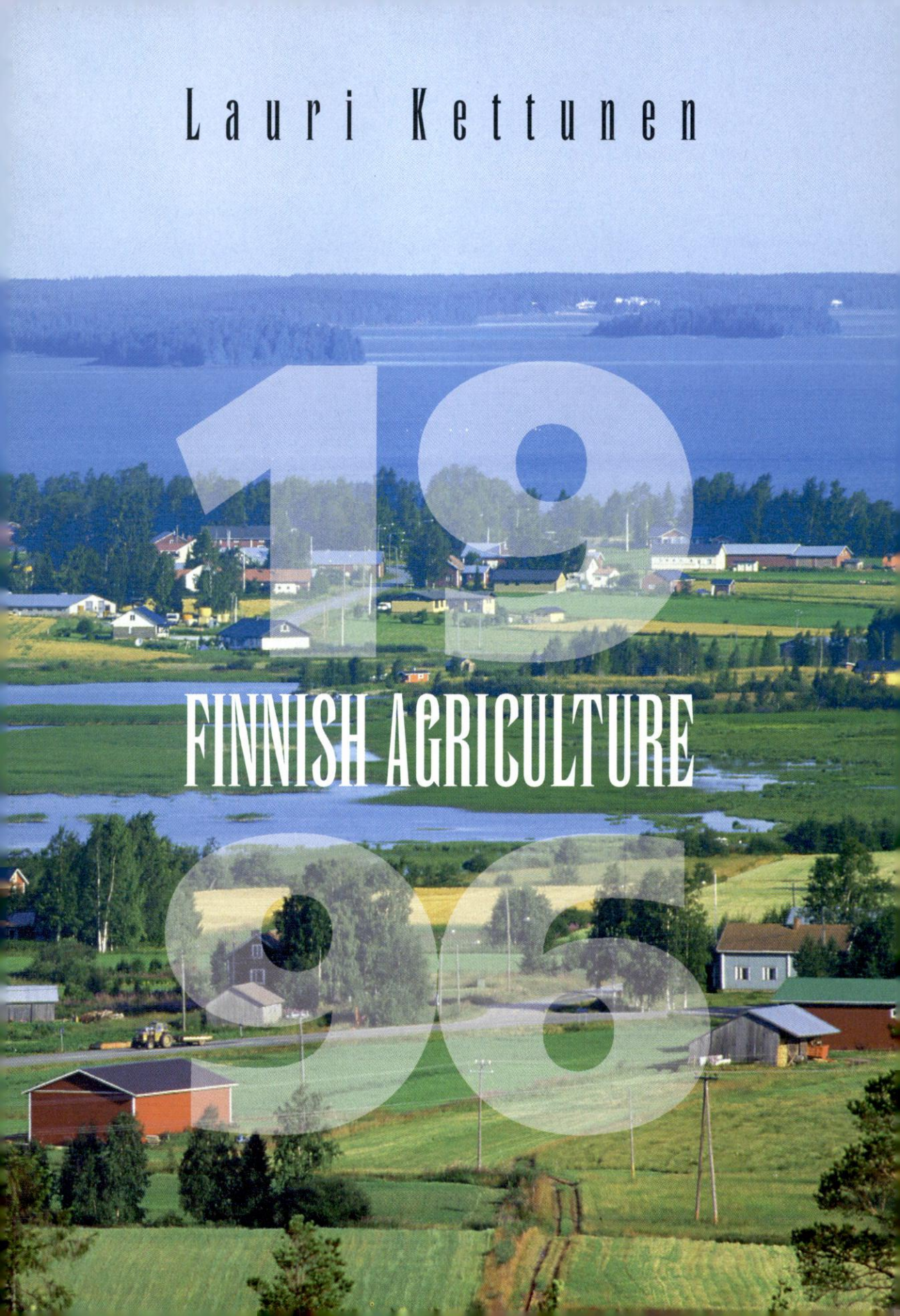


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FINNISH AGRICULTURE

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FINNISH AGRICULTURE IN 1996

Lauri Kettunen

MAATALOUDENTALOUDELLINEN TUTKIMUSLAITOS
AGRICULTURAL ECONOMICS RESEARCH INSTITUTE, FINLAND
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Abstract. Finnish agriculture in 1996

The early part of summer 1996 was rainy and cool, and the crop outlook was not too good. Instead, in August it was very warm and dry, which seems to have been favourable for agriculture, because the yield rose to the normal level. The cereal yield was 3.7 bill. kg, and the total yield measured as fodder units was 5,663 mill. f.u., which exceeds the yield of 1995 by 3 %.

The cultivated area grew by almost 10 % from the previous year, which explains the increase in the total yield. The set-aside area decreased and it was only 10 % of the total arable land area.

The earlier trends continued in livestock production. Milk production fell by about 1.5 %, and about 2,000 milk producers quit their production every year.

The total of the farm quotas exceeds the national quota granted to Finland by 5-6 %, and the farm quotas will be cut by this amount in the beginning of April, 1997. The trade on quotas will become administered again in order to be able keep the costs of the expanding dairy farms in control.

Pigmeat production grew by 3 % in 1996, and the market situation was quite good. The market prices were on the increase almost throughout the year as the meat consumption was transferred from beef to pigmeat.

In Finland beef production stayed at about the same level as earlier, and the BSE disease did not influence the Finnish beef markets. The consumption of poultry meat continues to grow, and in 1996 the production increased by 18 %.

There has been some increase in the foreign trade of meat. Pigmeat, in particular, is being imported and exported to an increasing extent.

No major changes occurred in the consumer prices and, consequently, consumption stayed at about the same level as earlier. Like in the past few years, cheese consumption grew to some extent, and poultry meat consumption also continued to grow very strongly. Instead, there was some decrease in the egg consumption.

According to a preliminary estimate, agricultural income fell by about 7 %. This was mainly caused by the decrease in the amount of aid by about FIM 1.0 bill. Agricultural income calculated at the market price rose by FIM 0.5 bill., mainly as a result of the increase in the amount of cereals entering the markets. The crop was good and stocks were discharged.

The second year did not bring along any significant changes in the agricultural production or prices. However, there is still a great deal of uncertainty about the future among the producers. The number of farms decreases quite rapidly, and this has aroused speculations about the collapse of agriculture especially in the more remote areas. However, no alarming changes are foreseen in the production, and investments have also been made, which indicates that there is still faith in the Finnish agriculture.

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

Preface

The second year in the EU seems to have been somewhat easier to Finland than the first. Agricultural producers were used to the lower price level and the fact that the different forms of aid constitute almost half of the turnover. A temporary settlement was also reached in terms of the national aid for Southern Finland, which reduced the uncertainty among the farmers of this area. However, according to the present settlement the aid will be paid only until 2001, and thus it will have to be negotiated on again.

The decrease in the transitional aid in the next few years will be problematic for all farmers. The income level may fall at the same pace, because the market prices are not likely to rise from the present level, but the input prices seem to be on the increase. The rationalization of the production is the only way to improve the economic situation.

The number of farms decreases in about the same way as earlier, but no major changes have occurred in the production. Thus agricultural production seems to continue at the earlier levels. This publication presents a review of the development of agriculture in 1996. As the earlier annual review, it covers the production, consumption, prices, and incomes in agriculture. Many of the statistics are only preliminary, and more accurate data will be available during the early part of 1997. A review of agricultural policy

is also presented, and this contains some preliminary data as well.

The structure of the annual review is about the same as earlier, and part of the text has also remained unaltered. However, an attempt has been made to update the statistical data 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 Alamaantila, Hannu Linjakumpu, Juha Marttila, Jyrki Niemi, and Reijo Pirttijärvi for their assistance in acquiring the data and revision of the text.

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

The publication comes out in Finnish in the Research Publications series no. 82, and in Swedish in no. 82b. I thank Jaana Kola for the translation into English and Heidi Mittler for the translation into Swedish.

Helsinki, January 31, 1997

Lauri Kettunen

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I OVERVIEW OF AGRICULTURE IN FINLAND

1. Agriculture and the national economy

In 1995 the gross domestic product at factor cost was FIM 478 bill. At the end of 1995 Finland had a population of 5.12 mill. Thus the gross domestic product was FIM 93,400 per capita, i.e. USD 20,100 per capita calculated according to the exchange rate at the end of the year, USD = FIM 4.64. This is slightly below the average of the EU countries.

In 1995 the share of agriculture of the gross domestic product was 1.7 %. The share of agriculture has decreased steadily, because in agriculture the production has grown more slowly than in other sectors of the national economy. The amount of purchased implements and serv-

ices 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.

The share of the food expenditure of the total consumer expenditure is about 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

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

Year	Gross domestic product			Investments		
	total FIMbill.	agriculture FIMbill.	%	total FIMbill.	agriculture FIMbill.	%
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	447.53	15.17	3.4	139.14	5.08	3.7
1991	427.78	13.09	3.1	110.06	3.75	3.4
1992	415.71	10.90	2.6	87.95	2.28	2.6
1993	421.24	11.84	2.8	71.19	2.08	2.9
1994	446.10	11.67	2.6	74.19	2.17	2.9
1995	477.51	7.91	1.7	82.60	2.26	2.7

Source: Statistical Yearbook of Finland from various years.

dropped to about half of the level of the end of the 1980s. The trend has been similar in the whole national economy. Uncertainty about the future has made farmers cautious. In 1995 the share of agriculture of the investments of the whole national economy was only 2.7 %. However, some increase occurred in the investments in agriculture, too, e.g. more tractors were bought than in the previous years. This trend continued in 1996.

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 were not prepared to make investments, especially due to the uncertainty caused by the EU membership. 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 6-7 % (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, there are difficulties in the compilation of statistics on the labour force and labour input in agriculture. 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 labour force. Only about half of the incomes of farm families come from agriculture.

Economic situation

In 1996 the economic growth was slower than had been expected and hoped for. The official forecast was 3.8 % but, according to preliminary reports, the growth was only 2.5 %. Thus the expected growth has not been realized in the past two years. The forecast for 1995 was 5.0 %, but the growth was 4.2 %. Normally this would have been considered very good, but lowering the rate of unemployment would require much more rapid growth for several years.

The main reason for the slow growth was the fact that the economic growth slowed down in all

West European countries in the early part of the year. In Germany, in particular, the economic growth was very slow, and this was reflected in the other EU countries. In Finland this affected mainly the wood processing industry, in which the exports decreased in the early part of 1996. This resulted in a decrease in the paper and pulp production by about 10 %. A slight recession or decline began already in the latter part of 1995. The price of pulp started to fall, and this continued in 1996. After the summer of 1996 some increase has occurred in the prices of both pulp and paper, but there is still uncertainty in the sector whether this is a sign of a steady improvement. Another decrease in the prices is considered possible. The profits of export companies have decreased considerably compared to 1995, i.e. they have returned to the normal levels from the record results reached in 1995.

The recession has also been reflected in the decrease in the stumpage prices and felling, although some improvement could be observed towards the end of 1996. During the whole year the value added of agriculture and forestry decreased compared with the previous year, which partly explains the slow economic growth.

In the other sectors, however, the steady growth has continued. In the metal industry the growth was particularly rapid. The electronics industry has grown the most, but the traditional engineering industry has also succeeded quite well.

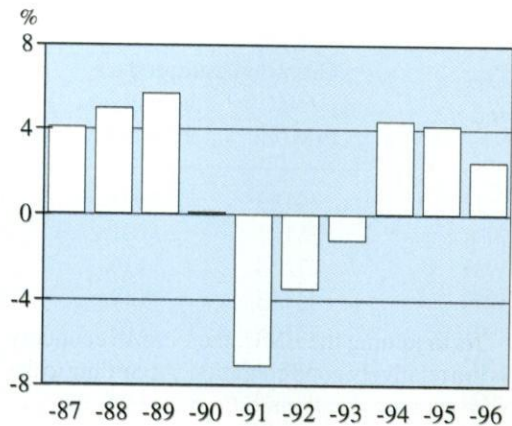


Figure 1. Growth in the volume of market price GDP in 1990 prices (%/year).

Due to the slow growth unemployment has not decreased as expected. The official rate of unemployment was 16.5 %, which is only 1 % lower than in 1995. However, it is likely that even this was mainly achieved by means of the public employment measures. Usually it is estimated that an economic growth of 3 % would keep the unemployment at the same level. On the basis of the development in the past few years, this seems to be true. The productivity of both old and new companies increases, which reduces the need for labour. The public sector is a major employer, but the number of people working there will have to be reduced, which makes the situation even worse. More and more often it is admitted that the economic growth only will not solve the unemployment, but we also need new ways of dividing the labour as well as changes in the wage systems in order to be able to employ more people. However, the labour unions oppose any radical changes, and thus the realization of reforms in the labour market is very slow.

In addition to the unemployment, the deficit in the state economy is another major problem. The need for net financing has decreased considerably from the record level of FIM 65 bill. reached in 1994, but it was still as high as FIM 40 bill. in 1996. According to the budget proposal, it should be about FIM 29 bill. in 1997. The state debt will then be FIM 432 bill., which is 72 % of the gross domestic product. The total deficit of the public sector was 61.8 % in 1996, and it will be 61.0 % in 1997.

In other respects the economic key ratios are good. The inflation is low, the balance of trade and current account show a surplus, interests are low, investments are on the increase, and the economic growth is in fact quite good. However, the high rate of employment and the difficulties in the state economy cast a shadow over the positive aspects of the economy. Unfortunately no major changes can be expected for some time.

As to joining the EMU, the Finnish economy is in a relatively good condition. According to the convergence programme, the increase in the consumer prices may be no more than 1.5 % higher than in three EU countries with the lowest rate of inflation. The long-term interest rate level (state

bonds) may be no more than 2 % higher than the interest rate level of three EU countries with the lowest inflation, and the criteria concerning the deficit of the state economy and state debt are 3 % and 60 %, respectively. Only the state debt (61 %) slightly exceeds the criterion of 60 %, but only Luxembourg, the Great Britain, and France meet this criterion. It seems that in 1997 only France and Luxembourg will meet all criteria for the EMU, and in France the deficit has been estimated at 3.0 %, which means that it may fall out as well.

