the system followed still in 1994, the value added tax farmers paid in the production inputs, which was estimated at the average of about 7.2 %, was not refunded to agriculture. The new system means that the production costs will be lowered by a corresponding amount.

The value added tax included in the retail prices of food was regulated by means of the deduction for primary products until the end of 1994. Thus, the value added tax on certain products, e.g. dairy products, was only a few percentages, but in the case of highly processed foods it was close to the overall tax rate of 22 %. The average value added tax on food was estimated at 15 % of the tax-free price.

III
AGRICULTURAL POLICY

10. Accession into the EU

Finland became a member of the European Union January 1, 1995. The negotiations on the integration were started in February 1992, when Finland left its application to join the EU. The preparations continued till October 1992, when the assessment of the EU Commission on the difficulties and possibilities involved was completed.

The revision of the legislation in order to map out the differences between Finland and the EU and the needs for unification was completed by autumn 1993. At that time, Finland left its negotiation tender, the so-called position paper, to the EU Commission, determining the demands of Finland for the part of agriculture, among other things.

The negotiations began at the end of 1993, and they culminated at the turn of February-March, 1994. The negotiation outcome was completed on March 1, 1994, but this was followed by negotiations on the interpretation of the text and the implementation of the negotiation outcome.

The Finnish Parliament submitted the negotiation outcome to a consultative referendum on October 16, and it was approved by 57 % of the votes for and 43 % against the approval. The Parliament ratified the Accession Treaty on November 18. Before this, the Swedish referendum had aroused a tremendous amount of interest. The ratification of the Accession Treaty in the Parliament was delayed until the outcome of the Swedish referendum was known.

Towards the end of the year, the negotiation process culminated into a strong debate on the payment of the support for the transitional period. The Government wanted to pay this as price support, but this met with resistance in the Commission. Consequently, an agreement was reached according to which the support for the transitional period is paid as price support in 1995, but after this only the support to milk, wheat, malt barley, rye, and starch potatoes can be paid as price support, and the support to other products must be paid on the basis of hectares and number of livestock. The total amount of support did not change, however.

10.1. Accession Treaty

The objective of Finland was to reach an agreement that would maintain the present level of agricultural production. Agriculture is an important sector of the economy in terms of the social and regional policy. Due to the economic depression, unemployment is very high in Finland, and the situation should not be made any worse by reducing agricultural production. Agriculture also forms the basic settlement of the countryside, and the existing infrastructure makes it possible to practice other small-scale entrepreneurial activities in rural areas.

The clauses and stipulations of the Accession Treaty can be divided into three parts: conditions concerning production, agreements concerning the support areas and the level of support, and arrangements for the transitional period.

10.2. Decisions on production

The agreements on production are mainly based on the production quantities of 1992. The cereal area entitled to the hectarage support according

to the CAP reform is 1.6 mill. ha. This is larger than the cereal area in the past few years, but when the present area under set-aside, which has been almost 20 % of the total cultivated area, is taken into account, cereal cultivation may be close to 1.6 mill. ha.

Because farms with cereal production of under 92 tons do not have to participate in the set-aside programmes, the area under mandatory set-aside is estimated to remain about 5 % of the cereal area.

Oats is not an intervention product, and, despite the demands presented by Finland, it was not included in them. However, it was agreed in the negotiations that export support can be used for oats exports. For the production of barley starch, support can be used up to 50,000 tons.

The sugar quota of Finland (A quota) is 144,000 tons. B quota, the price of which is 36 % lower than in A quota, is 10 % of A quota. The A quota of isoglucose is 10,845 tons. 40,000 tons of raw sugar can be imported. The quota corresponds quite closely to the present production, which covers 60 - 70 % of the domestic consumption.

The milk quota is 2,342 mill. kg, and the direct sales quota is 10 mill. kg. The quota is the same as the quantity of milk delivered to dairies in 1992, and it is tied to the present, relatively high fat content. If the fat content drops, the quota grows accordingly. The so-called SLOM quota (200 mill. kg) for farmers who have made contracts of definite duration to reduce production makes it possible for them to resume production.

The beef premium quota of 250,000 animals is equal to the present production. The quota entitled to the suckler cow premium is 55,000 animals, and the treaty includes a note on a possible need for increase. The ewe quota is 80,000 animals. There is hardly any room for increasing the production of beef and mutton.

A protection clause in the case of market disturbances was agreed in the negotiations, i.e. in order to prevent market disturbances Finland may call for the Commission to take action within 24 hours of detecting serious disturbances.

10.3. Decisions on support

According to the negotiation outcome, 85 % of the cultivated area is included in the LFA mountain support. This is about 1.9 mill. ha. Finland had to determine the 15 % that is excluded from LFA support, and this was done on the basis of wheat cultivation. This area included cereal cultivation areas in Southern Finland, where wheat, in particular, is cultivated (see Figure 10).

Another important borderline is the 62nd parallel, to the north of which and in adjacent areas to the south, permanent, so-called nordic agricultural national support can be paid. The support is tied to the area or the number of animals, as well as to fixed production ceilings, determined on the basis of earlier production. The support may not increase the production or its intensity.

The Accession Treaty also includes stipulations concerning agri-environmental support. The EU pays FIM 850 mill. agri-environmental support annually. As the amount of Finnish national environmental support must be at least the same, the total amount available for environmental support is FIM 1.7 bill. The support is mainly directed to Southern Finland, where the production is more intensive and the environmental hazards are thus greater than in other parts of the country.

For the payment of the support, Finland is divided into 9 areas. Area A includes areas that do not receive LFA support, which is 15 % of the arable land area. These areas have been determined on the basis of the natural conditions.

Area B consists of areas that receive LFA support, but are not included in the area entitled to the nordic support. Area B is further divided into two parts.

Area C, which is located north of the 62nd parallel, is divided into four basic areas (C1, C2, C3, and C4), of which C2 is divided into an area proper and the nordic area. The archipelago forms the 9th support area.

The division into support areas is based on the earlier limits for regional support. The starting

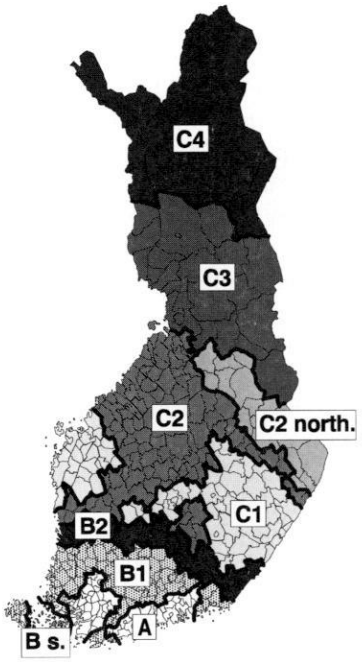

Figure 10. Support areas.

point was that the incomes should remain as close to the earlier levels as possible, and thus the earlier regional division should be retained.

The amount of support during the transitional period is presented in Appendix 10. The support consists of the nordic national support, which is paid in area C, national special support, which is paid perhaps since 1997 in areas A and B, as well as environmental support, which is paid in all areas.

In addition to these forms of support, farmers receive the CAP reform support and support for the transitional period.

10.4. Food industry

The Finnish food industry has operated in a closed economy, except for a few fields where competition has been relatively free. Consequently, the food industry faces a new situation when the borders are opened to the competition of the whole EU. Because of this, it has demanded special support for a transitional period in order to be competitive after this period.

For improving the competitiveness of the food industry, support is available for a) research and product development, b) export promotion and marketing, c) new investments and giving up production, and d) rescue support.

Support is available for promoting exports to countries outside the EEA if the project concerns the marketing of a new product, or launching exports to a new market area. The support is subject to the condition that the project aims at long-term exports, and priority is given to new exports.

An allocation for the transitional period is reserved for new investments and giving up production, as well as for programmes aiming at structural change in general. The support and the planned measures must lead to viability of the enterprise in the long run. Special attention must be paid to the competition effects of the support. Support may be directed to normal enterprises processing agricultural products.

According to the stipulations of the EU, rescue support may be granted when it is sensible to maintain an enterprise and make it viable again. The support consists of securities on loans or loans based on market terms. In general, the support can be paid for only 6 months, and it may not affect the activity of other enterprises in Finland or other EU countries.

10.5. Arrangements for the transitional period

Finland joined the common market area of the EU immediately upon accession. All border controls had to be abolished. Finland hoped for a long transitional period for agriculture and implementation of the ACA system, but the EU did not agree to this. Instead, the EU will pay compensations totalling 457 mill. ecus in the next four years for the decrease in the value of stocks and other costs caused by the system. In the first year the compensation amounts to 150 mill. ecus, i.e. about FIM 1,000 mill.

All stocks of market crops are compensated for by a single payment on the basis of the

situation on January 1, 1995. For this purpose, farms must make an inventory of their stocks, and the compensations are paid during spring 1995.

During the transitional period, Finland has the possibility to speed up the structural change without the restrictions that apply to structural change by means of EU support in general. Because of overproduction, the stipulations of the EU investment support restrict the investments to projects like land improvements and repairs. On the basis of the Accession Treaty, e.g. expanding production at the farm level is allowed during the transitional period, provided that the production capacity of the whole country does not grow.

The costs of livestock products will include costs of the earlier price systems after the integration as well. To compensate for this, support is paid to livestock products and special crops. In 1995 this support will be paid as additional price. In 1996 - 1999 the support is paid as additional price for milk, starch potatoes, wheat, rye, and malt barley.

11. The price system of the EU

The price system of the EU consists of separate price systems for individual products. The objective is to follow the set producer prices. The Commission interferes with the market by buying oversupply into stocks, by protecting the internal market against imports by means of duties, import levies and other means of border protection, as well as by allowing imports when the price level is too high. In addition, exports are supported by means of export subsidies.

In principle, there are three prices in the price system: the target price, which the producer price should follow, and the intervention price, which determines the level below which the producer price should not drop. If this occurs, the Commission is obliged to influence the markets by purchasing products into stock or by exporting them. The third important price is the threshold price, i.e. the level below which the prices of imported products may not drop. The difference between the threshold price and the world market price determines the import levy. According to the GATT agreement, in 1995 import levies are replaced by duties.

Usually the producer price remains below the target price because of overproduction. The EU buys products into stocks for the intervention price, which is lower than the target price. In principle the export support is determined as the difference between the intervention price and the world market price. However, no immediate action is taken to interfere with the markets, but it is hoped that the markets will restore the conditions by themselves.

The system is based on decisions on the administered prices and support made by the Council of Ministers on the basis of the proposal presented by the Commission for the coming crop year. The market situation and the prognoses on its development naturally influence the decision-making. There are no actual negotiations with the producer organizations. However, the different interest groups influence the decision-making process indirectly.

For the part of livestock production, the prices are determined for each production year, i.e.

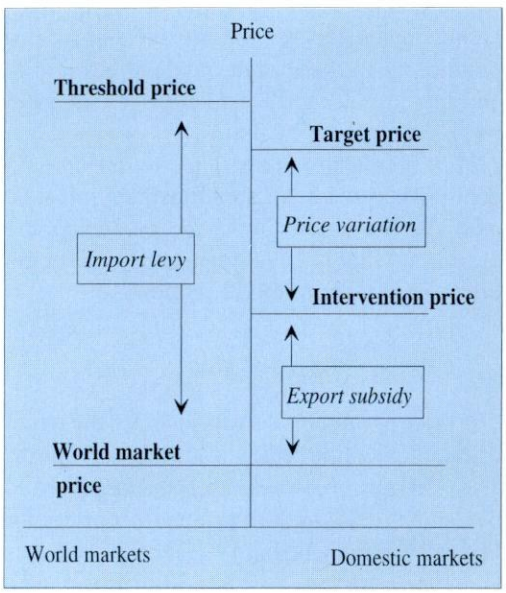

Figure 11. The price system of the EU.

from the beginning of April till the end of March, and, for the part of grains the prices are determined for each marketing year, i.e. from the beginning of July till the end of June.

11.1. Arrangements for different products

The EU has special arrangements for altogether 19 products, including e.g. cereals, milk, beef, pigmeat, mutton and eggs. In the following, the ones that are the most important for Finland are presented.

Milk

In principle, the price system for milk corresponds to the system presented above. Milk has a guide price, which is set for milk with the fat content of 3.7%. In the production year 1994/95 (from the beginning of April till the end of March), it was 256.6 ecus/ton (FIM 1,800/ton). The intervention and threshold prices are set only for butter and milk powder as well as for certain Italian cheeses. The storing of dairy products is supported. Export support forms an important pricing factor.

There is no actual threshold price, but marketing levies are set for the different dairy products on the basis of the guide price for milk and the current world market prices. In 1995 these are replaced by duties.

Milk production is restricted by means of a dual price system. An additional levy must be paid for the amount of milk exceeding the quota, and this is 15 % higher than the target price when milk is sold to dairies.

Cereals

The price system for cereals includes the target price, intervention price and the threshold price. The CAP reform, which drops the target prices by degrees close to the world market prices for cereals, was launched in 1993. The income loss is compensated to farmers as direct hectarage support.

In the marketing year 1995/96, the target price for wheat is 110 ecus/ton (FIM 0.77/kg) and the intervention price 100 ecus/ton (FIM 0.70/kg). The hectarage support is determined according to the average hectarage yield of the region, and in 1995/96 it is 45 ecus/ton. At that time the CAP reform will be completed. There are pressures to continue the reform by further reductions in the intervention price, because, according to some estimates, the GATT agreement cannot be fulfilled without this.

Set-aside programmes form an essential part of the price system. In 1995/96 farmers have to leave fallow 17 % of their basic area (12 % in the case of rotational fallow). In addition to cereals, oil-seed plants, peas, and beans are included in this basic area. Farmers are entitled to a compensation for the area under set-aside, and the amount is the average hectarage yield times 57 ecus/ton.

Beef

The administered prices for beef are the guide price (197.42 ecus/100 kg in the economic year 1994/95) and the intervention price. The guide price corresponds to the target price, and it provides the guidelines for deriving the prices for the different kinds of bovine animals. In addition, export support levies as well as border protection for determining the duties and import levies are used in the regulation of prices. Import levies (customs tariff) are determined separately for different breeds and parts of the carcass.

Pigmeat

The setting and regulation of the price for pigmeat is based on the idea that pigmeat production is a form of processing cereals. In principle, the price must be dependent on the price of fodder. This is influenced a great deal by the price of fodder cereals.

For the part of pigmeat, a basic price and a sluice gate price is determined. *As a concept,* the basic price corresponds to the target prices of cereals and milk, and it is determined for a crop year on the basis of the production costs.

There is no intervention price proper, but the community can interfere with the markets by buying meat into stocks if the price drops too low.

In principle, the import protection is calculated by means of the fodder costs of the community. In practice, however, it is divided into two components: the sluice gate price and the import levy. The sluice gate price is a calculated world market price for pigmeat, which is determined on the basis of the world market price for fodder. The import levy (customs tariff) is calculated by means of the difference between the price of fodder cereals in the community and the world market price for fodder cereals. Thus, the pigmeat producers of the community are put on the same line with their most efficient competitor.

As the prices of cereals decrease because of the CAP reform, the import levy for pigmeat will also drop, causing the price of pigmeat in the internal market to decrease.

The basic price for pigmeat in 1994/95 is 1,300 ecus/ton (FIM 9.13/kg). The producer price usually remains clearly below the basic price.

Eggs

The price system for eggs is the same as for pigmeat. The highest costs result from the use of fodder, which means that the price of fodder (fodder cereals) must have an effect on the producer prices of eggs.

12. Agricultural policy of Finland and the EU

Membership in the EU does not alter the basic outlines of Finnish agricultural policy in any significant way, and thus, in principle, Finland will have no difficulties in adjusting to the common agricultural policy of the EU. In many respects Finnish agricultural policy is in harmony with the EU agricultural policy. Both protect their agriculture against foreign competition by means of import levies and support the exports of overproduction through various kinds of export subventions. In addition, various forms of support are applied to develop the income level of farmers. Regulation and restrictions are typical for the production policy both in Finland and in the EU.

The Finnish marketing system was revised in the beginning of 1994 to make it correspond to the EU system, so that for this part, too, the policies are similar. The most essential difference between Finnish and EU agricultural policy is that in Finland the price and support levels are considerably higher.

In the following the aspects of the agricultural policy of Finland and the EU that are the most important for Finland are compared with each other.

12.1. Objectives and means

The objectives of Finnish agricultural policy have been

- self-sufficiency in food
- securing and development of farmers' income level, and, at the same time, keeping the retail prices of agricultural products at a reasonable level
- developing the structure of agriculture
- preserving the settlement of the rural areas

According to Article 39 of the Treaty of Rome, the main objectives of the agricultural policy of the EU are

- increasing the productivity of agriculture
- securing a just standard of living to farmers
- securing the supply of agricultural products
- reasonable retail prices for food

In fact, in both cases there are only two main objectives: to secure the availability of food and the income level of farmers. The other points mentioned in the lists are means, rather than objectives.

Agricultural policy was created in the 1950s, in particular, when the food shortages, even famine, were still fresh in the memory. Availability of food could be guaranteed only by means of viable agriculture.

Securing the income level usually involves

raising the producer prices. This is in conflict with reasonable consumer prices. An attempt is made to solve this problem by improving the structure of agricultural production and through various kinds of direct or indirect subventions for the retail prices of food.

The self-sufficiency objective has been reached both in Finland and in the EU. In fact, the objective has been exceeded, and overproduction has become a problem that has dominated agricultural policy for a long time. Balancing the markets has required eliminating foreign competition and regulation of the domestic market by means of quotas and various measures to restrict production.

The connection between the producer price and the retail price is disappearing. Direct income support is a good example of this. The system is approaching that of the former socialist countries, where the retail price could be even lower than the final price paid to producers.

Environmental considerations are not yet included in the lists of objectives of agricultural policy, but they have already become part of the praxis. Abundant use of fertilizers and pesticides has led to eutrophication of water courses, contamination of groundwater, and residues in food. An attempt is made to reduce the intensity of production, which serves both the environmental protection and restricting production. Even if the problems are not as extensive in Finland as in some EU countries, environmental policies are uniform, and Finland has no major difficulties in adopting and implementing the environmental policy of the EU.

12.2. Price policy

In 1994, Finland continued the national agricultural policy according to the earlier principles. Price policy was based on the Act on Marketing Systems for Agriculture. Price negotiations were conducted at the beginning of the year, but the price settlement was reached in a less formalistic way than earlier. Cost compensation was no longer automatic. It was not possible to raise the prices due to the difficult economic situation, but, on the other hand, inflation was slow, so that there were hardly any pressures for raises, either.

In 1994, the regulation of the prices was not as significant as earlier. The export quantities of overproduction were the same as earlier, but no special attention was paid to the fact that the prices remained below the target prices.

The principles of the EU price system are the same as those of the Finnish price system. However, in the EU it is not possible for farmers to influence the decision-making as much as in Finland. The Council of Ministers makes the decision on prices on the basis of the proposition of the Commission. Farmers may influence the process through national official channels or direct lobbying in Brussels.

12.3. Comparison of production policies

The production objective of Finnish agricultural policy has been to reach a level of production that corresponds to domestic consumption. Because of the seasonal variation, the Agriculture 2000 Commission accepted a small amount of overproduction as the production objective, especially in milk production. Usually, the production has exceeded consumption, but reducing production has been very difficult.

The self-sufficiency objective is based on the idea of securing food supply in all conditions. Preservation of agricultural production has also been considered important for employment and regional policy, as well as rural settlement. This is considered important after the accession into the EU as well.

After the accession into the EU, restrictions on production will have to be continued in Finland. The quota system for milk will remain the same. Beef production is regulated by the bull meat quota entitled to production support and the suckler cow premium. Similar premium quota is applied to regulate the production of mutton. Cereal production is restricted by the cereal area entitled to the CAP reform support. The production of pigmeat and eggs will be free from all restrictions, but, on the other hand,

there is no support available, except for structural development during the transitional period, which is also limited to the present production levels.

The production policy of the EU does not make it necessary to reduce the production from the current level immediately. However, it is to be expected that the milk quota will be reduced some time in the future. A reform of the whole agricultural policy is also possible. It is feared that the production in the EU may exceed the limits allowed by the GATT agreement. Because of this it will be necessary to lower cereal prices in the future, possibly without a corresponding increase in direct support. The milk production quotas may also be lowered.

12.4. Environmental concerns of agriculture

Increase in phosphoric load and eutrophication of water courses are serious problems, and, in addition to industry and settlement, agriculture is considered a major emission source. Nitrogen fertilizers also cause eutrophication. Nutrients from intensive fertilization have in some places led to oxygen shortages in bays.

A considerable amount of ammonia is evaporated from livestock buildings and manure storage facilities, as well as in connection with manure spreading. Ammonia gas returns to the ground as acid rain and acidifies the soil. It has been noted that the ammonia gas from traffic increases the ozone content of the air, which has been observed to lower the yields of cereals.

An increasing amount of attention is directed to the rural landscape. In Finland, agriculture has been considered an important factor in preserving the cultural landscape, and this is one reason why it has been regarded as necessary to support agriculture in all parts of Finland. On the other hand, modern farming technology causes ecological problems. The use of pesticides, subsurface drainage, and the disappearance of meadows has led to the vanishing of many plants and a decline in the populations of certain species of birds.

Environmental problems are centered in water and soil. Instead, food in Finland is pure, and heavy metals are not a serious threat, either. As a result of the good quality of the raw material, there is relatively little cadmium in fertilizers. Other sources of cadmium are the fallout from the atmosphere and sludge from the sewage treatment plants, the use of which is not approved of by agriculture. The residues of pesticides in food are very small. Besides, like in other parts in Europe, some decrease has occurred in the total amounts of chemicals used in plant protection.

Means

Attempts have been made to solve environmental problems through various means. A tax on fertilizers has been collected for many years to cover the share of agriculture in export costs, but, at the same time, the tax has been a means of environmental policy. A tax on phosphorus came into effect in 1990, and it was a purely environmental tax.

The taxes on fertilizers and phosphorus were combined at the beginning of 1992. The tax was determined on the basis of the nitrogen and phosphorus content of the fertilizers. In 1994, the amount was FIM 2.60/kg of nitrogen and 1.70/kg of phosphorus. These taxes were abolished in the beginning of July.

The use of nitrogen fertilizers has been restricted indirectly, because a tax on fertilizers has been collected from agriculture to finance the export of overproduction and set-aside. The main objective has been to restrict production, and the increase of the nitrate content of the groundwater has not as yet led to any special measures.

Phosphorus fertilization has been reduced in an efficient way by lowering the phosphorus content in fertilizers. The recommendations have been changed for the part of phosphorus, because the amounts accumulated in the soil are adequate.

An attempt is also made to prevent the leakage of phosphorus and nitrogen into the waterways through filter strips and grass fallowing, for which a special compensation is paid.

Agricultural producers themselves have also taken the initiative in taking environmental considerations into account. The Central Organization of Agricultural Producers has passed a program for environmental policy, which gives general directions on farming and other production techniques through which the problems caused by, for example, fertilizers, manure, pesticides, and other factors that may be hazardous to the environment can be reduced. The agricultural advisory organizations have also enforced their activity concerning environmental considerations.

Agri-environmental programme of Finland in the EU

The Accession Treaty includes a quite extensive amount of environmental support to Finland. The support is paid on the basis of hectares (see Appendix 10) to all farms that make a farm environmental management contract. According to the environmental programmes of the EU, support is paid to programmes which aim at reducing the load to environment caused by agriculture and promote the preservation of the rural landscape.

The objective of the environmental management programmes prepared in Finland is to prevent the leaching of nutrients into water courses and groundwater, reduce the ammonia emissions from manure, as well as to keep agricultural products as pure as possible. Special attention is also directed to the rural landscape.