The Finnish economy is in fact in quite a good condition compared to the other EU countries, and in this respect meeting the criteria for the EMU does not cause any additional problems to the management of the state economy. In Finland the state debt has usually been very small, so that the present amount of debt is something quite new. Hardly anyone is prepared to increase the debt, but some increase in the amount of the debt in FIM cannot be avoided. The interest expenditure on the loan is already as high as FIM 35 bill. in 1997, and this burdens the budget economy a great deal. The increase in the borrowing will be used for interest payments.

In 1996 the consumer prices rose by only 0.8 % (1.0 % in 1995). The increase resulted mainly from the increase in the environmental taxes, especially the tax on fuel. In 1997 the prices are expected to rise by 1.5 %. Food prices decreased 7.4 % in 1995, and in 1996 by about 2 %. The market prices of agricultural products, especially meat prices, have increased slightly during 1996.

Even if the growth of exports decreased from 13.7 % to 4.5 %, the balance of trade showed a surplus of FIM 44 bill. and in the balance of current account the surplus was about FIM 20 bill. (in 1995 FIM 48.2 and 24.5 bill., respectively). Thus the foreign debt has decreased to about 35 % of the GDP, when in 1993 it was still as high as 54 %. It has been possible for the state to borrow from the domestic market, because the debts of households have decreased. In general the competitiveness of the exports companies should be quite good in the future, too, because the increase in the costs has remained small. The decrease in the prices in the wood processing

industry will, however, affect the competitiveness of this sector.

The money market has been stable and, like in other countries, the interest rates have fallen. Short-term interest rates are even lower than in Germany, and the long-term interest rates are not much higher, either. The Finnish markka has been stable for the past couple of years. In the summer the value of markka fell and the exchange rate of ECU was over FIM 6, but it strengthened again in the autumn. In October markka was tied to the ERM and the exchange rate of the ECU was FIM 5.806. After that the value of markka has been somewhat higher than this.

The economic growth has been maintained by the increase in the domestic demand. Like in the previous year the private consumption grew by 3.9 % in 1996, and the growth is expected to stay at about the same level in 1997. In 1996 the real income of wage earners increased by 3.7 %. In 1997 the alleviation of the taxation will increase the disposable income by about 6.5 %. The growth of the domestic demand is vital for maintaining the economic growth, because the share of exports in the national economy is only about a third, and thus the economic growth cannot be based on exports only. The low interest rate level seems to stimulate the trade in houses and apartments, and this can be hoped to contribute to the recovery of the building activity. This is considered very important for strengthening the domestic markets, because it has significant effects on other sectors and, consequently, it would improve the employment situation.

Investments started to increase in 1995, when private investments grew by 10.9 %. This trend continued in 1996, and similar growth was also reached in the investments in the public sector. According to forecasts, the growth should stay at about the same level in 1997.

The membership in the EU has not aroused very much discussion in terms of the economic situation. It is very difficult to distinguish the effects of the membership from the other factors, especially as the national economy was already largely integrated to the West European markets, except for agriculture. The economic discussion has mainly concerned the future, i.e. the EMU and its effects on Finland.

The EMU will result in stable money markets, but it will reduce the means of the economic policy. The labour markets fear that they will be the ones to pay if the national economy runs into difficulties. The export sector can no longer resort to devaluation if its position were considerably weakened. In this case a wage reduction would seem the only way of preventing the loss of the exports markets and securing the employment. This is counterbalanced by the stability of the economy, which prevents inflation and thus the loss of competitiveness. The world market prices will fluctuate in any case, but the results of the good years must be adequate to get over the bad years.

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 the south to the 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

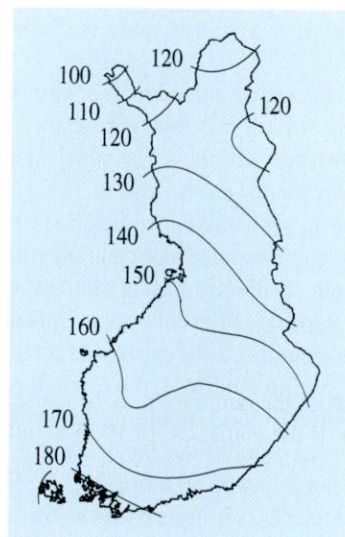


Figure 2. Growing seasons in Finland.

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 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 1995 private persons owned 79.6 % of farms, heirs and family companies 19.2 %, corporations and cooperatives 0.6 %, and the state, municipalities, and congregations 0.5 %. The share of farms owned by heirs has not changed. This is significant for agricultural policy because these farms have the lowest productivity, and their existence slows down structural development. In 1995 the owner 21.4 % of farms owned by private persons was over 64 years old.

According to the Farm Register of 1995, there were altogether 169,707 farms with over 1 hectare, and the average farm size of these was 14.9 ha. This is 20,000 fewer farms than in 1994. However, agricultural production was practiced on only 99,964 farms, and their average farm size was 21.7 ha. The number of active farms fell by about 14,500, i.e. the decrease was considerable. However, part of the decrease may be caused by the revision of the statistics. In 1995 about 98,700 farms applied for aid from the EU, and about 95,600 of these eligible for the aid.

The small farms in the statistics often distort the discussion on the structure of Finnish agri-

Table 2. The distribution of all farms and active producing farms into farm size classes and the average farm size (over 1 ha) in 1995.

	Farms over 1 ha		Producing farms	
	1,000	%	1,000	%
1-4.9	54.2	31.9	10.0	10.0
5-9.9	34.1	20.1	17.0	17.0
10-19.9	38.2	22.8	31.3	31.3
20-49.9	36.2	21.3	35.2	35.2
50-	6.6	3.9	6.5	6.5
Total	169.7	100.0	100.0	100.0
Arable land				
area 1,000 ha	2,525.0		2,167.3	
Farm size, ha	14.88		21.68	

Source: The Farm Register of 1995.

culture. 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 1995 altogether 482,494 ha, i.e. 19.1 % of the arable land area was rented. The average rented area of active farms was 10.3 ha.

Forest is an integral part of a Finnish farm: an average farm has 14.9 ha arable land and 48.3 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. Milk production accounts for about 30 % of the total return of agriculture, and the share of cattle production rises to about 40 % of the total agricultural production when beef pro-

Table 3. Arable land and forest areas in different parts of Finland in 1980 and 1995 (half-farm)¹⁾.

	Arable land and garden		Forest land	
	1980	1995	1980	1995
Uusimaa	18.2	22.9	28.2	32.8
Häme	14.1	17.0	31.0	38.5
Kuopio	9.4	13.1	37.2	47.3
Vaasa	11.3	16.0	26.4	31.8
Oulu	9.2	12.1	45.8	83.8
Lappi	6.1	7.6	78.8	90.0
Whole country	11.0	14.9	35.5	48.3

¹⁾The statistics have changed in 1992. Includes part of forestry farms.

Source: The Farm Register of 1980 and 1995.

duction 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 1995 there were only 29,900 milk suppliers (Appendix 2). About 40 % of producing 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

Table 4. Capital stock of agriculture in 1995, FIM bill.

Arable land	27
Production buildings	23
Machinery and implements	13
Livestock	7
Other	7
Total	77

Source: Pyykkönen 1996.

an estimate, there are about 232,000 tractors and 38,000 combine harvesters. Calculated per hectare, the level of mechanization is quite high. Almost all dairy farms have a milking machine.

The total capital stock of agriculture has been estimated at FIM 77 bill (Table 4). The share of land is about FIM 27 bill., when FIM 11,600/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. Estimation of the production buildings and other property items is somewhat easier.

The debts of farmers amount to about FIM 24 bill. In the distribution of the debt between the farms, about 40 % of farms have no debts at all. On the other 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.

3. Other rural industries

In addition to agriculture and forestry, farmers practise many other industries, e.g. horticulture, fishing, fur farming, farm holidays, etc. Fur farming is economically the most significant, but it is very sensitive to fluctuations in the economic situation and the returns may vary considerably. The other industries have established their position. An overview of these industries is presented in the following. Not all statistics from 1996 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 horticultural production in the open. Thus, greenhouse production is excluded.

The total area of the greenhouse production is about 493 ha. The value of the greenhouse production is estimated at FIM 1 billion in 1996, of which the value of vegetables was FIM 470 million. The most important vegetables are tomatoes, cucumbers and pot salad. The value of ornament plants was FIM 555 million.

There are about 3,100 greenhouse firms, of which 1,800 were eligible for aid. The difference is due to the fact that all plants are not eligible for aid, and a part of farmers may not get the aid due to the age or the technical reasons. It is also possible that all eligible farmeres do not apply for aid.

The number of farms which received aid was about 4.5 % smaller in 1996 than a year earlier. The average size was 2,100 m². Of these areas about 21 % were eligible for so-called short-term (2-7 months) production aid and about 79 % for the long-term production aid. About 60 % of the eligible area was in vegetable production and 37 % in ornamental plant production.

It was decided in the negotiations with the Commission that the levels of aid will be retained untill 1999. In 1999 new general negotiations will be held as to the remaining serious difficulties of agriculture. Horticulture will be included in these negotiations.

In 1995 there were about 4,300 *professional fishermen* in Finland. About 70 % practise their trade at sea. The number of fishermen has been decreasing rapidly.

In 1995 the catch of fish was at FIM 111 million kg and the value of this was FIM 166 mill. Most of the catch came from the sea areas. In addition,

aquaculture produced fish (mainly rainbow trout) 17.4 mill. kg, and the value was about FIM 286 million in 1996. Occasionally rainbow trout is also an important exports article. In 1995 1.7 mill. kg was exported, and the value of this was FIM 65 mill. The value of roe of rainbow trout export alone was FIM 31 mill. The value of planting production, which is important for improving the fish populations, was FIM 83.2 mill. in 1994.

An especially important side-line for agriculture is *fur farming*, which is also practised on its own. It employs about 7,000 people. There are about 2,200 fur farms. Fur production is mainly concentrated in the province of Vaasa, 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.

The collapse of the world market prices in 1988 forced many fur farms to stop their production. In 1993/94 prices started to rose considerably and the trend continued in 1996. The profitability improved particularly for fox. The price of mink is also on the increase.

The use for furs has moved to new markets, like to the Far East, where economic growth has been fast. Most of the production of fur clothing is concentrated in these areas. In Europe and the USA the demand has increased after many bad years. The field is sensitive to business fluctuations, and it has to adapt itself to the changes in the world market, which may be great.

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 1995/96 there were about 7,000 reindeer owners. At reindeer round-ups in 1995/96 there were about 333,500 animals, of which 120,700 were slaughtered. Meat production was 2.7 mill. kg, and its value was about FIM 72 mill. Reindeer meat has mainly been consumed in Finland, and hardly any is exported.

In 1995 there were about 49,500 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

Table 5. Some figures on other rural industries.

	Number of enterprises	Value of production FIMmill.
Greenhouse production	3,100	1,000
Fur farming	2,200	1,600
Reindeer herding	7,000	72
Apiculture	4,100	28
Farm holidays	2,000	170

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.

Apiculture provides additional income to about 4,100 beekeepers. In 1996 altogether 1.0 mill. kg honey was produced, and its value was about FIM 28 mill.

Wildberries (cloudberry, blueberry and lingonberry) are an important source of income for many people, especially in northern Finland.

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 170 million/year. Compilation of statistics is difficult because this field is very heterogenous and the scale is very small.

II

PRODUCTION, PRICES AND AGRICULTURAL INCOME

4. Crop production

4.1. Weather conditions

The winter of 1996 was like in the good old days with a lot of snow in Southern Finland, too. Almost the whole time the temperatures were below zero. The wintering of winter cereals was quite normal, and no major damages were reported. The spring was a little late and the temperatures were below the average. Sowing was started a week or two later than normally, but it was completed at about the usual time, because the weather was good. There were no regional deviations from the normal sowing times.

The early part of the growing season was quite normal. The temperatures were close to the average, the precipitation was slightly above the average, and this was favourable for the growth. Sprouting progressed very well. July was very bad for holidaymakers, because the temperatures were well below the long-term averages. The real summer began in August and the effective temperature sum rose gradually, but the normal level was not reached. It rained hardly at all in August, and the drought continued until the latter part of September. September was again quite cool. For the part of the total thermal growing period the effective temperature sums remained 5-10 % below the normal values.

The yield level was, however, quite good, partly actually above the normal. Thus the low temperatures in the early part of the growing season did not affect the yield level. High temperatures often involve drought, which seems to be a more important factor in terms of the yield

than the temperature. In August and early September it was very dry and this favoured the harvesting, which was completed without any major difficulties. Because of the favourable weather conditions the quality of the crop was good.

4.2. Areas and yields

The total area of Finland is 33.8 mill. ha. The share of forestry land is 26.3 mill. ha (78 %), that of water courses 3.4 mill. ha (10 %), of agricultural land 2.6 mill. ha (8 %), and the rest is uncultivable land. In practice all agricultural land is cultivated land. In Finland the area of natural pastures is only 100,000 ha, whereas in many European countries the area and significance of these is much greater.

The EU membership has increased the area under cultivation. In 1996 this grew by about

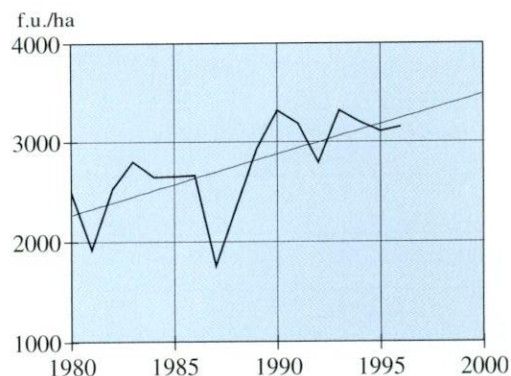


Figure 3. Total yield without straw in 1980-1996, f.u./ha.