In order to receive basic support, the farmer must commit himself to keeping the basic level of fertilization determined by authorities. The use of pesticides will be regulated so that in the future the spraying may be performed only by trained persons using tested equipment. Headlands of about one metre must be left on the sides of main ditches, and filter strips of at least five metres covered by perennial vegetation on the sides of brooks and water courses as well as around household wells. Manure spreading on frozen ground is forbidden. At least a third of the arable land area of the farm must be covered by plants outside the growing season, too, to minimize leaching.

12.5. The GATT settlement

The GATT settlement reached in December 1993 is very significant for agriculture. The agreement came into effect at the beginning of 1995, and the decisions must be realized in six years. The main points of the agreement are:

- lowering internal support by 20 %
- lowering import protection by the average of 36 % and at least 15 % per each product
- reducing export support by 36 % and the amount of supported exports by 21 % from the level of the years 1986 - 1990
- allowing imports of at least 3 % at the beginning of the basic period and 5 % at the end of the basic period

Support and import protection must be lowered by degrees by the year 2000. When Finland became a member of the EU, the GATT settlement shifted to the EU as well. The demands concerning Finland were implicitly taken into account in determining the production quantities and quotas, and they no longer influence the amounts of support or export support of Finland.

13. Production policy

Production policy consisted of production objectives and the means to achieve them. Production objectives are derived from the security of the supply, i.e. Finland should be self-sufficient in all conditions. However, self-sufficiency has been exceeded, and overproduction has become the most serious problem in production policy. In practice, production policy has mainly meant restricting production.

For the part of the production policy, 1994 was a significant year in Finland, because there were no collective production or export ceilings concerning the whole agriculture in force to regulate production. Until 1993, these were used to determine the quantities of milk deliv-

ered to dairies and export quantities of cereals, meat, and eggs for which agriculture received the full producer price. For the quantities exceeding the ceilings, agriculture got either the world market price only or a reduced producer price. Through this, agriculture carried part of the export costs caused by overproduction.

Although in 1994 there were no definite limits, as earlier, the responsibility for exports was determined in the state budget. In the state budget FIM 2,950 mill. was allocated for export support, and the share of agriculture was FIM 1,160 mill. Within this framework, export support was paid in the same way as earlier. In 1993, FIM 3,332 mill. were used for export support, and the share of agriculture was FIM 1,490 mill.

Production has also been regulated by means of the dual price systems for milk and eggs, set-aside programmes, and restrictions on the establishment of livestock enterprises. The taxes on fertilizers and fodder, as well as marketing charges collected to cover the responsibility of agriculture for the export costs, have restricted the production indirectly.

13.1. Production objectives

The task of production policy is to determine the production objectives and to direct production so that the objectives will be achieved. Since the 1950s production objectives were determined on the basis of the production and export ceilings. The new Farm Income Act (the Act on the Marketing System for Agricultural Products) that was in force in 1994 no longer included any fixed production ceilings, but these were determined indirectly on the basis of the appropriation available for exports.

Production objectives used to be determined on the basis of proposals of agricultural committees or corresponding work groups. The last of these was the so-called Agriculture 2000 Commission, which recommended that, in the long run, production should correspond to consumption, although some overproduction would be allowed due to seasonal variation. This 100 % self-sufficiency can still be regarded as the production objective of the government.

Membership in the EU has caused some changes in the objectives. Self-sufficiency is still the objective, but it might be asked if the EU is not capable of securing the food supply in Finland. However, Finland is located in the fringe areas of the EU, so that the supply is not necessarily secured. Yet, self-sufficiency cannot be considered an objective in the same way as earlier. Finland must adjust to the common agricultural policy of the EU (CAP). This does not prevent the maintenance of own security of the food supply, which guarantees the availability of food in all conditions. Storage can be continued, and production quotas allow maintaining the production at a level that corresponds to the consumption, or even slightly higher.

13.2. Measures to restrict production

Production restrictions have dominated Finnish agricultural policy for a long time. Production objectives have usually been exceeded, which has resulted in costs for both farmers and the government. They have usually agreed on the need for restricting production, but the practical measures have aroused criticism.

Production can be directed through both price policy and direct restrictive measures. As the price settlements have in the first place served the development of the income level, it has not been possible to use them for reducing production. Thus, production policy has relied on restricting the production volumes, which has been either voluntary or mandatory.

The mandatory production restriction measures included the dual prices systems for milk and eggs and set-aside schemes. In 1983, an act was passed for the voluntary systems (the Act on Regulating and Balancing Agricultural Production), and it remained in force in a revised form until the end of 1994. According to this act, the Government decided annually on the various measures to restrict production (e.g. giving up production for a certain period of time).

In addition, various other measures have also influenced production. The licences required for the establishment of production units have been one of the most important means of regulating production. In addition to covering the marketing responsibility, the export cost and marketing charges collected for financing the export of surpluses, as well as the tax on fertilizers and feed had a restricting effect on production. The land clearing charge, which has stopped land clearing almost completely, also aimed at restricting production.

Another means of restricting production have been the measures concerning farmers' pensions: an attempt has been made to promote retirement through improving pensions, as well as by abolishing hectarage subsidies and additional price of milk from farmers who have reached the retirement age from the beginning of 1988, and the additional price of eggs from the beginning of July 1988. The connection between retirement and giving up production has been tightened. Contracts to give up production have also been made with pensioners.

Production is also supported to some extent, for example, the production of beef and mutton is supported through an additional price, and beef production through beef cow contracts. There are also other forms of production support.

Consequently, there has been a good number of regulatory measures, and they dominated the realization of agricultural policy. These measures, some of them made earlier and some concerning the year 1994, are dealt with briefly in the following.

13.3. Contracts to reduce agricultural production

In order to reduce agricultural production it has been possible to draw up contracts that are directed to the whole production of the farm, to livestock production, or to only one product, e.g. milk or eggs. In the case of partial contracts, the farmer has not been allowed to expand other production on the farm. Instead, production for household use has been possible.

The most important contracts concerning individual products in the past few years year have been the measures directed to milk and egg production.

There were two ways of giving up milk production: farmers could stop producing either for a certain period of time (e.g. five years) or completely, i.e. give up their milk production quota. Some of these contracts are still in force.

Contracts to reduce egg production, made from time to time since 1976, have been an efficient way of curbing production. The contract could either be made for a certain period of time or it was permanent, in which case the state bought production quotas. There are still a few of these contracts in force.

In 1991, the so-called production intervals were introduced in egg production: the producer received the additional price only if he had an interval of at least ten weeks between production periods. Hens of under 20 weeks could be raised during the interval.

An attempt has also been made to reduce egg production by restricting hatching. General instructions on the number of chickens to be hatched have been issued for this purpose. Expanding hatcheries and setting up new ones has been prohibited in the past few years. However, since 1992 hatching has not been restricted.

Earlier contracts were made to reduce both pigmeat and piglet production. The contracts were made for five years, so that some of them are still in force. The compensation was determined according to the sales income. No new contracts were made since 1992. The grading of the marketing charges has also reduced pigmeat production.

Contracts to reduce production have also been made in cereal production. A compensation of FIM 1,500 - 2,700/ha a year is paid for five years if arable land is removed permanently from production. In the case of a six-year contract, the compensation is FIM 900 - 1,600/ha a year for five years.

An attempt has been made to reduce the arable land area through a compensation for afforestation. Also, the clearing of new arable

land has been made unprofitable through a land clearing charge of FIM 50,000/ha.

Already in August 1986, the authorities started to reform pension systems in order to cut overproduction. It has been possible for farmers to retire before the actual retirement age and receive compensation for this. Farmers committed themselves to leaving their land uncultivated for six years.

At the beginning of 1993, an act on the compensation to agricultural entrepreneurs for giving up production came into force. It has been possible for farmers to make the contract at the age of 55, and it stays in force until they are 65. The compensation consists of a basic amount and an additional compensation for giving up production. The basic amount is the same as the disability pension according to the act on farmers' pensions. The additional compensation is determined on the basis of the arable land area and the number of animals. Farmers must give up agricultural production for at least six years.

After the accession into the EU, the acts on the abovementioned compensations as well as on transfers of farms to descendantsare replaced by the act on support for giving up production. The earlier acts will remain in force until the end of 1995. This support concerns transfers of farms to descendants, handing over land to another farm, and commitments to leave land uncultivated. Arable land can also be handed over by a rent contract of ten years.

13.4. Set-aside

The overproduction of cereals has become a serious problem. It results from the decrease in livestock production and the increase in the yield level. An attempt has been made to reduce overproduction by means of a tax on fertilizers and set-aside schemes. The export cost charges of cereals have also influenced the decisions on production.

In 1991, a mandatory set-aside system came into effect. In 1994, a farmer had to leave fallow 15 % of the arable land area. If the farmer did not want to do this, he had to pay FIM 1,000/ hectare as export cost charges for the whole area. Farms with less than 3 hectares and those on which grass accounted for at least 85 % of the arable land area were exempt from fallowing. Set-aside was also a condition for the hectarage support. No compensations were paid in the mandatory set-aside scheme.

Through the mandatory 15 % set-aside, about 300,000 hectares could be removed from production. However, the objective was that the area left fallow would be 450,000 - 500,000 hectares a year. Consequently, a basic premium that was FIM 1,800 - 2,900/hectare up to 30 %, depending on the location of the farm, has been paid for the set-aside area exceeding the obligation. Only FIM 200 - 600/ha was paid for set-aside exceeding 30 % of the arable land area. The premium is subject to the precondition that the area must be under green fallow. For the part of the so-called stubble fallow, the premium is FIM 400/ha lower. The system worked well in 1994; the area under set-aside was about 500,000 ha.

In addition to the set-aside schemes, the farmer can participate in other systems to reduce production.

In the EU, the set-aside schemes are included in the CAP reform. The intervention price for cereals has been lowered year by year, but this has been compensated for through a compensation for the price reduction. A compensation for

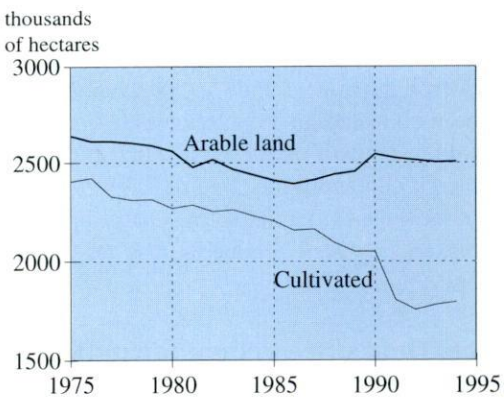

Figure 12. Arable land area and area under cultivation in 1975 - 1994.

the price reduction of 45 ecus/ton, based on the regional hectarage yield, is paid for cereal production if 12 % of the arable land area of the farm is under set-aside (17 % in the case of permanent set-aside). If the cereal crop of the farm is below 92 tons, set-aside is not mandatory. A compensation for set-aside is 57 ecus/ton based on the regional hectare yield. Finnish cereal farms are small, and it has been estimated that the set-aside area would be about 5 % of the total area under cereals.

13.5. Export cost charges

In order to cover the share of agriculture in the export costs, in 1994 export cost charges were collected as follows:

- Tax on fertilizers was FIM 1.70/kg of phosphorus and 2.60/kg of nitrogen until June 15, after which it was abolished.
- The export cost charge for all cereals was FIM 0.20/kg, and for rye FIM 0.70/kg. The charges were abolished July 1.
- Export cost charge for pigmeat was FIM 0.30/kg for carcasses under 76 kg, 1.00/kg for those between 76 and 80 kg, and 1.50/kg for those over 100 kg until March 20, after which it was FIM 0.30 for pigs of all sizes.
- Tax on protein fodder was FIM 1.60/kg on fat and raw protein, excluding the protein in cereals. The tax on each fodder mix was determined on the basis of its fat and protein content. The tax was abolished November 12, 1994.
- In order to cover the export costs of the overproduction of milk a "fat charge" has been collected. In 1994 this was 0.4 pennies for one tenth of fat for the part that exceeded the fat content of 3.7 % in milk.
- In 1994 the earlier marketing charge on large pig and chicken producers was no longer collected.

13.6. Dual price system for milk

The dual price system for milk came into effect at the beginning of 1985. A quota was set for each farm on the basis of the amount of dairy milk production in either 1981/82 or 1982/83, whichever was higher. However, all farms that produced milk at the beginning of 1985 could produce freely up to 30,000 liters. The free quota was raised to 40,000 liters at the beginning of 1990. Earlier it was not possible to purchase or rent quotas, but this was made possible at the beginning of 1994.

If the amount of milk delivered to dairies exceeds the quota, a quota charge (FIM 1.65/litre in 1994) is collected for the excess. The principle is that producers get only the world market price for the amount that exceeds their quota. The excesses have amounted to only about 10 mill. litrers a year.

The quotas for dairies were abolished already in 1993.

The quota system has met the objective set for it, i.e. it has prevented the increase in production. The problem of the system is that it impedes structural development because it is not possible to increase the farm size. Rise in the yield level has even forced producers to reduce the number of dairy cows, which has left some of the buildings and machinery unused. The reduction in the quota charge has made it easier to take the full advantage of the quota, as a slight excess over the quota was no longer a major economic problem. It has been possible to receive a full compensation for marginal production.

The system used to be based on the calendar year, but in 1992 this was replaced by the economic year, i.e. from the beginning of September till the end of August.

In order to improve the production structure, 75 % of a discontinued quota is returned immediately, based on a decision of the rural business district, unless the reduction results from a contract to reduce or give up production. In Northern Finland, the additional quota is 100 %.

Farmers who have made a contract on organic production can apply for a licence to start producing milk. The maximum quantity is the same as the free quota, i.e. 40,000 liters.

In the EU, the quota system for milk production is continued through a quota for each country. The final realization of the quota sys-

tem is still open. One problem is that the quota reached in the EU negotiations is about 100 mill. litres smaller than the quota currently in force. It has been suggested that the quota should be cut evenly, but the state should pay compensations for the loss of the quota. As the trade of quotas is possible, it is possible to keep the quota at the present level by purchasing the freed quotas.

The direct sale quota (10 mill. kg) is new in Finland. It causes practical problems as the sales must be registered and supervised. This concerns e.g. those making cheeses on farms.

In the EU, the quota charge is 115 % of the guide price, so that exceeding the quota is not profitable under any circumstances.

In addition, it is possible for farmers who have made contracts to reduce production to resume production up to a national quota of 200 mill. kg (so-called SLOM-quota).

13.7. Dual price system for eggs

At the beginning of 1986, a quota system for egg production came into effect. A production quota was determined for each egg producer, based on the largest quantity sold in a year in 1982, 1983 or 1984. For special reasons the quota could be altered.

In this system, the regulation of production is based on an additional price, which in 1993 was FIM 3.89/kg in the provinces of Oulu and Lapland and 3.49 in other parts of the country when the production was the maximum of 10,000 kg, and FIM 2.59 or 3.04/kg, depending on the marketing channel, in the whole country for the maximum of 80,000 kg.

Producers get the target price plus the additional price for the quota. The additional price is paid for the maximum of 80 % of the production quota, and for the part exceeding 50,000 kg for only 70 % of the quota. It is paid only up to 80,000 kg.

As a result of the grading of the price, production has decreased continuously, but this has been partly caused by the contracts to reduce production as well. However, egg production has started to increase again.

13.8. Regulation of the establishment of production units

Originally, the regulation of the establishment of production units was based on the objective to prevent agriculture from becoming too industrialized. An attempt has been made to keep production in the hands of farmers. A condition for the establishment of an agricultural enterprise is that the farmer lives on the farm, and the farm size does not exceed certain limits.

The licences have gradually become an efficient means of preventing the increase of production. New livestock production units cannot be established or old ones expanded without a licence from the authorities.

A licence from the rural business district was required for the establishment of production units with over 30 beef animals, 25 pigs, 100 hens for egg production, or 1,000 chickens (or other poultry) for poultry meat production.

Licences were not granted to enterprises with over 120 beef animals, 400 pigs, 4,000 chickens, or 30,000 broilers. The licence was granted for only one form of livestock enterprise.

These restrictions have not applied to milk production because it is regulated separately through the act concerning the milk quota system. Beef production that is based on suckler cows has not been regulated, either, but, on the contrary, it has been supported through a special suckler cow premium.

In addition, getting the licence has been subject to the condition that the farm should be able to supply 2/3 of the fodder needed in the production. If the size of the enterprise is over 60 beef animals, 200 pigs or 1,000 hens, a 3/4 self-sufficiency in fodder is required. In the case of broiler production, the required self-sufficiency is 1/5. In the past couple of years, suckler cows have not been taken into account in calculating the self-sufficiency in fodder.

In general, granting the licence has been restricted only to transfers of farms to descendants and, for special reasons, to some other cases in which there is a change in the ownership. In most cases production can only be continued in the same extent as earlier.

13.9. Production support

Finnish production policy is mainly characterized by measures to restrict supply. There are, however, some measures that aim at increasing production, too. The most important one is the beef production support, which aims at raising slaughter weights. This was regarded as necessary in the mid 1970s to secure the domestic beef supply.

Production support is realized through an additional price, which is paid if the slaughter weight exceeds certain limits (see the footnote in Appendix 7). In the EU, a beef production premium of 90 ecus/animal is paid twice during its life-time, in the age of 10 and 22 months. In addition, it is possible to receive support for extensive production, which is 30 ecus/bull.

Beef production proper is supported through the so-called suckler cow premiums. In 1994, the amount of this was FIM 1,700/cow for the maximum of 30 cows.

In the EU, the suckler cow premium is paid to farms that produce only beef or less than 120,000 kg milk a year. The amount is 120 ecus/suckler cow in 1995. In addition, 25 ecus/suckler cow can be paid from national funds.

Additional production premium of FIM 9.50 - 21.40/kg is paid for mutton. The EU support is 18 - 23.5 ecus/ewe.

There was no actual production support for cereals 1994. The production premiums for fodder cereals were abolished in the income negotiations in the spring.

Organic cultivation has been supported since 1990. Farmers can shift to organic cultivation during a three-year period, during which they are entitled to support. Farmers commit themselves to practicing organic cultivation until the end of the contract period. In 1994, this support was FIM 1,800 - 2,200/hectare. The contracts can be made for 6, 7, or 8 years.

In the EU, the support to organic production during the conversion period is FIM 1,400 - 1,800/ha, in addition to environmental support. After the conversion period the support is FIM 600/ha plus environmental support in the whole country.

14. Agricultural support

14.1. Support in general

There are many ways of understanding and defining agricultural support. As a rule, it refers to the support that is paid through the state budget, e.g. price support, export support, and production subsidies. Support can also be defined as the difference between the producer price and the world market price, like in the case of the PSE support calculated by the OECD. This is based on the idea that without the state support the producer price would be the same as the world market price.

The most important task of Finnish support policy has been to keep the producer prices at the level agreed on in the farm income negotiations. Most of the support has been an integral part of the price system and its realization. Part of the support was not included in the price system, for example, investment support and support for the financing of structural development were granted through the Development Fund. Agricultural information and processing were also supported through budget funds.

The support has been used for subsidizing exports, reducing income disparities, supporting production, and realizing the price level of special crops, like sugar beets and oil-seed plants. Part of the support is so-called direct support, which is recommended by the international organizations, instead of price support.

The distribution of the support for different purposes is presented in Table 19. The support has been divided into three parts: support of agricultural production, marketing support, and support of food stuffs.

Production is supported by means of the so-called price policy support, structural support, and various other forms of support. Price policy support is dealt with in detail in Chapter 14.2, and structural support in Chapter 15.

Marketing support includes the export support of raw materials and processed goods. The state has paid export subsidies and compensations for the differences in prices in order to

Table 19. Agricultural support, FIM mill.

	1991	1992	1993
Agricultural production	6,047	6,247	5,506
- price policy support	3,564	3,782	3,594
- structural support	1,104	1,180	1,011
- other	1,380	1,285	901
Marketing	5,079	4,261	3,952
- export support	3,838	3,134	2,689
- sales tax	885	748	712
- export of processed food stuffs	355	379	551
Food stuffs	911	734	814
- price support	874	690	710
- other	37	44	104
Total, gross	12,037	11,243	10,272
Total, net[1)]	9,896	8,700	8,043

[1)] Net expenditure has been calculated by deducting the state's tax and charge incomes from the gross expenditure (e.g. the share of agriculture in export costs).
Source: Economic Survey 1994.

prevent the export of surpluses from lowering the producer prices farmers get. For computational reasons, the refund of the sales tax for the part of export products is also regarded as export support.

The third form of support presented in Table 19 concerns food industry. In the case of sugar and oil-seed plants, the difference between the domestic and foreign price level has been equalized through special import levies and excise taxes. As a result, the budget has included support on food stuffs. Most of this has been returned to the state as import levies and excise taxes paid by the consumers.

PSE support

Agricultural support can also be defined as the difference between the producer price and world market price. This definition has been applied, for example, by the OECD in its study of agricultural support in different countries.

In the OECD study the support is measured by a PSE (producer subsidy equivalent) indicator, which is calculated, roughly, as the difference between the producer price and world market price. In principle, all agricultural support (price support, export support, production subsidies, investment support, research and advising costs, etc.) is included in the producer price. This procedure has been regarded as necessary to be able to include all forms of support in the calculation.

As calculated by the OECD, the support becomes very high because it is based on the world market prices, which are quite low. The support is very sensitive to disturbances in the market, especially oversupply. Some of the world market prices determined through this procedure (e.g. the price of milk) have obviously been far too low.

The devaluation of the Finnish markka has changed the price relations with the other countries considerably. As a result, the PSE support in Finland has decreased a lot during the past couple of years.

14.2. Price policy support

Price policy support has been a central form of support related to our price system. The amount has been decided in the farm income negotiations, since part of the need for raises was transferred to price policy support. Income disparities within agriculture were equalized through this support, but it also used to function as a means of slowing down inflation in the mid 1970s, when part of the raise in the price of milk was transferred to be paid as a so-called additional price through the budget.

The most important forms of price policy support have been:
1) support according to the size of the farm
2) hectarage support
3) regional support
4) additional price of milk, meat and eggs.

Support according to the area and size of the farm

Support according to the farm size (the so-called hectarage subsidy) has been tied to the area of the farm and to the number of livestock, i.e. to so-called production units (one hectare and one dairy cow equal one production unit, one pig equals 0.2 production units, etc.). Subsidies have been highest on farms with 7 - 8 hectares. No production units are formed of arable land area of over 50 hectares. The payment per production unit has been confirmed annually, and it has been graded according to the joint income of the farmer and spouse and according to the region.

In order to determine the hectarage subsidies, the country has been divided into five areas, two in Southern Finland and three in Northern Finland, and, in addition, the subsidies have been graded according to incomes. The basic price per production unit was FIM 450 in 1994. The amount available for this purpose decreased because it was also used directly to cover the export responsibility of agriculture. Producers under 39 (earlier 35) years of age receive a 40 % higher subsidy if their income is below FIM 90,000 (Table 20).

Hectarage subsidies have been applied for from the local agricultural boards, and the majority of farms have received this support.

Hectarage support

A support system based on the area was introduced in 1990, when part of the raises in prices was paid as direct support on the basis of the area. This became necessary as the GATT agreement made it impossible to raise agricultural support, which would have resulted from the increase in market prices. Hectarage support was FIM 450/hectare in 1994. For farmers under 39 years who have acquired their farm after 1983 the support was FIM 750. Farms with less than 3 hectares do not receive any hectarage support.