26,100 ha, i.e. 1.4 % (Table 6). The reason for this is the decrease in the mandatory set-aside. The set-aside area that is a precondition for the CAP aid is estimated at about 57,000 ha, because on many farms the yield remains below 92 tons, which is the limit for set-aside. Voluntary set-aside is also possible, and the area covered by this was 179,300 ha. In 1994 the set-aside area was 505,100 ha.

The increase in the cultivated area concerns mainly cereals, and the area under oil-seed plants and dry hay have dropped. The area under winter wheat grew by 12,000, which increased the total area to 112,000 ha. Considerable increase also occurred in the area under rye (to 35,000 ha), but

the yield of rye does not yet quite meet the domestic consumption. The area under oats increased by 12 %, and the area under barley also increased slightly from the previous year.

It has been necessary to reduce the area under oil-seed plants because of internal factors of the EU. The GATT settlement imposes certain restrictions on the production of oil-seed plants, and this affects the cultivation possibilities in Finland, too. The gradual decrease in cattle husbandry has probably led to a decrease in the area under dry hay, even if an annual error in the statistics is also possible. The area under dry hay increased in 1995, and the reason for this is not quite clear.

Table 6. Harvested areas and yields of main crops in 1995 and 1996¹⁾.

	1995			1996		
	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg
Winter wheat	12.6	41.7	53	25.2	43.0	108
Spring wheat	88.1	37.1	327	87.3	40.2	351
Rye	20.8	27.7	58	35.3	24.6	87
Barley	516.2	34.2	1,764	542.5	34.3	1,860
Oats	329.3	33.3	1,097	374.4	33.7	1,261
Mixed cereals	10.7	32.8	35	13.8	30.3	42
Peas	4.5	24.2	11	5.7	23.4	13
Potatoes	36.1	221.1	798	34.8	220.0	766
Sugar beets	34.8	319.0	1,110	34.7	258.4	897
Hay	287.1	37.8	1,086	243.6	43.0	1,047
Green fodder	31.6	137.4	434	30.4	148.3	451
Silage	300.9	187.2	5,633	302.4	183.6	5,551
Oil-seed plants	85.3	15.0	128	61.7	14.5	89
Other crops	36.3			36.1		
Pasture	127.8			118.2		
Total	1,922.1	3,109 ²⁾	5,481 ³⁾	1,946.1	3,151 ²⁾	5,663 ³⁾
Set-aside	223.2			179.3		

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.

The areas under potatoes and sugar beets were about the same as in 1995. The cultivation of sugar beets is largely based on contracts, and thus there is little variation in the area, but potatoes are also cultivated on the basis of contracts to a considerable extent.

The yield level was normal or slightly above the normal. The yields of fodder cereals, barley and oats followed the long-term trend, and they were about the same as in 1995. Actually, the yields of these were not as high as could have been expected. The reason for this was the fact

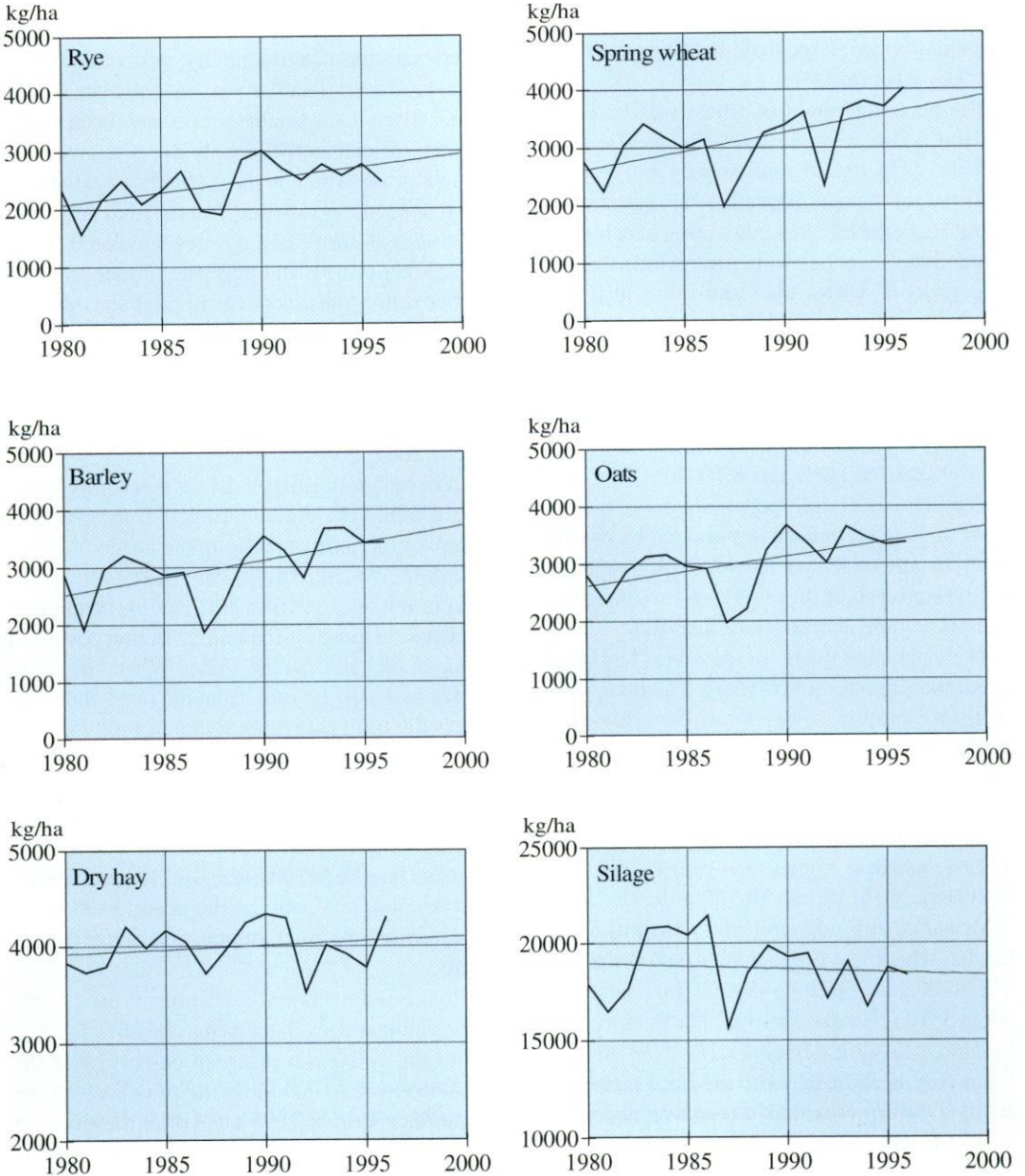


Figure 4. Yields of main crops in 1980-1996.

that the size of seeds was smaller than the normal. As the areas grew, the yield of fodder cereals exceeds the domestic need clearly, by about 680 mill. kg. However, it has been possible to export the surplus to the EU and third countries and the markets have functioned quite well. At the turn of the year there were no intervention stocks. Earlier oats used to be exported to the USA, but after the EU membership this has stopped. Export aid has been too small to make this profitable.

The hectare yield of wheat was excellent and the quality was also good. The yield level of cereals has increased continuously, but it is still well below the yield level of the agricultural countries of the EU. The cultivation of cereals in Finland can never be competitive within the EU. The yield of wheat does not quite meet the domestic consumption, but it is estimated to be about 80 mill. kg below this.

The total yield of cereals was 3,700 mill. kg, which is 11 % higher than in 1995. The increase is mainly caused by the growth in the cultivated area by about 100,000 ha, i.e. 10 %.

The yield of dry hay was quite good, but the yield of silage remained at the same level as in 1995. In general the yield levels of both of these have stayed at about the same level for some time, and even some decrease has occurred.

The hectare yield of potatoes has been about the same for a few years. The total yield corresponds quite well to the domestic consumption. Instead, the yield of sugar beets remained clearly below the normal, which was mainly caused by the drought in the latter part of the summer. The sugar content, however, was 17.6 %, which is higher than ever before. The total sugar yield was about 130 mill. kg.

Measured as fodder units the yield was 3,151 f.u./ha, which is a little smaller than the trend. The total yield was 5,663 mill. f.u., which is about 3 % higher than in 1995. The overproduction of cereals grew considerably from the previous year, because the cultivated area increased by 10 %. Overproduction is, however, no longer as problematic as prior to the EU membership, when the surpluses had to be exported at the world market price by means of national export support.

4.3. Monitoring of prices

The price paid to farmers consists of the market price and various forms of aid, which are paid in many different ways during the transitional period. Aid includes both price aid, which is paid for each produced kilo or litre FIM/kg or FIM/l, and aid paid on the basis of the number of animals or hectares, which is not dependent on the production quantities. Consequently, the average price the producers receive can be calculated only after all payments, including aid, have been made. In the official statistics only the so-called producer price, which includes the farm gate price and price aid, is reported, but the final price that includes all forms of aid is not calculated.

Market price is the price the farmer receives when selling the product to the recipient (slaughterhouse, dairy, recipient of cereals, etc.) Today this is the price of the raw material to the processor, and the consumer price is based on this, together with the margins of the processing and trade and the VAT.

The monitoring of prices is further complicated by whether the price is quoted at the place of trade or the farm gate. From the farmer's viewpoint the so-called farm gate price is the most important one in terms of the income formation, because in this case the transportation cost is no longer included in the price. When the dairy truck picks up the milk from the farm, the dairy pays the farm gate price to the farmer. Instead, the prices of slaughter animals are usually reported as prices at the slaughterhouses, because the animals may be transported in various ways. Cereal prices are also set in the place where the cereals are received, because farmers themselves may take care of the transportation. In these cases the price in question is the market price.

In this publication market price is used as the price indicator, even if this may be mixed up e.g. with the wholesale price. In certain cases the producer price, including the price aid, is also examined. Prior to 1995 it was often the producer price that was reported in the statistics. At that time the market price was much closer to the producer price than is the case at present. How-

ever, the earlier producer price did not include all forms of aid, e.g. subsidies and aid per hectare.

4.4. Market prices of crop products

In the beginning of 1995 the market prices of cereals fell by 50-60%. After that it took some time before the prices stabilized and began to follow the price development in the single market. Because the world market prices were quite high still in the early part of 1996, even so high that the EU restricted wheat exports by means of an export tax, there was no need to offer cereals to the intervention stocks and the price level has stayed above the intervention price. However, the price of the crop of 1996 fell close to the intervention price, and the world market prices have also dropped considerably.

The intervention price varies according to the season so that during the crop year the price rises by about 10%. Thus it is profitable to store cereals on farms, if this is possible. It is difficult to get a similar interest anywhere in the financial markets. Storage naturally involves certain risks, too, but it pays to take these. Cereals have, however, entered the markets almost in the same way as earlier, and exports have been needed

Table 7. Producer prices of some crop products in 1987-1996, FIM/kg.

	Rye	Wheat	Barley	Oats
1987	2.68	2.44	1.70	1.60
1988	2.91	2.43	1.73	1.65
1989	3.16	2.60	1.82	1.78
1990	3.03	2.54	1.76	1.72
1991	2.88	2.22	1.58	1.55
1992	2.72	2.19	1.65	1.55
1993	2.26	2.19	1.63	1.54
1994	2.52	2.13	1.57	1.48
1995 ¹⁾	0.89	0.87	0.73	0.70
1996 ^e	0.89	0.91	0.75	0.74

¹⁾Market price of grain from 1.1.1995, basic price of grain delivered to industry warehouses.

Source: Viljavaaka.

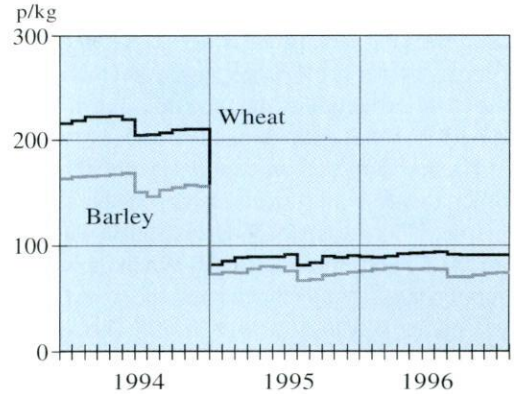


Figure 5. Producer prices of wheat and barley in 1994 and market prices in 1995 and 1996.

because of the storage space and to keep the markets in balance.

Cereal prices usually reported are those set at the storehouses of the buyer. The prices the farmers receive are normally not reported. These can be estimated by deducting the transportation costs from the market price.

In the early part of 1996 the world market prices of cereals were quite high, higher than the intervention prices of the EU. In several years the crop has been at about the same level or there has even been some decrease, but the consumption has grown. Consequently, the stocks have diminished and they were at a lower level than for a long time, actually they were close to the level of the food crisis of 1974. According to the CAP

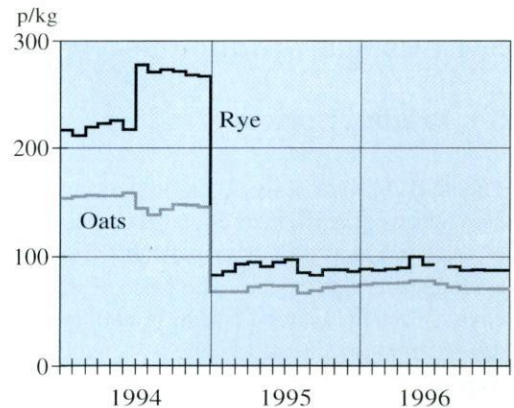


Figure 6. Producer prices of oats and rye in 1994 and market prices in 1995 and 1996.

reform, the set-aside area of the EU is as much as 15 % of the cereal area, which has reduced the supply, even if some people argue that this is not the case. Reduction of the set-aside area in 1996 and 1997 is not enough to cover the shortage.

The EU imposed an export tax on wheat in order to keep the prices stable on the single market. There was a lot of discussion on whether this was a sensible way to act. When the wheat supply decreased on the market, the world market prices stayed at a high level. This had a negative impact on e.g. developing countries that have to import cereals. The biggest surprise has been the very strong reaction, i.e. the increase in the prices. In connection with the liberalization of the world trade reference is often made to the reduction of the supply and increase in the prices, but in these calculations the changes in the production are much greater than those that have occurred in the past few years. Consequently, the price elasticities seem to be greater than assumed in the model calculations.