Regional support

In order to balance regional income disparities, milk and meat producers have been entitled to production support. For this purpose the country has been divided into 10 regions (for meat into 9), and the production subsidy for milk and meat has been determined for each of them separately. Regional subsidy is very important to farmers in Northern Finland because, for example, the regional subsidy for milk was FIM 0.11 - 0.60/l, that of pigmeat FIM 0.40 - 0.55/kg, and of beef the maximum of FIM 13.30/kg in the province of Oulu (Appendix 8). This subsidy has proved very efficient as a means of equalizing income disparities within agriculture.

Based on the number of animals, a subsidy has been paid in Northern Finland and in the archipelago. The subsidy has been graded regionally and it has varied between FIM 140 and 1,650 per livestock unit. In the southernmost parts of the support area the subsidy has been doubled for the first seven dairy cows, and in the north it has been tripled.

Table 20. Hectarage subsidies per production unit in 1994.

Income class	Southern Finland	Central Finland	Northern Finland		
			southern zone	central zone	northern zone
under 90,000	450	495	540	585	675
90,001 - 110,000	338	371	405	439	506
110,001 - 130,000	225	248	270	293	338
130,001 - 150,000	113	124	135	146	169
below 39 years of age	630	693	756	819	945

Additional price for milk

The additional price of milk was introduced in 1974 to slow down inflation. At first it was the same for all farmers, but later it has been graded according to the quantities of milk (see Appendix 8), and, consequently, it has become a means of distributing incomes within agriculture.

Farmers over 65 years of age do not get the additional prices. It is generally regarded as desirable that pensioners would give up agriculture. Thus, part of the arable land might remain out of production, which reduces overproduction.

Farmers over 65 years of age do not get hectarage subsidies, either. These two points have increased the willingness to retire, which is also supported by the improvements in the pension systems.

14.3. The new forms of support in the EU

The price policy support applied earlier in Finland had to be abolished completely at the end of 1994, and it was replaced by support based on the EU system.

Farmers over 65 years of age are not entitled to LFA support or environmental support, and they receive only 50 % of the national support. This probably means that farmers who have reached the retirement age have to either sell or rent their farms during the spring.

LFA support

The mountain support of the support to less favoured areas (LFA support) is paid for 85 % of the cultivated area (in area B - C). The amount is 146 ecus/hectare or livestock unit. On cattle and sheep farms, the support is mainly paid on the basis of livestock units, but on pig, poultry, and cereal farms it is based on hectares. The support is paid for the maximum of 120 units, and after 60 units it is halved.

CAP reform support

The CAP reform support of 45 ecus/ton is paid in 1995/96 on the basis of the average yield of the region. The average yield is calculated from the years 1986/87 - 1990/91, excluding the worst and the best years. The country is divided into regions, and in region A the average yield of cereals is 3,400 kg/ha, in regions B and C1 2,800 kg/ha, and in regions C2 - C4 2,300 kg/ha. Compensation for the price reduction is paid to all farms on the basis of areas under cereals, protein, and oil-seed plants. It is not paid for grass.

Hectarage support to oil-seed plants

Oil-seed plants play a central role in the price policy of the EU, and numerous negotiations have been held in this field, especially with the USA. Earlier the support was paid through the oil pressing plants, but this has been replaced by direct support to farmers. The objective has been a hectarage support of 359 ecus at the average yield level of the EU. In principle the support to farmers is determined on the basis of the average yield of the area and that of the EU (2.36 tons/ha). The average yield of cereals (4.6 tons/ha in the EU) can also be used as the reference point. In Finland, this support will amount to FIM 1,700/ha, if the farm has arable land under set-aside. If the farm has not arable land under set-aside, this support will amount same as the compensation for the price reduction for cereals.

National support

National support is an essential part of the Accession Treaty and the national decision to become a member of the EU. The normal forms of support in the EU are not adequate to compensate for the income losses resulting from the decrease in the market prices. After the transitional period the need for national support is FIM 3.8 bill. in order to keep the incomes at the level of 1993.

National nordic support may be paid in area C for beef cattle, and for hectares of arable land in areas C2 - C4 (see Appendix 10). After the transitional period, the support is paid on the basis of hectares and livestock units. It is differentiated by the region according to the production costs.

During the transitional period, it is also possible to pay the national support as price support. Through this, an attempt is made to alleviate the price shock caused by the decrease in the prices to efficient producers, in particular. They will be the ones to suffer the most from the shift to support based on hectares and number of animals.

Environmental support

Environmental support consists of basic support and special forms of support. Basic support is paid in the whole country, and it decreases from south to north. The reason for this is that the requirements of the basic support (e.g. lowering the fertilizer level and maintaining the plant cover outside the growing season) cause more costs in the southern parts than in the northern parts of the country. Special forms of support are available for restricted regional programs, and for other special programs, which are directed to a restricted number of farms. In addition, advisory services, education and experimental projects are supported under this scheme.

Support during the transitional period

In 1995, farmers receive compensation for the decrease in the value of stocks. In addition, compensations are paid for production costs transferred from investments made in earlier years, as well as e.g. for raising beef cattle and milk production.

15. Structural support

Small farm size, which leads to unnecessarily high production costs, is considered one of the major problems in Finnish agriculture. The task of structural policy is to increase the farm size and, in general, to rationalize production in order to reduce production costs.

The state supports the rationalization of agriculture. This activity is based on the Act on Rural Business, which came into effect in 1991, and which provides the general framework for the development of farms that is supported by the state. On the basis of this act, farms are granted investment and financing support as well as direct subsidies. The purpose of the act is to create uniform legislation to promote agriculture and rural businesses. It includes the earlier Farm Act and certain other acts.

A central means of the Act on Rural Business is the Development Fund of Agriculture and Forestry, through which the state supports investments in agriculture by granting low-interest loans and direct subsidies. The support is subject to the condition that the farm must be profitable, and the objective is to improve the farm structure and to increase the average farm size. It is still in force in a revised form, and the structural support through the EU is also administered through this act.

The capital of the Development Fund consists of annual transfers from the state as well as the interests and repayments of loans and trade price payments resulting from the land use activity. However, now the transfers to the Fund have been stopped. The capital stock of the Fund is about FIM 8 bill. The interest varies between 4 and 7 %, depending on the region. The Development Fund has granted loans, in particular, for transfers of farms to descendants.

By means of state funds it is also possible to lower the interests on loans granted by private financial institutions, if the loans meet the preconditions of the act. The interest support is half of the interest of the credit institution. Interest support loans are as significant as the actual loans granted by the state. Almost all loans except for those granted in connection with transfers of farms to descendants are granted as interest support loans.

In the future, the support granted according to the interest support system is either part-fi-

nanced by the EU or financed completely from national funds. Support from the EU is mainly directed to full-time farmers, but under certain conditions part-time farmers are also entitled to it. Support part-financed by the EU is available for e.g. improving the quality of the products, diversification of the activity of the farm, lowering production costs, improving the living and working conditions as well as the hygiene of the livestock building and the well-being of animals, and protecting the environment. Land acquisition and investments on residential buildings are supported through national funds. According to a special stipulation granted to Finland, investment support is available during the transitional period for expanding pig production and investments in poultry and egg production, provided that the total production capacity of the lines in question will not grow and the amount of support does not exceed the maximum amounts of the investment support system of the EU.

Support of rural business

The rationalization and decrease of agricultural production may cause a decrease in rural population and threaten to leave the countryside uninhabited. Consequently, an attempt has been made to develop rural businesses in general. However, only basic production and entrepreneurial activity closely connected with it are subsidized on the basis of the Act on Rural Business, and other small-scale entrepreneurial activity in the countryside is still excluded.

Subsidies and loans may also be granted to support so-called rural businesses that are outside agriculture proper. The support has been granted for entrepreneurial activity practiced by farmers in connection with agriculture. Enterprises that are run by the farm family or that employ outside labour corresponding to the maximum of 2 - 3 annual jobs are entitled to the financing. The most important fields that have received the support are small-scale labor intensive manufacturing and service enterprises (about a third), garden, greenhouse, and other special crop production (about 20 %), farm holidays, horse husbandry and other enterprises related to free-time activities (about 20%), as well as fur farming, aquaculture, and beekeeping.

The so-called start money system is also part of the investment support. Young farmers under 35 years of age are entitled to state support when they start practicing agriculture on a farm they have acquired. In 1994 the maximum subsidy was FIM 62,500 to be spent on, for example, purchasing machinery, implements, or fertilizers. Altogether about FIM 65 mill. of start money was available in 1993.

16. Social policy

Membership in the EU causes hardly any changes in the legislation on the social security of farmers. The Union has no uniform social security programme, only some stipulations on minimum benefits that do not affect Finnish social policy. Thus, the development of the social security of farmers is still conducted in Finland

A farmer is, at the same time, an entrepreneur and an employee. The general legislation on the social security of employees does not concern farmers, but a separate legislation has been developed for them. Usually this has been decided on in the farm income negotiations. The responsibility for the costs of the social security is divided between farmers and the state. The most important acts concern the pensions, compensations in case of sickness or accidents, annual vacation, and substitute help.

Farmers' pensions are prescribed by law, and they are comparable with employee pensions in other sectors. Farmers pay insurance payments according to their labour income, which is mainly determined by the area of the farms. They are entitled to, for example, old-age pensions, part-time pensions, disability pensions, unemployment pensions, as well as a pension in case of early retirement. The amount is determined by the insurance payments, but the state also contributes to financing the pension costs. Because the number of the insured has decreased and the number of pensioners has in-

creased, the state accounts for about 80% of the pension costs.

The acts on farmers' pensions are supplemented by *the pension in the case of a transfer of the farm to a descendant*, which mainly aims at lowering the average age of farmers and to get skilled farmers to the field.

Pension in the case of a transfer of the farm to a descendant can be granted to farmers over 55 of age. The pension is subject to the further condition that the production on the farm is considered profitable. In practice, the amount is determined in the same way as in the case of disability pensions, and the same stipulations are applied as for the other pensions in the case of early retirement. The sale price of the farm also affects the pension. This aims at preventing the rise in sale prices and making them correspond to the return value of the farm.

The system in case of giving up production that came into effect at the beginning of 1993 can also be included in the pension systems, replacing the earlier act on pensions in the case of giving up production. The system aims at improving the structure of agriculture and reducing agricultural production, because the pension is subject to the condition that the production is stopped.

In the case of disability resulting from illness farmers are entitled to compensation on the basis of the general *sickness insurance act.*

In 1982, farmers' *accident insurance act* came into effect. The accident insurance is automatically incorporated in the pension insurance. The insured are entitled to compensation for costs, daily allowance, and pension in case of accidents or occupational diseases. Insurance payments are collected from those who, according to the act, have to take the insurance.

In 1988, a *group life insurance* for farmers was introduced, the aim being to secure the subsistence of the family of the deceased.

Farmers engaged in livestock production are entitled to an *annual leave* of 22 days. The municipalities have to arrange substitute workers for the duration of farmers' vacations. This system is financed by the state.

Farmers can get *substitute help* in the case of sickness, accidents, rehabilitation, military service, or childbirth. The substitute help for the duration of maternity leaves was extended to 320 days from the beginning of 1991. Farmers pay for the substitute help, and the amounts are determined according to their income and the size of the family.

Animal husbandry does not allow week-ends off as most other jobs do, which means that these farmers have a seven-day working week. *A days-off scheme* has been developed to relieve farmers engaged in animal husbandry from being continuously tied to their work. A farmer is entitled to a maximum of 12 days off a year, either one day at a time or several consecutive days, the maximum being five days a month. Farmers contribute to the costs of the scheme, and the amounts are determined according to the number of animals. Only about 20 % of farmers entitled to the days-off have taken advantage of this scheme.

Farmers' *occupational health care* was started in 1980. Occupational health care is preventive health care, including accounts of working conditions and health inspections. Farmers pay 50 % of the costs of health inspections, and the National Pensions Office and the state account for the rest.

The social security payments are paid in full through the state budget.