On the other hand, the decrease in the prices has also been more rapid than was expected. During the autumn the prices fell considerably and the EU again promotes cereal exports by means of export premiums. However, despite the good crop the stocks will remain at a low level and the prices may start to rise again, but they will not be as high as in the early part of 1996.

5. Livestock production

5.1. Producer prices

The market prices of livestock products in Finland followed the EU markets, but the price level of some products differs considerably from the average prices of the EU. The price of milk is closest to the EU average, and the price of mutton differs from this the most. The reasons for the differences are not quite clear. Finland is a remote country with long distances, which would actually make it possible to have a higher price level than in the competing countries. This is not

Table 8. The paid producer prices of the most important agricultural products in 1987-1994 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
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	326,5	30.45	16.14	11.15

the case, however. The price differences may be caused by the differences in the quality classifications despite the fact that an attempt is being made to standardize the determination of prices. Differences may also be caused by the development level of the markets and the costs related to the slaughterhouses, transportation, and marketing. The price differences may reveal the competitiveness of the companies operating in the meat business.

On the other hand, the demand-supply-situation of the local markets may have a greater impact on the prices than the possible foreign competition would imply. For example, the over-production of eggs is still considerable in Fin-

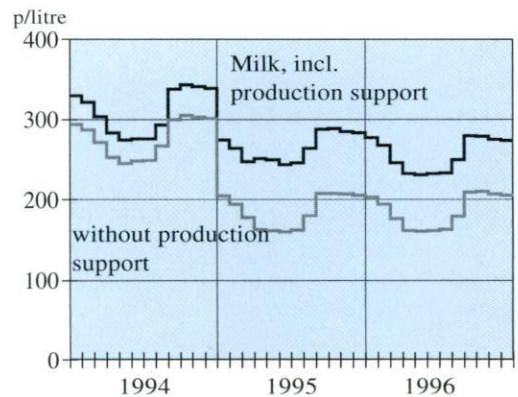


Figure 7. Producer price of milk in 1994-1996.

Table 9. Estimated prices of milk, meat and eggs in 1996.

		Farm gate price	Producer price ¹⁾
Milk,	FIM/l	1.86	2.70
Beef,	FIM/kg	13.30	18.61
Pigmeat,	"	7.90	10.40
Mutton,	"	8.98	12.72
Eggs,	"	4.18	6.21

¹⁾ incl. additional price

land, and this is likely to lower the market prices. In the case of pigmeat the demand and supply are well in balance, and the price is close to the EU average. The beef markets have also been in balance, but the price is clearly below the EU level. There has been oversupply at times, for example in the autumn of 1996, and as launching exports has been difficult the prices have remained below the EU averages.

It is very difficult to find any reasons for the low market price of mutton. The consumption is quite low, but, in proportion to the consumption, a considerable amount of mutton has been imported. Is the aid going mainly to the processing and trade sectors? There are numerous examples of this in other countries. Aid directed to agriculture often increases the input prices and

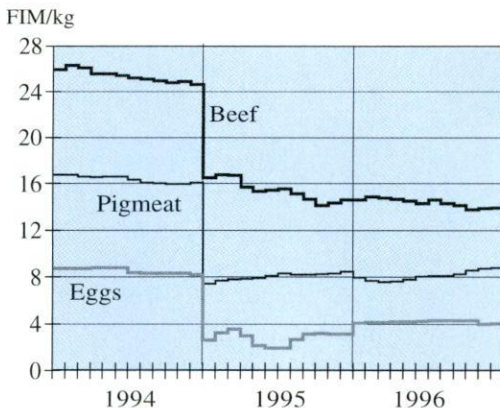


Figure 8. Producer prices of beef, pigmeat and eggs in 1994-1996.

Table 10. Market prices of livestock products in Finland and some EU countries in 1995, FIM/kg (milk FIM/l)¹⁾.

	Milk	Pigmeat	Beef ²⁾	Eggs ³⁾
Finland	1.89	8.06	16.10	2.83
Sweden	1.82	8.17	16.71	4.90
Denmark	1.77	7.77	17.07	4.89
Germany	1.70	7.95	16.65	7.51
The Netherlands	1.77	..	16.97	3.55
France	1.63	7.78	16.69	3.67
Italy	1.81	..	18.31	5.50

¹⁾According to the average exchange rates of 1995.

²⁾R3-class ³⁾Prices converted into these per kilo according to average weight of 62 g.

the margins of the processing and trade, and agriculture may not benefit from it at all.

The producer prices of pork increased slightly. The trend has been similar in the other EU countries, too. The mad cow disease has affected the consumption of beef in many EU countries, and the demand for meat has shifted to pigmeat and poultry meat. The market price of pigmeat has risen because of the increase in the demand. This has also been reflected in Finland, even if the mad cow disease had no effect on the beef consumption in Finland.

In 1995 the market price of eggs was exceptionally low (about FIM 2.5/kg), but it has risen to about FIM 4/kg. This is also below the EU level. The producers are still receiving transitional aid, which naturally increases the price paid to the producers.

5.2. Production

Milk

Milk production fell by about 1.5 % from the level of 1995. This is quite well in accordance with the long-term trend. Annual variations have been considerable, depending on the production restriction measures used. In 1991 the production fell by 10 %, but in 1994 it increased by 2.3 %.

In the early part of the year the production level was about 4 % lower than in the previous year, but the decrease slowed down towards the end of the year. Changes in the production are often determined by the pasture season. A high fodder yield during the pasture season increases the average yields, and this often continues during the whole feeding period. The quality of the harvested fodder influences the returns a great deal, and thus it is necessary to wait for the beginning of the indoor feeding period in order to find out the output level of the whole winter.

The number of milk suppliers is decreasing steadily. In 1996, too, their number fell by 2,000, which is a little more than in the previous year. The average annual increase in the average yield has been 80 l/cow, and it is already nearly 6,000 litres.

In 1996 milk producers were very much concerned about the cuts of the farm quotas. In the Accession Treaty the national quota was determined on the basis of the output of 1992. The total of the farm quotas, however, was about 150 mill. litres larger. The national quota has not been exceeded, but the Commission has required that the total quota should be based on the national quota. In 1995 the state bought some quotas from farmers, but this was not very successful. Free trade on quotas has been possible, except for the condition that 50 % of the sold quotas had to be relinquished to the state free of charge. The price of quotas has been FIM 1.5-4.5/l. Income from quota sales is taxable income.

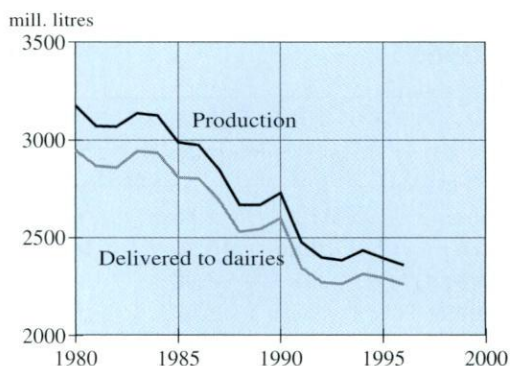


Figure 9. Milk production and the amount of milk delivered to dairies in 1980-1996.

The government made a decision to cut the quotas of all farms by 5-6 % (except for farms that had received aid from the EU to expand the production) in the beginning of April 1997. There is no decision so far on the compensation to be paid for the cuts. The lower quotas do not cause any problems as long as the total quota is not exceeded, but this always involves a risk of exceeding the quota, and farms that have exceeded their own quota are the ones to suffer.

In connection with the cuts it was also decided that the Northern aid is paid for all milk production, even if the output were to exceed the farm quota. The amount of aid cannot exceed the set maximum, and thus it is probably necessary to lower the average amount of aid in order to be able to pay the new aid.

Table 11. Livestock production in 1990-1996¹⁾.

		1990	1991	1992	1993	1994	1995	1996 ^c
Dairy milk	mill. l	2,600	2,345	2,274	2,264	2,316	2,296	2,261
Beef	mill. kg	118	122	117	106	107	96	97
Pigmeat	"	187	177	176	169	171	168	172
Eggs	"	76	67	67	70	72	75	71
Poultry meat	"	33	37	36	35	39	42	49

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 also dropped by 3 %. Starting from July 1, 1995 the hot weight reduction is 2 %.

Beef

Beef production has decreased steadily since 1991, when the output was 122 mill. kg. In 1996 the output was only 97 mill. kg. The number of slaughter animals decreased slightly, but the slaughter weights rose. In beef production the share of cows is about a third and that of bulls about 55 %. The share of veal (carcass weight less than 80 kg) is only 0.1-0.2 %. The weights of both cows and bulls are increasing slightly. In 1997 the output is forecast to decrease by 1-2 mill. kg.

In the EU beef production is supported by means of special beef premiums and suckler cow premiums. According to the Accession Treaty, special beef premium may be paid for 250,000 animals. This number has not been realized in full. Because beef production is mainly based on slaughter animals produced in connection with milk production, the number of animals eligible for the special beef premium does not reach the upper limit very easily, but the number is likely to fall short of this, even to an increasing extent.

The suckler cow premium may be paid for the maximum of 55,000 animals. Their number has been growing slowly, but it is still well below the maximum.

In Finland there has been no BSE disease, and thus it has not affected the beef markets. In the very beginning of the crisis consumers had certain reservations with respect to beef, but the

issue was soon forgotten and the consumption has been quite stable. The domestic supply has satisfied the demand, and very little beef has been imported.

Beef production policy of the EU

The BSE disease was a major issue in the agricultural policy of the EU almost throughout the year. The collapse of the demand caused a panic among the producers as the producer prices fell rapidly. The situation is particularly difficult in the United Kingdom, because it was forbidden to export beef. Based on a proposal by the Commission the Council had to make a decision on the management of the disease, according to which a large number of animals will be slaughtered. The producers receive compensations for their losses.

The difficulties in the beef production sector due to the loss of the demand and decrease in the producer prices led to economic difficulties in the EU, because there was no extra money available for this kind of compensations. The financing of the compensations is still open. At the moment it seems that they will be financed by means of internal transactions within agriculture. The aim is to reduce the funds reserved for the CAP reform aid by 7 %, but it has not been possible to make the decision yet. However, the issue will have to be settled during 1997.

In October the Council made a decision on an extensive cattle package, which includes e.g. the following:

- introduction of a slaughter/marketing premium for calves or, alternatively, an early marketing premium for a little older calves in the member states
- shift to a single special beef premium
- cuts of the national quotas for special beef premiums
- inspection of the use of the quotas for the suckler cow premium
- raising the purchase ceiling for intervention for this year, and
- revision of the criteria for the premium for extensive production.

Beef production is supported by 2.5 bill. ecus

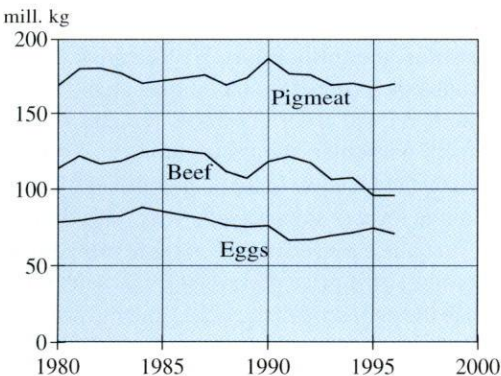


Figure 10. Production of beef, pigmeat and eggs in 1980-1996.

in order to balance the markets. In addition, 500 mill. ecus is paid as a special income aid. An attempt is being made to balance the markets by raising the intervention stocks from 460 mill. kg to 550 mill. kg. In the beginning of 1996 there were no intervention stocks.

However, 230 mill. ecus of the total additional aid of 2.5 bill. to beef producers was paid in advance already in 1996. The share of Finland is 1.2 %, i.e. FIM 35 mill. (6 mill. ecus).

An attempt is made to reduce beef production by paying the special beef premium only once. The aid is 135 ecus for bulls under 10 months. It used to be 108.68 ecus paid twice per animal. The new systems also involves the possibility for a second payment. This can be applied for "traditional extensive production regions", but it is restricted to only 3 % of the regional ceiling. The total of the two payments may not exceed 216 ecus.

The limits for extensive production were changed so that the aid is 36 ecus if the number of animals is 1.4 LU/ha and 52 ecus when it is less than 1 LU/ha.

The system also involves a slaughter premium for small calves (under 84 kg), which is FIM 380 for calves slaughtered in December-February and about FIM 350 for calves slaughtered after that. The system remains in force until the end of November, 1998.

The quotas for special beef premiums were cut by altogether 19.3 %. This was made possible by the fact that the quotas have not been fulfilled. In Germany the quotas were cut by 42.4 %. The Finnish quota decreased from 250,000 to 241,553, i.e. by 3.4 %. The number of bulls slaughtered is on the decrease, and thus the cuts should not cause any major problems.

No permanent settlements have been reached in restoring the equilibrium on the beef market, even if the problem is generally recognized. Even without the BSE the production exceeds the demand, and the problem was known before the crisis. However, no one seems to be prepared to take any measures to solve the problem. In October the Irish Minister of Agriculture made the sarcastic remark that "all ministers have agreed on the need to cut beef output, but no-one wanted their production reduced".

According to some estimates, the EU is going to have problems in achieving the equilibrium on the beef market until the end of this decade. In 1995 beef output was 8 mill. tons and consumption 7.65 mill. tons. According to the GATT agreement, the EU has an import obligation of 460,000 tons, which means that in 1995 the total overproduction amounted to 795,000 tons. Based on the agreement the EU may export 821,000 tons beef by means of export aid in 2000, which is about the same as the present overproduction. However, the output increases by about 1.5 % a year and the consumption does not grow but it is rather on the decrease, and thus the excess supply is growing rapidly. The consumption has been forecast to decrease as much as 20 % by 2000. If export is not possible, the stocks will soon be several millions of tons. Consequently, it has been argued that the EU should take powerful measures to reduce output, but this does not seem to succeed.

Pigmeat

In 1996 the pigmeat output (172 mill. kg) was 2 % larger than in 1995. Slaughter weights were about 3 % higher than in 1995, but the number of pigs slaughtered fell by almost 2 %. The output is forecast to grow by about 4 % in 1997.

The growth in the consumption as a result of the shift from beef to pigmeat because of the BSE disease stimulated the production in 1996.

The profitability of pigmeat production has been a key factor in terms of the development of the production. It seems that, in spite of the cost pressures, the profitability is still satisfactory, because the production has stayed at about the same level as earlier. Towards the end of the year, in particular, the profitability was weakened by the increase in the fodder prices by 8 % from the level of the previous year. This was in the first place caused by the increase in the price of protein (the price of soybeans has been high due to the poor crop in the USA), but the price of cereals also rose towards the end of 1996.

According to the bookkeeping results, the production cost of pigmeat was about FIM 10.55/kg in 1995. The costs are clearly higher than in Denmark (FIM 7.75/kg). Especially the prices

of fodder and piglets were a lot higher than in Denmark. The difference are caused by the scale of the production: in Finland the pig houses are considerably smaller than in Central Europe.

Mutton

The price of mutton has stayed at a level that is clearly below the EU average. At the annual level the price has been as low as FIM 10/kg, when the average price in the EU was about FIM 20/kg in 1995. In Denmark, too, the price has been about FIM 5/kg higher than in Finland. The markets are not in balance, i.e. the demand is not large enough in proportion to the supply. The slaughterhouses are congested and slaughterings have to be postponed, which increases the average slaughter weights.

Mutton is imported, even if there is oversupply in the domestic mutton. The EU launched a special storage programme between November 4 and 22 in order to draw mutton from the market and thus increase the price.

Eggs

There have been difficulties in egg production for a long time due to the oversupply. The output exceeds the consumption by about 30 %. During 1996 the output decreased by about 5 %. In the first two months the quantities entering the markets actually exceeded those of the previous year, but after that the production gradually dropped to a lower level than in 1995. However, this does not seem to reflect any permanent improvement in the market situation, because hatching has increased by about 8 %. The production may begin to grow again in 1997.

6. Retail prices and consumption

6.1. Retail prices

The retail prices have already become fully adjusted to the changes resulting from the EU

membership. The prices fell until the end of 1995, even if the most significant drop occurred in the beginning of January, 1995. After the middle of 1995 it is no longer possible to assess the effects of the EU membership on the retail prices, because the prices have since then been influenced by the variation in the producer prices both in Finland and in the EU. Now the retail prices follow the producer prices (market prices).

The National Consumer Administration has made detailed studies on prices both between and within the different regions. According to these, the prices fell by about 12 % as a result of the EU membership. There is considerably variation in the food prices depending on the location of the retail store.

The group "foods" of the consumer price index may also be used in examining the development of the prices. This contains, however, products of both domestic and foreign origin, and thus it does not fully reflect the effect of the EU membership. Finding out this would require an account of the prices of foods coming from third countries.

The prices of the group "foods" started to decrease already in the latter part of 1994 as a result of a decrease in the price of the domestic raw material. When the decrease is monitored at the annual level it can be observed that in January 1995 the price index for food decreased by 4.4 %, in February by 5.4 %, etc., reaching a 9.0 % drop in October 1995. The index was the lowest in December 1995. Since then the prices have been on the increase, albeit very slowly, and at times the prices have also fallen due to seasonal variation. By September the prices had risen by about 1 %, but at the annual level from 1995 to 1996 the food prices fell by 2.0 % because of the decrease in the prices that continued for almost the whole year of 1995. In 1996 the food prices were about 8 % lower than in 1994.

The decrease in the prices in the beginning of 1995 was mainly caused by the decrease in the prices of raw materials. The market prices fell by a little under 50 %. Estimates on the decrease in the prices made prior to the EU membership varied between 10 and 12 %, partly depending

Table 12. Retail prices of some products in December 1994-1996, FIM/kg (milk and cream FIM/l) and the change XII/95-XII/96, %.

	1994 XII	1995 XII	1996 XII	Change %
Milk	3.92	3.91	3.87	-1
Cream	4.87	4.71	4.71	0
Butter	14.88	12.12	12.85	6
Cheese	49.54	46.96	47.12	0
Margarine	7.93	6.54	6.18	-6
Pigmeat	42.87	32.72	33.00	1
Beef	56.14	44.91	42.38	-6
Broiler	23.47	19.14	17.28	-10
Eggs	16.48	9.75	10.86	11
Wheat flour	10.26	6.86	7.22	5
Rye bread	16.57	14.99	14.76	-2
French bread	14.63	12.27	11.73	-4

Source: The Central Statistical Office, Consumer price statistics.

on the choice of the products included in the estimate. The decrease was greater in the case of the retail prices of purely domestic products than in the prices of all products included in the group "foods", because the prices of certain imported foods rose due to e.g. the increase in the value added tax and duties.

Development of margins

The pre-integration assessment of the changes in the prices was based on the assumption that there would be no changes in the margins expressed in FIM. According to calculations, no very significant changes have occurred in the margins, but there is variation between the product groups. Margins were calculated at the annual level from 1994 till 1995, which does not provide a fully accurate picture of the changes in the prices, because the prices fell throughout the year 1995, and some decrease occurred already in 1994. The prices seem to have become fully adjusted only in the latter part of 1995, and after that the changes in the prices have been caused by other factors, not the integration.

According to calculations made at the Agricultural Economics Research Institute, the average increase in the margins of dairy products was 8 %. The values of the fat and protein in milk were changed (fat is now 32 % cheaper and protein 27 % more expensive), which was reflected in the price formation of different dairy products. As the value added taxation was changed so that the products that used to be almost free of tax now contain the same 17 % of value added tax, independent of the product, the average prices of dairy products are only a little lower than prior to the EU membership, despite the decrease in the market price of milk. The prices of cheese and butter decreased, but the price of milk is at about the same level as earlier.

Meat prices have fallen considerably from 1994. The decrease has been the greatest in the case of pigmeat. In March 1996 the consumer price of pigmeat was 28 % lower than in September 1994. This has mainly been caused by the decrease in the market price of pigmeat, but it should be noted that the margins have also decreased considerably, by 7-14 % depending on the part of the carcass. The EU membership brought along significant changes in the pricing, but the prices of all valuable parts have decreased by about the same 23 %.

The decrease in the consumer prices of beef has not been as great as in the case of pigmeat, 12-15 % for whole meat and 20 % for ground beef. The margins fell by 3-4 %, but those of ground beef fell by as much as 12 %. The consumer prices decreased more than had been expected (by about 7 %) because of the decrease in the margins. The decrease in the beef prices continued throughout the year, and by the first quarter of 1996 the prices of whole meats had fallen by 25-26 % and the price of ground beef by 30 %.

The consumer prices of eggs fell by as much as 45 % from 1994 (FIM 17.09/kg) until 1995 (FIM 9.35/kg). The market price fell from FIM 11 to FIM 3.29/kg, and the margins decreased as well (from FIM 6.46 to 4.70/kg). The oversupply forced the prices to a level that was lower than the price level within the EU (about FIM 5.50/kg) would have required. Eggs had to

be exported, but due to the transportation and marketing costs the prices remained very low, which deteriorated the profitability of packaging companies and made it necessary to lower the producer prices more than had been expected. During 1996 both the retail price and market price have risen by about FIM 1/kg.

The prices of flour and bread have followed quite closely the decrease in the prices of the raw material and the level of the value added tax. The margins have stayed at about the same level as earlier, with a slight increase or decrease in certain sectors.

At this stage it is still impossible to estimate the development of the margins in 1996. The wages rose considerably in 1996, and this has influenced the margins of trade. No significant changes have occurred in other cost factors, and there was hardly any inflation.

One reason for the price variation is the increase in the demand. The disposable income of consumers has increased considerably, which has been reflected in the demand for food, even if the effect of incomes on food usually remains relatively small.

Prices in 1996

Retail prices are dependent on the producer prices, margins of the processing and trade, as well as the overall market situation. During 1996 some increase occurred in the producer prices, especially for the part of cereals as well as pigmeat. It seems that during the first months in the EU the slaughterhouses and dairies were very cautious, fearing that the imports might increase, and the producer prices were pushed at a lower level than would have been necessary.

Even if the agricultural policy of the EU reduces the price variation or even isolates the prices in the single market completely from the variation in the world market prices, the increase in the world market prices for cereals, which continued in the early part of 1996, resulted in a considerable increase in the EU prices, too.

The consumer prices of food in Finland are close to the average level of the EU, about the

same as in Germany. In Finland the value added tax on food is one of the highest in the EU, which should be kept in mind when making price comparisons. Variations in the exchange rates make it difficult to prepare any accurate comparisons. Finnish markka has been quite stable for the past two years, but it also varies by a few percentage units within a year, and thus the timing of the comparison influences the prices by a few percentage points.

6.2. Consumption

The disposable income of consumers rose by about 7 % during 1996, and this has been reflected especially in the consumption of products with a high income elasticity. These include, among others, cheese and valuable parts of the carcass. In other respects the effect of incomes is small, and the consumption is rather determined by other factors, like advertising and health considerations.

Compared with 1995, no significant changes occurred in the consumption last year. In 1995 the retail prices of many products fell considerably, but last year the prices changed very little.

Table 13. Consumption of dairy products and margarine/capita in 1987-1996.

	Liquid milk litres	Butter kg	Cheese kg	Marga- rine kg	Butter mixes ¹⁾ kg
1987	225.6	8.2	11.5	7.1	2.2
1988	221.8	7.0	11.7	7.3	2.1
1989	217.7	6.5	12.5	8.0	2.1
1990	216.0	5.5	12.7	7.6	2.2
1991	209.0	6.2	12.8	7.9	2.6
1992	208.0	5.6	13.1	8.6	2.8
1993	205.3	5.5	13.5	8.7	2.9
1994	201.1	5.4	13.5	8.2	2.8
1995	196.3	5.5	14.8	8.3	2.6
1996 ^e	196	4.7	15.6	8.4	2.7

¹⁾butter-vegetable oil mixes

Source: The Yearbook of Farm Statistics 1996 and ETT.

Table 14. Consumption of meat and eggs in 1987-1996, kg/capita¹⁾.

	Beef and veal	Pigmeat	Poultry meat	Eggs
1987	20.9	32.6	5.2	11.8
1988	20.9	32.7	5.6	11.6
1989	20.5	31.9	6.2	11.1
1990	21.8	33.0	6.8	11.1
1991	21.3	32.9	7.2	10.7
1992	21.1	32.6	7.4	11.0
1993	18.9	30.8	7.3	10.7
1994	19.0	29.7	7.8	10.4
1995	19.4	33.3	8.7	11.8
1996 ^e	18.7	33.1	9.7	10.8

¹⁾Since 1990 the consumption figures for meat are about 3% higher than earlier as the hot weight reduction was abolished. A 2% reduction is again made from July, 1995.

Source: The Yearbook of Farm Statistics 1996 and ETT.

The consumption structure of dairy products follows the earlier trends quite closely. The consumption of milk is decreasing whereas that of dairy products is on the increase. The consumption of liquid dairy products decreased again by a few litres per capita. In addition, the trend is towards low-fat products. The consumption of fat-free milk increases and the consumption of milk with a higher fat content and, in particular, that of whole milk is on the decrease. Instead, the consumption of cream has increased slightly, and that of yoghurt and sour milk has stayed at about the same level for some time. Finnish consumers have become used to the foreign products, and these no longer lead to an increase in the consumption.

The consumption of butter has decreased slightly. Cheese consumption continues to grow quite strongly, and in 1996 the increase was 5%.

In 1995 the consumption of eggs grew by about 13% because of the dramatic decrease in the consumer prices. In 1996, however, the consumption decreased to the level of 11 kg/capita, on which it had stayed for a long time.

The growth in the meat consumption shifts to poultry meat, in the case of which the increase was 13% from 1995. However, the consumption of poultry meat is still as low as 10 kg/capita, and thus, in quantitative terms, the growth was only 1.3 kg/capita. The consumption of pigmeat grew by about 1%, but that of beef fell slightly. Thus the total meat consumption rose by about 2 kg/capita, i.e. a little under 1%. The consumption of broiler is expected to continue to grow in the future, but that of other meats seems to have become established at the present levels. Health considerations do not favour any increase in meat consumption, either.

Functional food were the specialty of the year 1996. These are products that may not be advertised to cure any illnesses, but they can be said to maintain a good health, and they include e.g. the new margarine Benecol that lowers the cholesterol.

Compared with other countries the consumption of meat and eggs is quite low in Finland. Consumer habits have become established over a long period of time, and they do not change very rapidly. Instead of meat Finns eat fish and drink milk. As a result, the share of animal protein in the consumption is at about the same level as in other industrialized countries on the average. Measured as energy the total per capita consumption is low in Finland (2,800 kcal or 11.7 MJ).

7. Foreign trade

7.1. Change in the structure of trade

Very significant changes occurred in Finnish foreign trade as a result of the accession into the EU. The single market of the EU abolished all border controls between Finland and the other member states. Exports are free within the single market, and there are no restrictions on imports, either. The quantities of foreign products imported and bought in Finland are determined by the prices and consumer preferences.

Prior to the EU membership the agricultural producers feared that the imports would in-

crease dramatically. To some extent this has also happened, but the increase in imports is not yet too alarming. Besides, the increase has not caused any major disturbances because the consumption has grown as a result of the decrease in the prices, and thus the domestic producers have not had difficulties in marketing their products. The Accession Treaty provides the possibility to take special measures if the imports threaten to grow too much, but so far this has not been necessary.

The imports of processed products between the EU and Finland were liberalized already in 1993, after which these could be imported freely, except that the difference in the price of the raw material was balanced by means of an import levy. Thus the prices of imports were brought to about the same level as that of foods produced in Finland. However, this arrangement had no significant impact on imports, and it was only the full EU membership that made free trade on raw materials possible. Certain products, e.g. cheese, were excluded from this agreement.