IV
SUMMARY

Like in 1993, in 1994 the summer was favourable for farmers. The hectarage yields were almost as high as in the previous year, and in some cases the highest of all times. June was quite cool, but this favoured the sprouting of cereals. The cereal crop did not suffer very much, even if July was exceptionally warm and dry. The average hectarage yield was 3,201 f.u./ha, and the total yield was 5,260 mill. f.u., which is 3 % smaller than in 1993, but clearly above the trend value. The cultivated area was 1.67 mill. ha, i.e. 1.0 % larger than in the previous year. About half a million hectares of arable land was under set-aside.

Livestock production started to increase slightly in 1994. No extensive measures to restrict production were applied, and as some of the earlier contracts expired, the production of milk and eggs increased somewhat.

The amount of milk delivered to dairies grew by about 2 %. The decrease in the number of milk suppliers was smaller than earlier, i.e. only about 1,000 milk producers discontinued their production in 1994. The number of cows has decreased slightly, but the rise in average yields led to growth in the production. In the latter part of the year, there were actually no quotas, either, which is one of the reasons for the increase.

Meat production stayed at about the earlier levels. Pigmeat production was the same as in 1993. Slaughter weights were restricted through the marketing charges. However, some increase occurred in the average slaughter weights, and even if the numbers of animals decreased slightly, the total production was at the same level as in 1993. Beef production grew slightly during 1994.

Poultry meat production has been growing steadily, except for a slight decrease in 1993. In 1994, the production grew by about 11 %.

Egg production grew by about 1 %. The problems caused by overproduction became obvious right at the beginning of 1995, when the producer prices decreased dramatically.

Farm income settlements aroused very little interest in 1994. The new Act on Marketing Systems, which replaced the earlier Farm Income Act, was applied for the first (and last) year. The new marketing system resembles the price system of the EU. A target price and a minimum price were set for the main products, and the latter formed the basis for decisions on export support. Imports were regulated by means of the Act on Import Levies.

According to the new act, the cost compensation was not as automatic as earlier, but the decisions on this were left to the negotiators. As the economic situation is very difficult and wages were not raised in the other sectors of the national economy, incomes were not raised in agriculture, either. Price policy support was raised slightly, but this was related to the arrangements concerning the payment of support in general, rather than being an income increase proper.

In 1994, agricultural income rose by about 26 %, mainly as a result of the increase in the cereal quantities coming into the market. The growth in milk production also had a favourable impact on the income development. A decrease occurred in the price of production inputs.

The most important issue during the year was the membership in the EU. The negotiation outcome was the main topic in the early part of the year. According to the Accession Treaty,

Finland is allowed to pay national support north of the 62nd parallel and in adjacent areas to the south. By means of environmental support it is possible to compensate for the income losses to some extent in the southernmost parts of the country, too.

In the beginning of the transitional period, compensation is paid for the reduction in the value of stocks. In addition, costs resulting from earlier investments are compensated for during a couple of transitional years. For the part of the price support during the transitional period that aroused a lot of debate, it was finally decided that price support can be paid to almost all products in 1995. The total amount of support will stay within the framework of the national support package agreed on in connection with the Accession Treaty.

Agriculture started the year 1995 with feelings of expectation and uncertainty. During the first days of the year, the market prices dropped even more than was expected. In most studies it has been estimated that milk producers would cope the best in the EU, whereas in pigmeat and egg production profitability seems now very poor. A dramatic income drop is to be expected in cereal production, too.

Exchange rate:
1 ecu = FIM 5.82
1 green ecu = FIM 7.02

Explanation of symbols:

e	Preliminary data
-	Magnitude nil
..	data not available or too uncertain to express

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Appendix 1. Producer price index and cost price index in agriculture with subsidies (1970=100).

	Producer price index of agriculture	Cost price index	Requisites and tools	Machines	Buildings
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	456.5	518.6	506.4	517.7	517.1
1987	463.7	522.8	499.5	534.1	535.1
1988	480.7	537.5	496.9	561.9	563.4
1989	500.0	566.5	518.1	590.2	602.5
1990	500.0	607.6	557.4	630.4	647.2
1991	481.5	634.9	600.9	632.3	656.9
1992	478.0	652.6	616.5	656.2	639.4
1993	476.5	658.6	626.5	712.4	638.1
1994[e)]	476.5	638.0	639.3	723.0	653.6

Appendix 2. Some figures of the agricultural structure.

	Number[1)] of farms 1000	Average[1)] size of farms, hectares	Number of milk suppliers 1000	Employed in agriculture[2)] 1000 persons	% of total employed
1977	237.7	10.43	112	278	12.5
1978	232.8	10.60	104	261	11.9
1979	229.3	10.78	98	251	11.1
1980	224.7	10.96	91	251	10.8
1981	218.9	11.16	85	250	10.6
1982	212.6	11.42	78	255	10.7
1983	208.2	11.63	74	246	10.3
1984	203.9	11.85	70	242	10.0
1985	200.5	12.07	66	228	9.4
1986	195.4	12.38	63	218	9.0
1987	192.2	12.59	58	206	8.5
1988	189.0	12.77	53	197	8.1
1989	..	..	48	179	7.2
1990	199.4	12.76	45	170	6.9
1991	200.0	12.90	40	166	7.1
1992	197.6	13.05	36	157	7.2
1993	191.9	13.46	35	146	7.2
1994[e)]			34		

[1)] *over 1 hectare*
[2)] *Source: Finnish Labour Review, Ministry of Labour Planning Secretariat*

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

	Dairy cows 1000	Yield per cow litres	Pigs 1000	Hens 1000
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	4812	1295.2[1)]	5922.4
1986	606.8	4935	1322.7[1)]	5532.1
1987	589.0	4905	1341.9[1)]	5341.6
1988	550.6	4990	1305.1[1)]	5237.6
1989	506.6	5246	1290.7[1)]	4923.3
1990	489.9	5547	1394.1[1)]	4844.8
1991	445.6	5619	1344.3[1)]	4138.0
1992	428.2	5613	1297.9[1)]	3968.9
1993	426.4	5648	1272.7[1)]	4024.9
1994	416.7	..	1298.3[1)]	4089.8

[1)] *Including the pigs of dairies*

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

	N	P	K
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	30.8	56.5
1985-86	90.0	30.2	55.5
1986-87	94.4	31.0	56.5
1987-88	98.2	32.0	59.3
1988-89	100.3	29.7	56.1
1989-90	111.5	30.7	57.6
1990-91	109.4	26.3	53.4
1991-92	92.8	19.9	39.7
1992-93	94.3	19.4	39.8
1993-94	94.1	19.0	40.0

Appendix 5. Agricultural total calculation, gross return in current prices, FIM mill.

	1988	1989	1990	1991	1992	1993[e)]
Crop production						
- Rye	163.3	448.5	430.8	492.6	121.5	89.8
- Wheat	659.6	1028.5	1415.0	954.7	938.4	577.6
- Barley	1266.0	1435.8	1552.8	1510.9	1730.6	1409.8
- Oats	571.8	901.6	1377.3	997.3	865.5	887.3
- Potatoes	517.9	457.9	313.4	359.7	489.7	331.2
- Potatoes of processing	223.7	260.9	226.2	164.8	163.1	180.4
- Seed potatoes	10.7	10.8	9.3	6.2	7.9	6.9
- Sugar beets	489.2	555.2	545.8	472.2	475.3	475.6
- Oil plants	461.7	515.5	526.6	439.9	326.3	416.5
- Peas	13.6	16.3	19.3	28.4	32.7	23.9
- Grass seeds	44.3	47.1	62.4	44.7	21.3	13.1
TOTAL	4422.0	5678.2	6478.8	5471.4	5172.4	4412.1
Garden production						
- Root crops	126.9	93.3	94.0	110.5	76.8	86.2
- Vegetables	533.9	604.7	571.2	554.4	561.5	560.5
- Berries	119.7	164.0	192.9	155.0	187.7	181.8
- Fruits	44.2	53.3	20.0	21.2	22.9	24.5
TOTAL	824.7	915.3	878.1	841.1	848.9	853.0
Animal production						
- Milk	7638.3	8170.6	8439.2	7730.4	7391.6	7615.6
- Beef	3411.1	3520.9	3794.7	3582.6	3522.6	3117.6
- Veal	1.1	0.8	0.5	0.5	0.3	0.3
- Pork	2924.5	3141.2	3302.0	2942.3	2869.9	2751.1
- Mutton	36.3	37.1	43.2	38.1	41.6	43.7
- Horse meat	14.6	15.6	17.3	18.5	21.3	17.9
- Poultry	365.4	392.6	438.6	494.8	449.9	423.1
- Eggs	848.3	889.1	902.3	793.4	806.9	807.4
- Wool	1.6	2.4	2.4	2.5	3.1	3.6
- Export of animals	10.6	6.6	9.9	1.2	2.5	2.0
TOTAL	15251.7	16177.0	16950.2	15604.2	15109.6	14782.3
PRODUCTION TOTAL	20498.4	22770.6	24307.1	21916.8	21130.9	20047.4
Income from rents						
- Means of production	469.4	511.7	581.1	461.5	460.4	465.1
- Buildings and land	166.9	175.1	184.9	175.1	180.7	169.8
TOTAL	636.3	686.8	766.0	636.6	641.1	634.9
Subsidies						
- by farm size	644.6	1340.9	961.5	840.3	758.6	678.6
- by number of cows	145.3	180.5	191.8	188.8	206.9	203.7
- Premium of feed grains	39.6	42.0	45.7	33.6	27.4	25.2
- "Start money"	132.0	116.0	107.0	97.2	85.3	61.4
- Premium for suckler cows		10.0	20.3	27.0	37.8	47.5
- Support for field area			564.1	827.0	1116.3	959.3
TOTAL	961.5	1689.4	1890.4	2013.9	2232.4	1975.6
Compensations to reduce production						
- Production guiding (4a§)			7.8	5.1	3.1	1.7
- Milk bonus	142.8	141.2	140.5	335.9	330.8	197.6
- Egg bonus	0.8	12.8	41.8	61.4		
- For decreasing animal production	31.8	22.7				
- Premium of beef	5.3	2.2				
- Fallowing compensations	209.3	375.5	347.3	729.3	567.8	457.9

Appendix 5, continued.

	1988	1989	1990	1991	1992	1993[e)]
- Premium for ecological cultivation			16.5	29.4	40.5	32.0
- Premium for pea cultivation				23.5	27.4	13.1
- Premium for green hay				0.3	0.9	1.1
TOTAL	390.0	554.4	553.9	1184.9	970.5	703.3
Compensations for crop damages	1541.4	128.9	8.1	4.6	15.0	133.0
GROSS RETURN TOTAL	**24027.5**	**25830.1**	**27525.5**	**25756.8**	**24989.9**	**23494.3**
Costs						
- Fertilizers	1605.9	1674.1	1681.7	1509.9	1579.6	1691.9
- Lime	119.0	130.4	146.3	118.6	85.2	145.5
- Feed concentrates						
- mixture	3069.4	3488.5	3056.3	2966.0	2655.5	2584.0
- other	122.0	126.2	87.8	38.7	42.0	39.3
- Feed conserving chemicals	145.2	152.1	162.3	142.8	122.6	93.2
- Pesticides	291.9	342.6	308.6	328.4	289.1	289.2
- Purchased seeds	601.9	520.6	388.7	317.2	260.9	304.4
- Fuel and lubricants	492.2	564.3	709.6	633.3	663.4	792.6
- Electricity	369.5	348.3	386.2	411.7	434.3	477.0
- Agricultural firewood and timber	126.9	131.8	140.5	77.9	67.7	61.1
- Delivery of calves and pigs	45.8	47.3	53.6	55.6	55.4	52.7
- Overhead costs	1342.2	1416.4	1526.1	1639.7	1681.9	1757.1
- Hired labor						
- wages	363.2	406.4	418.2	456.5	441.7	400.0
- social expenses	204.3	247.7	273.1	283.2	280.4	282.2
- Machinery and equipment expenses						
- depreciations	3056.0	3189.0	3380.0	3269.0	3193.0	3224.0
- maintenance	807.8	868.5	936.0	876.8	961.2	1029.4
- Equipment	144.4	156.4	168.4	154.3	157.1	167.3
- Building expenses						
- depreciations	919.0	991.0	1082.0	1120.0	1108.0	1114.0
- maintenance	255.9	279.7	318.9	326.7	304.2	305.7
- Drainage, bridges, etc.						
- depreciations	235.0	257.0	282.0	285.0	301.0	259.0
- maintenance	177.8	198.9	169.2	163.4	161.2	132.5
- Interest payment	1338.0	1540.4	1688.5	1882.1	1896.0	1784.7
- Imports of animals	3.1	4.0	6.7	5.5	5.7	6.0
- Rent expenses						
- means of production	298.3	316.2	358.5	297.0	289.4	286.8
- buildings and land	270.0	308.0	346.0	335.2	339.3	350.8
- Farmers' share of costs from						
- accident insurance payment	34.9	45.9	58.9	48.5	42.9	40.0
- outside help	17.1	16.5	20.1	25.6	25.0	36.7
- days-off scheme	12.6	12.4	13.7	17.2	17.0	12.6
COSTS TOTAL	**16469.2**	**17780.6**	**18168.0**	**17785.7**	**17460.5**	**17719.7**
GROSS RETURN TOTAL	24027.5	25830.1	27525.5	25756.8	24989.9	23494.3
COSTS TOTAL	16469.2	17780.6	18168.0	17785.7	17460.5	17719.7
FARM INCOME	**7558.3**	**8049.5**	**9357.5**	**7971.0**	**7529.4**	**5774.6**

Appendix 6. Agricultural total calculation, gross return in 1990 fixed prices, FIM mill.

	1988	1989	1990	1991	1992	1993[e)]
Crop production						
- Rye	172.4	434.1	430.8	533.2	140.6	132.5
- Wheat	752.3	1008.4	1415.0	1108.8	1105.5	683.3
- Barley	1294.5	1399.9	1552.8	1657.5	1849.5	1526.5
- Oats	597.2	872.0	1377.3	1107.8	962.9	989.6
- Potatoes	269.1	328.9	313.4	337.6	304.4	290.2
- Potatoes of processing	233.9	263.8	226.2	146.1	174.4	190.6
- Seed potatoes	10.9	10.8	9.3	6.1	7.4	7.7
- Sugar beets	487.2	512.4	545.8	532.9	509.5	469.8
- Oil plants	481.4	512.5	526.6	465.2	381.7	520.0
- Peas	15.2	15.9	19.3	34.0	37.8	28.3
- Grass seeds	29.3	43.0	62.4	50.1	20.6	15.2
TOTAL	4343.6	5401.8	6478.8	5979.3	5494.3	4853.8
Garden production						
- Root crops	126.3	116.5	94.0	108.1	76.5	84.3
- Vegetables	538.3	563.0	571.2	552.7	569.9	529.6
- Berries	166.0	177.6	192.9	171.4	209.2	164.6
- Fruits	37.2	44.1	20.0	25.4	31.5	28.5
TOTAL	867.8	901.2	878.1	857.6	887.1	807.0
Animal production						
- Milk	8260.8	8272.8	8439.2	7615.6	7388.3	7341.6
- Beef	3578.8	3442.3	3794.7	3908.1	3767.1	3415.5
- Veal	1.1	0.8	0.5	0.5	0.3	0.3
- Pork	2988.9	3078.6	3302.0	3126.5	3109.2	2987.8
- Mutton	41.3	38.1	43.2	40.6	47.3	51.4
- Horse meat	15.5	15.8	17.3	20.6	27.3	25.9
- Poultry meat	367.6	400.2	438.6	493.6	473.6	458.2
- Eggs	905.8	892.8	902.3	790.1	797.2	823.2
- Wool	2.6	2.3	2.4	2.3	2.4	2.8
- Export of animals	11.6	6.8	9.9	1.3	2.6	2.1
TOTAL	16174.1	16150.6	16950.2	15999.2	15615.2	15108.9
PRODUCTION TOTAL	21385.5	22453.6	24307.1	22836.1	21996.6	20769.7
Income from rents						
- Means of production	513.5	534.6	581.1	446.3	448.8	446.0
- Buildings and land	180.8	180.8	184.9	174.1	175.8	158.2
TOTAL	694.2	715.4	766.0	620.4	624.6	604.2
Subsidies						
- by farm size	698.1	1384.3	961.5	835.6	738.0	632.3
- by number of cows	157.4	186.3	191.8	187.8	201.3	189.8
- Premium of feed grains	42.9	43.4	45.7	33.4	26.7	23.4
- "Start money"	143.0	119.8	107.0	96.6	83.0	57.2
- Premium for suckler cows		10.3	20.3	26.9	36.8	44.3
- Support for field area			564.1	822.4	1086.0	893.9
TOTAL	1041.3	1744.1	1890.4	2002.7	2171.8	1840.9
Compensations to reduce production						
- Production guidning (4a§)			7.8	5.1	3.0	1.6
- Milk bonus	154.7	145.8	140.5	334.0	321.8	184.1
- Egg bonus	0.9	13.2	41.8	61.1		
- For decreasing animal production	34.4	23.4				
- Premium of beef	5.7	2.3				
- Fallowing compensations	226.7	387.7	347.3	725.3	552.4	426.7

Appendix 6, continued.

	1988	1989	1990	1991	1992	1993[e)]
- Premium for ecological cultivation			16.5	29.2	39.4	29.8
- Premium for pea cultivation				23.4	26.7	12.2
- Premium for green hay				0.3	0.9	1.0
TOTAL	422.4	572.3	553.9	1178.3	944.2	655.4
Compensations for crop damages	1669.4	133.1	8.1	4.6	14.6	123.9
GROSS RETURN TOTAL	**25212.8**	**25618.5**	**27525.5**	**26642.1**	**25751.8**	**23994.1**
Costs						
- Fertilizers	1754.7	1802.2	1681.7	1209.2	1148.1	1226.7
- Lime	129.2	133.7	146.3	111.5	81.0	136.2
- Feed concentrates						
- mixture	3370.0	3647.4	3056.3	2966.3	2729.4	2626.4
- other	141.2	138.4	87.8	40.0	42.7	39.2
- Feed conserving chemicals	150.6	157.4	162.3	139.4	143.3	106.6
- Pesticides	305.3	357.1	308.6	308.7	241.7	229.7
- Purchased seeds	648.3	542.6	388.7	327.6	289.0	338.0
- Fuel and lubricants	689.4	678.2	709.6	613.1	609.2	600.0
- Electricity	405.9	373.8	386.2	404.1	417.6	425.0
- Agricultural firewood and timber	145.9	140.0	140.5	82.4	82.4	80.0
- Delivery of calves and pigs	51.1	52.3	53.6	51.6	50.9	46.5
- Overhead costs	1455.1	1426.6	1526.1	1634.8	1632.9	1630.0
- Hired labor						
- wages	442.0	438.6	418.2	408.0	385.2	356.7
- social expenses	248.6	267.3	273.1	253.1	244.5	251.7
- Machinery and equipment expenses						
- depreciations	3388.0	3375.0	3380.0	3322.0	3143.0	2907.0
- maintenance	917.0	939.9	936.0	826.4	855.9	850.0
- Equipment	162.1	167.0	168.4	153.8	150.9	148.1
- Building expenses						
- depreciations	1055.0	1064.0	1082.0	1103.0	1121.0	1130.0
- maintenance	293.9	300.4	318.9	321.9	307.9	310.0
- Drainage, bridges, etc.						
- depreciations	270.0	276.0	282.0	285.0	291.0	293.0
- maintenance	204.0	213.7	169.2	163.4	156.0	150.0
- Interest payment	1692.8	1788.5	1688.5	1717.3	1734.5	1583.4
- Imports of animals	3.4	4.1	6.7	5.6	5.7	6.4
- Rent expenses						
- means of production	326.4	330.4	358.5	287.2	282.1	275.0
- buildings and land	292.4	318.0	346.0	333.3	330.1	326.9
- Farmers' share of costs from						
- accident insurance payment	37.8	47.4	58.9	48.2	41.7	37.3
- outside help	18.5	17.0	20.1	25.5	24.3	34.2
- days-off scheme	13.6	12.8	13.7	17.1	16.5	11.7
COSTS TOTAL	**18612.2**	**19009.7**	**18168.0**	**17159.7**	**16558.4**	**16155.7**
GROSS RETURN TOTAL	25212.8	25618.5	27525.5	26642.1	25751.8	23994.1
COSTS TOTAL	18612.2	19009.7	18168.0	17159.7	16558.4	16155.7
FARM INCOME	**6600.6**	**6608.8**	**9357.5**	**9482.3**	**9193.4**	**7838.4**

Appendix 7. Target prices of agricultural products in 1972 - 1994.

	Rye[1] (South. area) p/kg	Wheat[1] p/kg	Milk[2] p/l	Beef[4] (all) FIM/kg	Pork FIM/kg	Eggs[3] FIM/kg	Feed-barley[1] p/kg	Feed-oats[1] p/kg	Mutton[5] FIM/kg
1.4.1972	66.00	62.00	59.00	6.48	4.42	3.50			
1.4.1972[6]	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[7]	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[8]		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[9]	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			188.90	20.73	13.14	8.88			23.80
1.9.1982[10]	202.70	185.80					138.00	129.50	
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			205.70	22.31	14.18	9.60			
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			221.60	23.91	15.38	10.20			26.15
1.3.1985	264.00	231.00	228.60	24.67	16.05	10.50	170.00	158.00	
1.9.1985			230.10						
1.1.1986						9.00			
1.4.1986	270.00	233.00	232.00	24.97	16.25	8.80			25.15
1.3.1987			234.50	25.10	16.30				24.65
1.4.1988	300.00	243.00	244.50	26.10	17.00	9.10	175.00	166.00	25.90
1.1.1989			259.50						
1.3.1989	310.00	251.00	269.00	27.80	17.95	9.20	178.00	176.00	27.45
1.3.1990[11]			277.00	28.22	18.06	9.20	180.00	175.00	27.88
1.3.1991			282.00	28.42			182.00	172.00	
1.9.1991	290.00	231.00							
1.5.1992				27.92					
1.7.1993	285.00	226.00					177.00	167.00	
1.7.1994	306.20	249.60	282.00	27.92	18.06	9.20	192.10	182.40	27.88
1.7.1994[12] t	286.00	229.00	282.00	27.92	18.06	9.20	172.00	162.00	27.88
v	266.00	213.00	276.00	25.40	17.15	8.83	160.00	151.00	-

For footnotes, see next page

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 with 4 % fat p/kg and from 1973 milk with medium fat p/l without production support.
The additional price of milk is paid as follows:
from 1.9.1988 23.5 p/l up to 37 000 litres, thereafter 12.0 p/l up to 150 000 litres
from 1.9.1989 30.0 p/l up to 37 000 litres, therafter 15 p/l up to 150 000 litres
from 1.9.1989 30.0 p/l up to 50 000 litres, thereafter 15 p/l up to 150 000 litres
from 1.4.1991 see appendix 8.
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.

3) The additional price for eggs paid for beginning from 1.9.1988 is following:
a) Production quota 0 - 10 000 kg

	Oulu and Lapland	The rest of the country
from 1.9.1988	2.90 FIM/kg	2.55 FIM/kg
from 1.3.1989	3.35 FIM/kg	2.95 FIM/kg
from 1.3.1990	3.74 FIM/kg	3.34 FIM/kg
from 1.10.1990	3.94 FIM/kg	3.54 FIM/kg
from 1.1.1991	4.24 FIM/kg	3.84 FIM/kg
from 1.1.1993	4.19 FIM/kg	3.79 FIM/kg
from 7.4.1993	3.89 FIM/kg	3.49 FIM/kg

b) Production quota from 1.1.1988 10 001 - 100 000 kg and from 1.1.1991 10 001 - 80 000 kg

from 1.9.1988	2.05 FIM/kg	2.05 FIM/kg
from 1.3.1989	2.50 FIM/kg	2.50 FIM/kg
from 1.3.1990	2.89 FIM/kg	2.89 FIM/kg
from 1.10.1990	3.09 FIM/kg	3.09 FIM/kg
from 1.1.1991	3.39 FIM/kg	3.39 FIM/kg
from 1.1.1993	3.34 FIM/kg	3.34 FIM/kg
from 7.4.1993	3.04 FIM/kg	3.04 FIM/kg

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

from 1.4.1988	4.00 FIM/kg	bulls over 260 kg
	3.10 FIM/kg	bulls 210-260 kg
	2.00 FIM/kg	bulls 180-210 kg
	3.10 FIM/kg	heifers over 160 kg
	1.00 FIM/kg	heifers 130-160 kg
from 1.3.1989	2.00 FIM/kg	bulls 190-219 kg
	3.50 FIM/kg	bulls 220-269 kg
	5.00 FIM/kg	bulls over 270 kg
	1.00 FIM/kg	heifers 140-169 kg
	3.50 FIM/kg	heifers 170-259 kg
	5.00 FIM/kg	heifers over 260 kg

from 1.5.1991 see appendix 9.