As a result of the EU membership the trade shifted to the single market of the EU, but at the same time efforts have been made in Finland to maintain the markets in Russia and the Baltic States, especially Estonia. The eastern trade has, however, become more difficult due to the im-

port protection practiced by Russia. It is very difficult for exporters to follow the changes in the Russian trade policy. In 1996 Finnish exports to Russia increased by about a third from the previous year, and the development of the food exports has also been quite good.

The trade between Finland and Estonia is also very important, but is difficult to estimate because of the extensive tourism. Finns buy a lot of foodstuffs from Estonia or from the ships travelling between the two countries. In Estonia there is no protection against imports, and thus the food prices are determined according to the world market prices. It is obvious that the prices in Estonia are a lot lower than in Finland, and this attracts Finnish tourists to buy foodstuffs there.

7.2. Foreign trade in 1995 and 1996

The compilation of statistics on foreign trade has become more difficult because the trade is now practiced on the single market and the statistics on trade are completed later than earlier. For the part of 1996 the statistics extend only about halfway through the year, and thus it is not possible to make any firm conclusions on foreign trade. In the following the development of trade has been examined mainly for the part of the first year in the EU, 1995.

Table 15. Exports and imports of agricultural products in 1986-1995, FIM mill.

	Exports total	Imports total	Imports Coffee, tea and spices	Fruits	Beverages and tobacco
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
1994	5,366.6	9,067.2	1,289.2	1,645.8	728.9
1995	4,246.0	8,000.5	782.6	964.5	839.4

Source: Official statistics of Finland, Foreign trade. Year 1995: Statistical Yearbook of Finland.

Table 16. Exports of some agricultural products in 1986-1995, mill.kg.

	Butter	Cheese	Milk powder	Pig-meat	Beef	Eggs	Cereals
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	15.0	14.7	15.1	762.2
1994	22.6	27.0	2.8	20.5	12.4	18.3	991.2
1995	18.3	29.5	5.7	5.2	3.9	13.8	384.9

Source: *Monthly Reviews of Agricultural Statistics*.

Foreign trade on dairy products grew especially for the part of cheese and yoghurt. In the case of cheese Finland had already prior to the membership a special agreement with the EU in force, which allowed considerable exports to the EU, and gradually Finland has also started to approve imports of special cheeses within the limits determined by quotas. Cheese imports have increased slightly, but not in a very significant way. Finns seem to favour domestic cheeses. However, cheese exports do not grow very much, either, because milk production is on the decrease, and the raw material supply is going to impose restrictions on cheese production. In addition, the domestic consumption also increases, and thus the exports cannot grow very much.

The imports of yoghurt have increased considerably. These come mainly from Sweden, and they started before the EU membership. Danish and French yoghurt has also been imported to Finland. The annual yoghurt consumption is about 16 litres/capita, which means that the significance of these is relatively small, but they have attracted a lot of attention due to advertising.

Usually Finland has been a net exporter of meat, and there used to be very little imports. Prior to the EU membership meat was imported only in few years when the production fell

below the self-sufficiency level for a short time, which led to a shortage of especially the more valuable parts of the carcass.

The situation changed in 1995, and the meat imports grew considerably. The consumption of pigmeat increased as the price dropped, and the domestic production was not able to meet the demand. This made it possible to import pigmeat, and the domestic competition of the markets also led to imports because all meat processing companies could not get enough meat from the domestic market. At the same time meat was

Table 17. Exports and imports of some products in 1995 and 1996, mill. kg.

	Exports		Imports	
	1995	1996	1995	1996
Beef ¹⁾	4.4	6.7	8.0	5.5
Pigmeat ¹⁾	8.9	14.6	11.7	11.3
Poultry meat ¹⁾	0.0	0.0	2.0	1.2
Eggs	13.8	12.1 ²⁾	0.0	0.0 ²⁾
Butter	18.9	21.0 ²⁾	0.8	0.8 ²⁾
Cheese	29.5	29.0 ²⁾	6.4	11.1 ²⁾
Cereals	384.9	299.7 ³⁾	196.0	205.6 ³⁾

¹⁾Carcass weight ²⁾estimate ³⁾January-October.

Source: ETT, Trade Statistics.

also exported, but for the part of pigmeat Finland was a net importer.

Poultry meat was imported in 1995, too. The consumption increased rapidly as the prices fell. Broiler producers were not able to meet the demand, even if in general this field has been capable of restoring the market balance quite well. In 1996 imports have decreased because the domestic production has grown and become better able to satisfy the demand.

Cereal production exceeds clearly the domestic demand. Barley and oats have been exported every year, except in a couple of years when there was a bad crop failure, which led to a shortage of fodder cereals. The cultivation of bread cereals has varied mainly due to the weather conditions, and thus imports have been needed at times. Special wheat has to be imported e.g. as raw material for pasta industry. The area under rye has varied because of the weather conditions as well as due to the active measures of the state. The foreign trade on bread cereals depends on the variation in the supply, and no forecasts can be made.

In 1995 the foreign trade on cereals decreased considerably from the previous years, independent of the quantities produced. It seems that farmers stored more cereals on the farms than earlier. This may have been caused by the seasonal variation in the prices, because the interest received through this is higher than in the regular money market. It is more profitable to sell cereals in spring.

Cereal exports increased in 1996. The stocks may be full, and the crop was also larger than in 1995.

In the exports to other than EU countries, the cheese exports to the USA stayed at the same level as earlier, but e.g. the export of oats to the USA has stopped completely.

Imports consist mainly of vegetables, fruits, coffee, and tobacco. The share of these is about half of the imports, and the value of these imports has increased as a result of the increase in both the quantities and the prices. No major changes can be observed in vegetable imports, which means that the domestic producers of tomatoes and cucumbers have been able to keep the mar-

ket shares. The most notable change is that now these products can be imported throughout the year, and the early production is not as profitable as earlier. The Finns can no longer enjoy having fresh strawberries only after midsummer, and the seasonal variation is not reflected on the vegetable counters as clearly as it used to be.

The values of exports and imports have increased because the trade is now practiced mainly on the internal market of the Union, where the price level is higher than earlier, when the world market prices were applied. The foreign trade on agricultural products shows a considerable deficit despite the fact that for the part of the basic products the self-sufficiency is over 100 %. The deficit is caused by the tropical products.

Intervention activity has not been very significant in Finland. Cereals and livestock products have been exported directly on the single market at the market price or to third countries by means of aid from the EU. In the early part of the year the world market prices of cereals were high, which made exporting easier. The world market prices of other agricultural products have also been satisfactory, and the trade has functioned quite well.

8. Income trends in agriculture

8.1. Sources of income

The average taxable income of farm families was FIM 153 000 in 1994 (Table 18). This information is based on the income and tax statistics, the basic sample of which included 120,862 farms owned by natural persons in 1994. The average arable land area of these farms was 18.6 ha and the forest area 40.0 ha.

The average calculation distorts the picture of income formation to some extent. On factor causing this are pensions. Over 12 % of the farms included in the statistics are owned by farmers who are over 65 years old.

Forestry incomes are based on taxation, i.e. they do not correspond to the real incomes. On

Table 18. The taxable income of farmer and spouse according to source of income in state taxation in 1994.

	Income FIM/farm	%
Agriculture	52,873	34.6
Forestry	10,706	7.0
Wages	41,478	27.1
Other	22,882	15.0
Transfers	24,758	16.2
Total	152,697	100.0

Source: Income and tax statistics of agriculture and forestry 1994.

many farms wages and salaries are an important source of income. One of the spouses may work full-time outside the farm, but it is also possible for both to have wage incomes.

Income comparisons between agriculture and the other sectors are interesting, but they are difficult to make because farmers have incomes from various sources. Members of a farm family may also participate in farm work part-time, which makes it almost impossible to distribute the income from the farm among the family members. One possible solution is to choose farmers who earn their livelihood mainly from agriculture for the comparison. Farmers and spouses whose income from agriculture and forestry accounts for over 75 % of all incomes are considered full-time farmers. In 1993 the number of these farms was about 34,500. On these farms farm income was FIM 64,500/person. In the same year the wage income of a skilled industrial worker was FIM 106,100.

8.2. Farm income in 1996

The Agricultural Economics Research Institute has monitored the development of farmers' incomes in each calendar year on the basis of money flows. Changes in the stocks have not been taken into account, because the compilation of statistics on these is very difficult. This

concerns both the final products and the production inputs.

Instead, in the national accountancy the production and use of inputs are calculated according to the time of occurrence. Consequently, the cash flow principle and the national accountancy produce somewhat different figures, but in the long run the income development must be the same.

According to a preliminary estimate, the farm income calculated at the Agricultural Economics Research Institute was FIM 6.6 bill. in 1996. This is FIM 0.5 bill. lower than in 1995. The aid decreased by about FIM 1.0 bill., but the income in market prices rose by about FIM 0.5 bill.

No major changes occurred in the production activity. Livestock production was continued at about the same extent as earlier (the decrease was only about 1 %). The quantities of cereals entering the market grew considerable from the previous year. This was caused by the larger crop as well as the discharging of the earlier stocks.

The use of inputs decreased by about 3 %. The change results from various small items. Fertilizer purchases per calendar year were at about the same level as earlier, but the purchases of fodder decreased by 3 %. Interest costs fell by about FIM 170 mill. as a result of the decrease in the loan portfolio and in the interest rates. Some decrease occurred in the depreciations on machinery and buildings, which is to be considered natural as the investment activity has been very slow in the past few years. The total reduction in the costs was about FIM 400 mill.

Even if the farm income fell by about 7 %, the incomes per farm stayed at about the same level as earlier, which can be deduced from the fact that decrease in the number of active farms continued by about the same percentage share as incomes.

The decrease in agricultural income was as expected. The amount of aid decreases every year, except that about FIM 1.7 bill was transferred from 1995 to be paid in 1996, and about FIM 1.3 bill. of aid was transferred to 1997. The returns and costs calculated at the market prices have not changed very much. The production

Table 19. Development of farm income in 1986-1996, FIM mill. and as an index.

	Gross return	Total costs	Farm income	Index
1986	23,273.4	15,626.0	7,647.4	100.0
1987	22,486.1	16,291.7	6,194.4	81.0
1988	24,027.5	16,469.2	7,558.3	98.8
1989	25,830.1	17,780.6	8,049.5	105.3
1990	27,525.5	18,168.0	9,357.5	122.4
1991	25,756.8	17,785.7	7,971.0	104.2
1992	24,989.9	17,460.5	7,529.4	98.5
1993	23,383.5	17,417.5	5,965.7	78.0
1994	24,229.6	16,435.6	7,794.0	101.9
1995	21,090.0	14,049.9	7,040.1	92.1
1996 ^e	20,209.8	13,640.9	6,568.9	85.9

continues at about the same level as earlier, and no major changes have occurred in the use of inputs, either. The situation is likely to remain about the same in the next couple of years. As the price level is stable, the changes in incomes depend on the changes in the amount of aid. In 1997 this will be FIM 500 mill. smaller than in 1996. The payments of aid will continue to be transferred to the following years, which confuses the income calculations, but gradually these should become established at a certain level.

8.3. Taxation

Farmers pay income taxes according to their real income. For this purpose, each farmer keeps simple accounts, including the sales income and the expenditure on production inputs. All forms of direct aid (including those from the EU) are taxable income. Depreciations are made on capital assets like machinery and buildings. 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 other income earners.

The depreciations on machinery and implements can be the maximum of 25 % and those on production buildings the maximum of 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 1994 the average taxable income of a farmer and spouse (earned income and capital income) in the state taxation was FIM 152,425, and the tax on this was about 27.2 %.

The tax on capital income is 28 %. Capital incomes are e.g. interest on deposits, income from dividends, sales profits, rent income, income from timber sales, as well as part of the pure farm income.

Because farmers invest their own capital in agriculture, the taxable income from agriculture must be divided into wage income and capital

income. This is very difficult, and thus, after the tax reform of 1993 the capital income in agriculture is calculated schematically so that half of the debts are first deducted from the taxable assets, which results in net assets. Until 1997 50 % of the long-term debt liable to interest, but no more than FIM 500,000, can be left out when calculating the net assets. This makes it possible to adjust the proportional shares of the earned income and capital income for taxation purposes. The capital income in agriculture is 15 % of the net assets. In 1997 the percentage will rise to 18 %.

The tax on capital income is 28 %. When the capital income is deducted from the pure taxable income, we arrive at earned income, and the tax on this is paid as in the case of earned income in general. The marginal tax on earned income is often close to 50 %, and thus the division into capital and earned income is very significant in terms of the total amount of taxes paid.

Each person is taxed separately, and this concerns farmers and spouses and other family members working on the farm as well. The taxable pure income of the whole farm must be divided between the farmer and spouse, and this is done on the basis of the labour input and ownership. If both work mainly on the farm which is in joint ownership, the taxable pure income is divided equally between the spouses.

Farmers may also have other capital incomes, and the tax on these is the regular 28 %.

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 transition period is 13 years, and after this the taxation will be based on sales income, which is regarded as capital income.

There is a separate progressive tax on property (the maximum of a little under 0.9 % of the

value of the property). Unlike in other forms of entrepreneurial activity, the property used in the production (except for animals and stocks) is liable to taxation. In practice only large farms pay property tax because the value of farms used in the taxation is clearly below their real value.

8.4. Value added tax

Finland shifted to the value added tax system in the beginning of June, 1994. The overall tax rate was 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. All farmers are obliged to pay value added tax. 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.

The buyer of agricultural products and timber pays the value added tax to the farmer, and the farmer transfers this 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.

During the transitional period, farmers have the right to make deductions for the part of investments purchased after July 1, 1994. In addition, a so-called primary stocks deduction can be made for current assets purchased after October 1, 1991 (e.g. pesticides, fodder preservatives, fuel and lubricants, but not fertilizers and fodder).

III AGRICULTURAL POLICY

9. Systems of aid

Finnish agricultural policy is based on the common agricultural policy of the EU (CAP). The actual decisions are made by the Community, and Finland has to adjust its own measures to the CAP. In the Accession Treaty, however, reference is made to certain forms of national aid that are applied in Finland only.

The most important means of the agricultural policy of the EU are border controls and agricultural aid paid from the budget, which at first was mainly investment aid, but gradually the significance of direct income aid has increased. Direct income aid proper was introduced as a result of the GATT negotiations. The need to bring the price level closer to the world market prices had been emphasized for a long time. Too high prices were considered to lead to overproduction, which had to be exported by means of public aid.

There are various forms of aid in Finland. The most important ones are CAP aid (crops, set-aside, animals), LFA aid (aid for less favoured areas) environmental aid, transitional aid, and national aid. The Finnish system of aid is illustrated in Figure 11.

The LFA and CAP aids are regular forms of aid used in the EU, which all farmers eligible for them may apply for according to the stipulations of the EU. Finland has to pay part of the

LFA aid from the national funds. Environmental aid is generally applied in the EU as well, but in Finland it is more extensive than in the other EU countries. The EU pays half of it, and in practice environmental aid covers the whole agriculture.

Transitional aid is intended to compensate for e.g. costs resulting from the decrease in the value of stocks as a result of the decrease in the price level (in 1995) and other adjustment costs due to the EU membership. These were agreed on in the Accession Treaty, and the EU pays part of them.

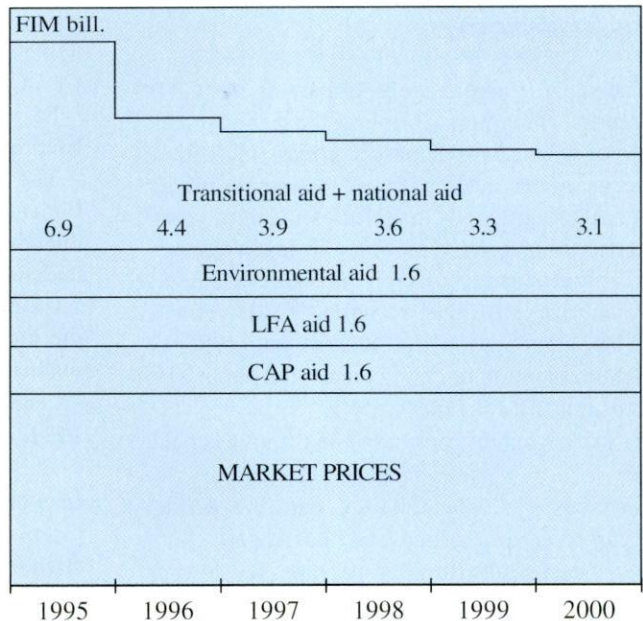


Figure 11. Agricultural aid in 1995-2000.

The northern aid, special national aid for serious difficulties, and transitional aid form an extensive aid package, in which, according to the Accession Treaty, the northern aid is long-term aid. There is an agreement on the special national aid for serious difficulties until 2001, but this will be negotiated on again in 1999.

The CAP, LFA, and environmental aids are permanent, and the amounts are dependent on the annual cultivated areas and environmental contracts made. The amounts of 1995 are presented in the figure, but these do not differ very much from those of 1996. The data on these will become available during 1997.

According to the decisions currently in force, from 2000 there will be FIM 3.1 bill. of national aid available. The payment of the northern aid will continue, and it is likely that the special national aid for serious difficulties in areas A and B will continue as well.

There are some earlier forms of national aid still in force because of long-term production restriction and investments contracts. These will come to an end in a few years.

9.1. CAP aid

Aid for arable crops

The aid for arable crops is part of the CAP reform, which aims at bringing the market prices closer to the world market prices. In 1992 a decision was made to lower the market prices for cereals gradually in the following three years and to compensate for the income loss by means of aid per hectare based on the arable land area. As a result of this so-called CAP reform (MacSharry reform) in the crop year 1996/97 the intervention price of cereals was about 119 ecus/ton (FIM 0.72/kg).

Aid for arable crops based on the area is paid for:

- cereals (rye, wheat, barley, oats, rye-wheat, mixed cereals, maize, and buckwheat)
- oil-seed plants (turnip rape, rape, sunflower)
- protein crops (peas, broad beans, sweet lupin)
- oil flax
- set-aside.

Arable land area that was under cultivation in 1991 is eligible for aid. The minimum area is 0.30 ha. This aid that is paid in full by the EU is subject to no requirements related to the residence or age of farmers. The aid is paid within either the general or the simplified system.

a) Within the general scheme the aid is paid for as large an area as the farmer wishes. It involves a set-aside obligation, which was 10 % in 1996. In 1997 the mandatory share of set-aside area is 5 %. The set-aside area may not exceed the area eligible for the aid for arable crops.

The aid is determined on the basis of the regional average yield, and it is 54 ecus/ton. The average yields are: area A 3,400 kg/ha, areas B and C1 2,800 kg/ha, and areas C2 - C4 2,300 kg/ha. Aid for the different production areas are calculated on the basis of these basic data (see map on page 38).

b) In the simplified scheme the possibility for set-aside has been excluded and the aid is the same for all arable crops (the same as the aid for cereals in the general scheme). This suits small farms for which the mandatory set-aside does not apply and which cultivate mainly cereals. The maximum farm size in the different areas without the mandatory set-aside are: area A 27.05 ha, areas B and C1 32.85 ha, and areas C2 - C4 40.0 ha.

Farms producing less than 92 tons are exempt from mandatory set-aside.

The total CAP reform aid area granted to Finland is 1.6 mill. ha. In 1996 the cereal production area was 1,078,500 ha and the area under oil-seed plants 61,700 ha. The area under set-aside was 179,300 ha. About 280,000 ha of the area eligible for the CAP reform aid remained unused.

Aid for livestock in the CAP

In connection with the CAP reform the market prices of livestock products were lowered slightly, because the fodder cost decreased as a result of the reduction of cereal prices. However, at the same time livestock premiums corresponding to the compensation for the reduc-

tion in cereal prices were agreed on for suckler cows, bulls, and ewes.

a) The suckler cow premium is about FIM 1,027/suckler cow. If there are fewer than 1.4 suckler cows/ha of fodder, an additional premium for extensive production of FIM 213/suckler cow is paid. The farm must keep the animals for at least 6 months after filing the application.

b) In 1996 the special beef premium was about FIM 639/head, and it is paid twice in the bull's lifetime. The aid may be applied for the first time when the bull is at least 8 months, but no more than 20 months old, and for the second time when the bull is at least 21 months old. The premium is paid for the maximum of 90 heads a year. The additional premium for extensive production is FIM 213/year/head. The animals must be kept for at least 2 months after filing the application.

In 1997 the aid is paid only once during the animal's lifetime. In 1996 the EU paid additional aid to beef producers due to the market disturbances caused by the BSE disease. The share of Finland was 57 mill. kg.

c) The ewe premium is FIM 102/head. In the area eligible for the LFA aid there is an additional premium of about FIM 40/head.

The limit for extensive production is 1.4 livestock units per hectare of fodder (cows and bulls of over 2 years = 1 LU, bull of 6-24 months = 0.6 LU, and ewe = 0.15 LU). The number of animals for which the aid is applied may not exceed 2.0 LU/ha (in 1996). Livestock density always includes dairy cows, as well as suckler cows, bulls, and ewes.

In 1996 some changes were made to the limits for extensive production (see p. 22).

9.2. LFA aid, i.e. aid for natural disadvantage

The aid for natural disadvantage, i.e. LFA aid (aid for less favoured areas) is intended to secure the continuation of agricultural industries and preserving the population of the countryside in the less favoured areas. This was included in the CAP when the United Kingdom joined the EC.

According to the Accession Treaty, 85 % of the arable land area in Finland is covered by the LFA aid, and it is paid on the basis of the highest criterion, i.e. the mountain aid. No LFA aid is paid in area A.

Farmers eligible for this aid must live within 12 kilometres from the economic centre of the farm, they must be under 65 years old, and they must commit themselves to cultivating at least 3 hectares of arable land for at least five years from the date of the first payment of the compensation. The compensation is paid to arable land that is cultivated regularly.

In the case of livestock farms the aid is paid on the basis of livestock units and arable land area and on other farms on the basis of the arable land area, and it is 180 ecus, i.e. FIM 1,048 per unit. It is not paid to wheat area, apple farms with over 0.5 ha, or the fodder area of animals eligible for the LFA aid.

In 1996 the number of LFA units was larger than the EU Commission had approved for Finland, the aid had to be cut. In area 6 the aid was FIM 990/unit and in other LFA areas FIM 950/unit.

The aid to livestock farms is calculated by multiplying the livestock units and the total area under fodder cereals separately by 180 ecus, and choosing the smaller one of these figures. In the case of other area the aid is calculated by multiplying this by 180 ecus. When aid is applied for on the basis of both animals and hectares, the LFA compensation for the livestock units is calculated first, and after this the LFA compensation for arable land not included in the fodder area is calculated. The total of these forms the LFA aid of livestock farms. In the case of crop producing farms the aid is calculated by multiplying the arable land area (excluding area under wheat) by 180 ecus.

Animals must be kept for at least two months from the date of filing the application. If the commitment is canceled within two years from the date it was issued, the aid paid so far may be recovered. Cultivation contract lapses if the farmer shifts to the aid for giving up production or becomes 65 years old, but in these cases the aid is not recovered.

9.3. Environmental aid

According to the Accession Treaty, the EU pays annually 135 mill. ecus environmental aid to Finland. In addition to this, Finland must use at least the same amount of national environmental aid, and thus there is altogether a little under FIM 1.6 bill. available for environmental aid. The aid is focused on Southern Finland, in particular, where the production is more intensive and the environmental problems are greater than in other parts of the country.

The environmental aid is part of the total aid package of agriculture. By means of this an attempt is made to reach environmental objectives as well as to secure farmers' income level. The aid is mainly paid on the basis of hectares to farmers who commit themselves to measures that reduce the environmental load from agriculture. Farmers have to prepare a farm environmental management programme, which restricts e.g. the use of fertilizers and pesticides (see Chapter 13).

9.4. National and transitional aid

The national aid package is an essential part of the adjustment of agriculture to the EU. It was decided on in connection with the membership negotiations, together with the criteria to be applied for determining the level and regional distribution of the aid. The production may not be increased by means of the aid, and the amount of aid may not exceed the level of aid prior to the EU membership. The aid may be paid partly as additional prices as well as on the basis of the number of hectares and animals. It is differentiated by region and degressive.

The aid package is based on securing the preconditions for domestic agricultural and horticultural production. It is obvious that the aid may not exceed the constraints imposed by the state economy.

When the Accession Treaty was made, the amount of national aid agreed on was altogether FIM 3.8 bill. a year. However, starting from 1996 the aid has been cut by FIM 750 mill., and based on the current figures the national aid will

be FIM 3.1 bill. in 2000.

The aid for horticultural production is paid as storage aid, aid for horticultural products grown in the open, which is based on the area, and aid for greenhouse products.

Transitional aid

Finland hoped that the border controls between Finland and the EU would be abolished gradually during a transitional period. This was believed to alleviate the adjustment process. However, the EU did not agree to this, and thus it was to be expected that the market prices would drop to the EU level right at the beginning of 1995.

Without any measures to alleviate the adjustment, membership in the EU would have been a very bad shock for agriculture. However, it was decided that the adjustment would be alleviated by means of aid for the transitional period. Finland was granted the permission to pay national adjustment aid for five years, and the EU made a commitment to account for part of the transitional aid. The aid paid in 1995, 476 mill. ecus, was very significant, even if it was not directly allocated to agriculture. The aid for stock compensations (FIM 2.3 bill.) accounted for the largest share of the transitional aid in 1995.

During the transitional period 1995-1999 aid is paid in various ways, and monitoring this is difficult. Figure 11 illustrates the degression of the aid. All aid of 1995-1999 exceeding the budget frame of FIM 3.1 bill. in 2000 could be understood as additional transitional aid, although strictly speaking this is not the case, because the aid is determined on the basis of the number of animals and hectares.

Whether the transitional period comes to an end in 1999 (or 2001) is open to negotiations. According to the Accession Treaty, the northern aid is long-term aid, which will be paid after 1999, too. The aid for Southern Finland (special national aid for serious difficulties) will be negotiated on during 1999. It is very likely that the payments will continue after 2001. Thus the transitional period will continue in the next millennium, even if it is a matter of taste whether

this should any longer be referred to as a transitional period, or whether we should talk about long-term national aid in the whole country.

Northern aid

In the Accession Treaty Finland is granted the right to pay national northern aid north of the 62nd parallel, i.e. areas C. The objective of Finland was to be allowed to pay special national aid in the whole country to compensate for the losses caused by the northern location. In Finland the yield level is clearly below the average of the EU, in some cases it is only half of this, even if the same amount of production inputs are being used (except for pesticides).

Because of the cold climate building costs are higher in Finland than in the other EU countries, and the long winter with a lot of snow also causes special costs. The costs per hectare are the same as in Central Europe, but calculated per kilo they may be double. The profitability of agriculture would be very weak without special national aid.

The requirements for aid covering the whole country were not approved, however, but the so-called national northern aid may be paid in Northern Finland (area C) only. The area was determined on the basis of the regional distribution of aid applied earlier.

Special national aid for serious difficulties in Southern Finland

The most important measure of the agricultural policy in 1996 was the decision on the payment of aid for serious difficulties in areas A and B, i.e. in Southern Finland. Even if Finland was not granted the right to pay national aid in the whole country, additional transitional aid was paid in 1995 and 1996, which compensated for the national aid that could not be paid in Southern Finland.

However, the Accession Treaty included a reservation (Article 141), according to which Finland could negotiate on the payment of aid from the national funds in Southern Finland (areas A and B) if, in spite of the transitional aid,

there are factors that cause the income level to remain below the objective.

The negotiations were conducted in the early part of 1996. Finland was well prepared to negotiate on the so-called serious difficulties. There were abundant research data, which indicated that the income level was falling continuously as the transitional aid decreased. The incomes of meat producers, in particular, seemed to remain very small without any additional national aid.