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

from 1.3.1989	8.80 FIM/kg	over 16 kg
	6.70 FIM/kg	13-15 kg

from 1.5.1991 see appendix 9.

6) New statistical basis for beef and pork.

7) Target prices for meat were applied from 1.3.

8) Target prices for meat were applied from 1.2. and for eggs from 1.4.

9) Target prices for meat were applied from 12.1.

10) Grain prices on farm level from 1982.

11) Price for beef, pork and mutton adjusted to the abolition of the weight reduction. Price for eggs represents IA-class.

12) t=target price, v=minimum price. Price of cereals at the store of the byer from July 1, 1994.

Appendix 8. Production support for milk (p/l).[1)]

District	Milk quantity, litres								
	0 - 50 000			50 001 - 150 000			over 150 000		
	A	B	C	A	B	C	A	B	C
1	99.0	95.0	97.0	84.0	80.0	82.0	69.0	65.0	67.0
2	73.0	69.0	71.0	58.0	54.0	56.0	43.0	39.0	41.0
3	62.0	58.0	60.0	47.0	43.0	45.0	32.0	28.0	30.0
4	55.0	51.0	53.0	40.0	36.0	38.0	25.0	21.0	23.0
5	46.5	42.5	45.0	31.5	27.5	30.0	16.5	12.5	15.0
6	43.0	39.0	41.0	28.0	24.0	26.0	13.0	9.0	11.0
7	36.5	32.5	35.0	21.5	17.5	20.0	6.5	2.5	5.0
8	34.5	30.5	33.0	19.5	15.5	18.0	4.5	-	3.0
9	55.0	51.0	53.0	40.0	36.0	38.0	25.0	21.0	23.0
10	30.0	26.0	28.0	15.0	11.0	13.0	-	-	-

A = 1.4.-30.9.1991 and 1.9.1992-31.5.1993
B = 1.10.1991-31.8.1992
C = From 1.6.1993
[1)] *Including additional price and district support.*

Appendix 9. Production support for meat (p/kg).[1)]

Species	District								
	1	2	3	4	5	6	7	8	9
1.5.1991-30.4.1992									
Bulls and heifers 260 kg and over	1460	1350	1130	840	780	660	550	950	500
Bulls 220 - 259.9 kg and heifers 170 - 259.9 kg	1310	1200	980	690	630	510	400	800	350
Bulls 190 - 219.9 kg	1160	1050	830	540	470	360	250	650	200
Heifer	350	350	350	350	350	350	350	350	350
Sheep 16 kg and over	2140	2000	1790	1580	1280	1280	1280	1740	950
Pigs	85	75	55	40	-	-	-	40	-
1.5.-31.12.1992									
Bulls and heifers 240 kg and over	1610	1500	1280	990	930	810	700	1100	650
Bulls 210 - 239.9 kg and heifers 170 - 239.9 kg	1460	1350	1130	840	780	660	550	950	500
Bulls 190 - 209.9 kg	1310	1200	980	690	620	510	400	800	350
Heifer	500	500	500	500	500	500	500	500	500
Sheep 16 kg and over	2140	2000	1790	1580	1280	1280	1280	1740	950
Pigs	85	75	55	40	-	-	-	40	-
1.1.-31.5.1993									
Bulls and heifers 220 kg and over	1610	1500	1280	990	930	810	700	1100	650
Bulls 190 - 219.9 kg and heifers 170 - 219.9 kg	1460	1350	1130	840	780	660	550	950	500
Heifer	400	400	400	400	400	400	400	400	400
Sheep 16 kg and over	2140	2000	1790	1580	1280	1280	1280	1740	950
Pigs	85	75	55	40	-	-	-	40	-

Appendix 9, continued.

Species	District								
	1	2	3	4	5	6	7	8	9
From 1.6.1993									
Bulls and heifers 220 kg and over	1660	1550	1330	1040	980	860	750	1150	700
Bulls 190 - 219.9 kg and heifers 170 - 219.9 kg	1510	1400	1180	890	830	710	600	1000	550
Heifer	400	400	400	400	400	400	400	400	400
Sheep 16 kg and over	2140	2000	1790	1580	1280	1280	1280	1740	950
Pigs	85	75	55	40	-	-	-	40	-

[1)] *Including production premium and district support.*

Appendix 10. Support and the additional prices during transitional period.

	A - C4 -areas	The Archipelago
The additional prices in 1995, FIM/kg		
Cow meat	1.60	1.60
Beef, (170-220 kg)	7.31	10.84
Beef, (over 220 kg)*	8.81	12.80
Pork	2.81	3.31
Eggs	2.56	3.16
Broiler	2.25	2.25
Turkey, other poultry (not laying hen)	2.69	2.69
Mutton	8.53	13.00
Peas	0.24	0.24
Sugar beet	0.049	0.049
Milk	0.64	0.92
Wheat	0.24	0.24
Rye	0.26	0.26
Malting barley	0.17	0.17
Starch potatoes	0.031	0.031

**) In addition to this, the additional price is paid (FIM 2.35/kg) from January to April because lacking of beef production premium.*

Appendix 10, continued.

Year	1995	1996	1997	1998	1999
Harvest year	1995/96	96/97	97/98	98/99	99/2000
The additional prices in1996 - 1999, FIM/kg					
Milk	-	0.54	0.37	0.22	0.11
Milk (Archipelago)	-	0.64	0.48	0.27	0.11
Wheat	-	0.24	0.18	0.13	0.07
Rye	-	0.26	0.19	0.13	0.07
Malting barley	-	0.17	0.13	0.09	0.05
Starch potatoes	-	0.028	0.021	0.013	0.008
Livestock and hectarage support during transitional period, FIM/animal, FIM/ha					
A - C4-areas, without Archipelago					
Milk	Will be paid in additional prices				
Heifer, male bovine (over 12 months)*	-	1020	650	390	180
Male bovine (over 16 months)*	-	1850	1280	790	510
Dairy cow*	-	150	50	-	-
Ewe, goat	-	340	220	150	70
Pig	-	610	460	290	160
Hen	-	35.60	26.20	16.90	8.50
Broiler	-	14.30	10.70	7.20	3.20
Turkey, other poultry	-	34.80	25.10	16.80	7.70
Starch potatoes	Will be paid in additional prices				
Sugar beet	-	1650	1240	830	410
Malting barley	Will be paid in additional prices				
Wheat	"				
Rye	"				
Peas	-	630	460	310	160
Hectarage support, FIM/ha					
Cereals, protein plants and oil-seed plants	290	200	140	80	30
National hectarage support to young farmers, FIM/ha (A- and B-areas)	200	200	150	100	50
Livestock supports, FIM/animal					
In the whole country					
Suckler cows	600	600	500	350	200
Sows	1620	1620	1200	750	350
Hatching hen for broiler	61.20	61.20	45.90	30.60	15.30
Hatching turkey and other poultry	90	90	67.50	45.00	22.50
Goat, (milk production)	700	650	600	550	500
Chickens for laying hens	2.59	2.59	1.95	1.30	0.65
Horses (FIM/LU)	3500	3100	2800	1800	1000

**FIM/slaughtered animal*

Appendix 10, continued.

	C1	C2	C2 north.	C3	C4
Nordic support in 1995, FIM/LU, FIM/ha					
Suckler cows		100	150	600	1050 2150
Dairy cows	650	700	1150	1600	2700
Male bovines, over 6 months	650	700	1150	2900...3400	4500...6000
Other bovines, over 6 months	650	700	1150	1600	2700
Ewes, goats	650	700	1150	3100...3700	4800...6400
Horses	0	0	0	0	0
Pigs	0	0	590	590	900
Poultry	0	0	590	900	1900 (in 1996 2400)
Wheat, rye	0	0	0	-	-
Malting barley	0	0	0	-	-
Sugar beet	500	500	500	-	-
Starch potatoes	400	400	400	-	-
Vegetables	0	0	0	0	0
Other arable crops	0	0	0	-	-
Apples	0	0	0	-	-
Payments per hectare	-	200	200	400	800
Payments per hectare, young farmers	200	200	200	200	200
Nordic production aid, milk	-	-	-	0.07-0.32	0.32-0.84
Nordic support in 2000, FIM/LU, FIM/ha					
Suckler cows	1900	1950	2400	2850	3950
Dairy cows	2450	2500	2950	4300	4500
Male bovines, over 6 months	2450	2500	2950	4700...5200	6300...7800
Other bovines, over 6 months	2450	2500	2950	3400	4500
Ewes, goats	2450	2500	2950	4900...5500	6600...8200
Horses	2500	2500	2500	2500	2500
Pigs	2450	2500	2950	2950	3400
Poultry	2450	2500	2950	3400	4500
Wheat, rye	800	800	800	-	-
Malting barley	400	400	400	-	-
Sugar beet	2000	2000	2000	-	-
Starch potatoes	1000	1000	1000	-	-
Vegetables	2350	2350	2350	2350	2350
Other arable crops	300	300	300	-	-
Apples	920	920	920	-	-
Payments per hectare	-	200	200	400	400
Payments per hectare, young farmers	200	200	200	200	200
Nordic production aid, milk	-	-	-	0.07-0.32	0.32-0.84

Appendix 10, continued.

FIM/ha, FIM/LU	A	B	C1	C2	C2 north.	C3	C4
Average regional cereal yield, tn/ha	3.4	2.8	2.8	2.3	2.3	2.3	2.3
Supports financed completely or partly by EU							
CAP reform support, cereals	1074	884	884	727	727	727	727
CAP reform support, oil plants[1)]	1700	1700	1700	1700	1700	1700	1700
CAP reform support, protein plants[1)]	1551	1278	1278	1049	1049	1049	1049
CAP reform support, set-aside	1360	1120	1120	920	920	920	920
CAP reform support, suckler cows[2)]	1018	1018	1018	1018	1018	1018	1018
CAP reform support, male bovines	632	632	632	632	632	632	632
CAP reform support, ewes	126	165	165	165	165	165	165
LFA support	0	847	847	847	847	847	847
Agri-environmental support							
- cereals, oil plants, protein plants, starch potatoes	1130	600	400	250	250	250	250
- grass, other potatoes, sugar beet	1730	850	850	850	850	850	850

[1)] *On set-aside farmers, otherwise same as CAP reform support on cereals.*
[2)] *Including national addition, 25 ecus/animal.*

Seed production support	FIM/100 kg
- timothy, meadow fescue	250
- red clover	1400
- perennial rye-grass	400
- orchard grass	1200
- wheat, rye, barley, oats	15

	1995	1996	1997	1998	1999
Long-term nordic support, FIM/ha					
Industrial potatoes					
- A- ja B-areas	2700	2700	2700	2700	2700
- C1, C2 ja C2 north. -areas	2900	2900	2900	2900	2900
Other potatoes and seed potatoes					
- In the whole country	2700	2400	2400	2400	2400
Bee keeping, FIM/beehive	290	270	240	240	240
Hectare subsidy					
- % of the hectare subsidy in 1993	70	40	30	20	10
- FIM mill./year (total)	476	272	204	136	68

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