The negotiations with the Commission were completed in summer 1996, and the final settlement was presented in September. According to the outcome of the negotiations, Finland is allowed to pay national aid in areas A and B until 2001. The settlement includes the aid for both cereal production and animal husbandry. This aid is not presented separately in the aid tables, but it is paid as part of the environmental aid on the basis of the area and the number of animals. The aid is generally referred to as aid for serious difficulties, even if it is in fact aid to Southern Finland (areas A and B) that corresponds to the Northern aid.

The settlement aroused criticism within agriculture because the aid for animal husbandry was smaller than had been applied for, but the aid granted for arable crops exceeded the objectives.

Investment aid, which compensates for the small amount of aid for animals husbandry in areas A and B, forms an essential part of the agreement. According to this the expansion of pigmeat and milk production is eligible for aid, which is 50-70 % of the amount of the investments (see Chapter 12.2.).

The continuation of the special national aid for serious difficulties after 2001 will be negotiated on in 1999.

The national aid package also includes FIM 0.15 bill. for aid for young farmers and FIM 0.41 bill. for aid for horticulture. The forms of aid referred to above, together with the northern aid, total FIM 3.1 bill.

The Accession Treaty and the settlement for serious difficulties allow for a larger amount of aid, in fact the national aid could be FIM 3.8 bill.

The aid has been determined on the basis of hectares and animals, and thus the total amount depends on the number of animals and the cultivated area.

Regional distribution of the aid

For the regional distribution of the aid Finland has been divided into three areas, which partly follow the earlier regional division according to the hectare support system (see Figure 12). Forms of aid paid in the whole country are CAP aid (animals, crops, set-aside), environmental aid, and transitional aid. The northern aid and LFA aid are paid in area C. In order to differentiate this aid, area C has been further divided into four parts. The southern border of the northern aid is the northern border of the southern zone of the earlier hectare subsidies. Central Finland forms area B, which is eligible for the LFA aid but not to the northern aid. This has been divided further into two regions. The third area, area A includes the 15 % of the arable land area that does not receive the LFA aid. This area was determined on the basis of natural conditions.

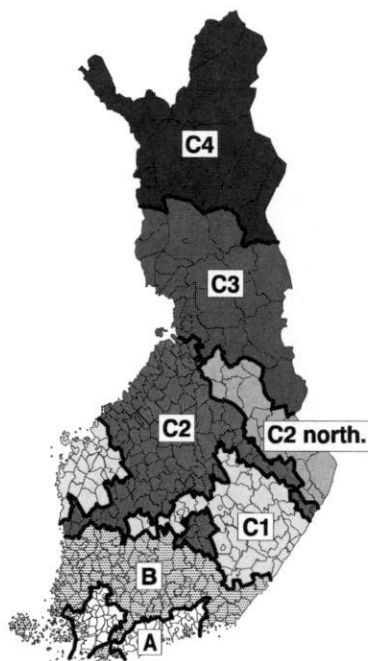


Figure 12. Support areas.

Using the farm models the aid in different areas has been determined so that farmers' incomes would stay at about the same level as before, or decrease evenly in all regions and production lines. It is impossible to prepare the new system of aid without any changes in the level of aid. National aid has been differentiated by region, i.e. it increases by degrees from the south to the north (see Appendix 7).

10. The price system of the EU

The price system of the EU consists of separate price systems for individual products. The objective is to maintain the set producer prices.

In order to prevent too great variations in the prices the Commission may regulate the market by buying oversupply into stocks, by protecting the single market against imports by means of border protection, as well as by allowing imports when the price level is too high. As determined in the GATT agreement, import levies and other obstacles to imports have been changed into duties, which will be lowered by the average of 36 % in the next five years. Exports are supported by means of export premiums, but these have to be lowered as well on the basis of the GATT agreement.

There used to be three prices in the price system: target price, intervention price, and threshold price (Figure 13). The price concepts varied in the case of different products, but the principles were largely the same. Target price formed the starting point, and the producer price had to be close to this. The so-called threshold price was determined on the basis of the target price, and the import levy, which could be adjusted daily if considered necessary, was in turn determined as the difference between the threshold price and the world market price.

The adjustable import levies were abolished as a result of the GATT agreement, and these were replaced by fixed duties. These are often divided into a percentage duty and a fixed duty in ecus, and the latter is to be lowered by 36 % according to the GATT agreement.

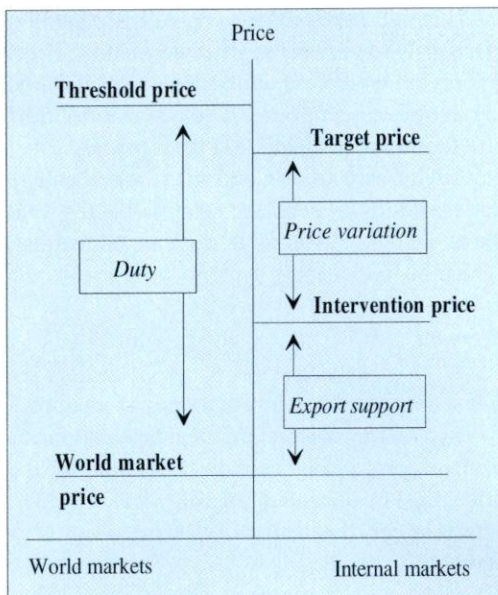


Figure 13. The price system of the EU.

The administered threshold price was also abolished as a result of the settlement. The import price of a product is now in principle set on the basis of the world market price and the duty. However, in the case of several important agricultural products the EU may still raise the duties within the limits imposed by the GATT agreement should a significant drop occur in the world market prices.

Of the traditional price concepts, only the intervention price has retained its significance. In order to restore the market balance the EU buys products into intervention stocks at the intervention price, and the producer price may not be lower than this. This system concerns only certain products, like cereals, beef, and some dairy products. The intervention stocks are discharged either on the single market or to third countries as exports. Exports usually require aid, which is either determined on the basis of a bidding procedure or fixed for a longer period of time.

The Commission may also impose an export tax if it seems that too high a world market price causes the price on the single market to become

too high. This was the case in the latter part of 1995, when a fixed export tax of 25 ecus/ton was set for wheat. The objective was to avoid the shortage of the wheat supply on the single market. The tax was abolished in autumn 1996, when the world market prices fell considerably as a result of the new crop entering the market.

The price system is based on decisions on the administered prices and aid 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 influence the decision-making. Administered prices are usually set for each marketing year, which is generally from the beginning of July till the end of June.

10.1. 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

Milk still has a target price, which is set for milk with the fat content of 3.7 %. In the production year 1995/96 it was 309.8 ecus/ton (FIM 1.82/kg), and it will be the same in 1996/97. The price level on the single market is regulated by means of duties, export aid, as well as intervention purchases of butter and milk powder and aid for private storage.

As a result of the GATT agreement there is no actual threshold price, and the variable import levies have been replaced by fixed duties. However, should a significant drop occur in the world market prices (10 % below the so-called trigger price), the EU may apply an additional duty to secure the price level on the domestic market.

Milk production is restricted by means of the national quota. An additional levy must be paid for the amount of milk exceeding the quota, and

this is 15 % higher than the target price. Surpluses can be adjusted at the national level or the level of the dairies, and through this the additional levy of milk producers who have exceeded their quota can be lowered. However, at the national level the additional levy is always paid in full by producers who have exceeded the farm quota.

Cereals

The price system for cereals used to include the target price, intervention price, and the threshold price. The MacSharry reform, which has dropped the target prices by degrees close to the world market prices for cereals, was launched in 1993. The income loss has been compensated to farmers as direct aid per hectare.

In the marketing year 1995/96 the intervention price for cereals (except for oats) was 119 ecus/ton (FIM 0.71/kg), and the price is the same in the marketing year 1996/97.

The aid per hectare is determined according to the average hectare yield of the region, and in 1995/96 it was 54 ecus/ton. The CAP reform has now been 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.

The price of imported cereals is raised to the price level of the EU by means of duties, which will be lowered by 36 % between 1995 and 2001. The duty is calculated by multiplying the intervention price for cereals by 1.55 and deducting the representative import price from this. Thus in the marketing year 1996/97 the lowest import price is about 185 ecus/ton. This system concerns e.g. wheat, rye, and barley. In the case of oats the duty is fixed, and it does not vary as a result of changes in the world market prices.

Beef

The intervention price for beef is 347.5 ecus/100 kg (slaughter weight, quality class R3).

Intervention purchases are made if the market price is clearly lower than the intervention price. Export aid levies and duties are also used in the regulation of beef prices. A fixed customs tariff is determined for different species of animal and parts of the carcass. In addition to the percentage duties, duties as ecus are often collected, and these will be lowered during an adjustment period of five years.

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 largely determined by the price of fodder cereals.

For the part of pigmeat a basic price corresponding to the target price is determined (150.94 ecus/100 kg in the economic year 1996/97). The price on the single market is regulated by means of import control, export aid, and aid for private storage.

As a result of the GATT agreement the earlier sluice gate price and the import controls based on variable import levies have been replaced by duties. An attempt is being made to fix the amount of export aid for a relatively long period of time, but it can also be adjusted if this is considered necessary because of the market situation.

Eggs

The price system for eggs is the same as for pigmeat. Import levies based on the sluice gate price have been replaced by duties.

10.2. Green ecu

Because of the changes in the exchange rates, the so-called green ecu had to be used in the EU to calculate agricultural aid. In principle the green ecu was abolished in 1995, but in practice it is still being used. Aid is paid according to a fixed (green) exchange rate. This may deviate

from the commercial rate because of the floating currencies, which may cause certain problems in the foreign trade. Goods may be circulated through countries where the aid is the highest.

In order to overcome this problem the green rates of ecu are continuously adjusted so that the deviation of the exchange rates from the green ecu would not exceed 5 %. If a certain currency remains below the range, it is devalued. Correspondingly, if a certain currency exceeds the limit of 5 % in at least five ten-day periods, the currency is revalued by half of the range. Thus the sum of negative and positive deviations is smaller than 5 %.

At the end of 1994 (December 21-30) the commercial rate of ecu was FIM 5.81 and the rate of green ecu FIM 5.81 (first it was 7.02, but as the system was revised in the beginning of February 1995, the rate became 5.81). However, in the beginning of 1995 Finnish markka weakened so much that it was devalued in the beginning of February, and the new exchange rate for green ecu was FIM 5.88. It stayed at the same level until spring 1996, even if the value of markka exceeded this rate by over 5 %, but not for a period of time that would have been long enough to make it necessary to revalue the green rate of Finnish markka.

The value of markka fell considerably in spring 1996, and at its lowest the rate of ecu was FIM 6.05. The green ecu was devalued four times, first in April to FIM 5.898, and, finally, in May to FIM 6.028. However, in the autumn markka strengthened again, and the rate of ecu was about FIM 5.8, i.e. at the same level where it had been for a couple of years, but the rate of green ecu has stayed at the level of FIM 6.028. Payments are made on the basis of the exchange rate of either the beginning of July or the end of December.

The forms of aid included in the common agricultural policy of the EU are paid according to the green rate of ecu, and thus the fact that the rates have been higher than the market rate has benefitted Finnish farmers to some extent. The market prices proper are based on the commercial rates, and these have not reacted to the changes in the green rate of ecu.

11. Production policy

11.1. Production objectives

Production policy consists of the production objectives and the means to achieve these. The task of the production policy is to define the production objectives and to regulate the production according to the objectives. In Finland the production objectives are based on the security of the supply, i.e. the view that we should be self-sufficient in food in all conditions.

Membership in the EU caused some changes in the objectives. The self-sufficiency objective can still be applied, but it could also be asked, whether the EU is not capable of securing the food supply in Finland. However, Finland is located in the peripheral area of the EU, where the food security is more susceptible to becoming endangered. Yet, self-sufficiency cannot be set as an objective in the same way as earlier. Finland has to adjust itself to the common agricultural policy of the EU. This will not, however, prevent maintaining our own food security, which guarantees the availability of food in all conditions. Storage can be continued and the production quotas allow to maintain the production at a level that corresponds to the consumption, or even a little higher.

The production objectives have usually been determined according to the proposals of agricultural committees or work groups. In 1996 the work group for agricultural policy, headed by the Minister of Agriculture, proposed the full utilization of the national production rights as the objective. The production and premium-quotas that Finland reached in the negotiations with the EU correspond quite closely to the production volume prior to the EU-membership. According to the work group, adequate domestic production of the basic foodstuffs should be maintained in Finland in order to secure the food supply, and the security means that the supply should be large enough to meet the demand in case there should be two consecutive poor crop years.

11.2. Measures to restrict production

Prior to the EU membership Finland applied dual price systems for milk and eggs and a set-aside system. These were almost mandatory production restriction measures. After the accession the dual price system for eggs was abolished, but that of milk as well as set-aside are still used.

There also was a number of various kinds of voluntary measures to reduce overproduction, which concerned either agricultural production as a whole or the production of milk, pigmeat, or eggs. Premiums were paid for giving up or reducing production. Some of these contracts are still in force, and the compensations are paid from the national funds.

The act on compensations for giving up production came into force in the beginning of 1993. The contract could be made when the farmer was 55 years old, and it stayed in force till he was 65. The compensation consists of a basic amount and an additional amount for giving up production. The basic amount is the same as the disability pension, and the additional amount is determined on the basis of the arable land area and the number of animals. Agricultural production must be discontinued for at least six years.

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. According to estimates, at present the total of the farm quotas exceeds the national quota in force, which is 2.315 litres, by 5-6 %, and the farm quotas will be cut by this amount in the beginning of April 1997. The national quota has grown by 28 mill. litres due to the SLOM quotas, i.e. farmers who have resumed milk production. Quotas are tradable. However, the Government is planning to make the system administered again to decrease the costs caused by the purchases expanding dairy farms.

If the quantity of milk delivered to dairies exceeds the quota, a charge of 115 % of the guide prices is collected, and this makes it unprofitable to exceed the quota under any circumstances. In the EU the quota year is from the beginning of April till the end of March.

Set-aside

The CAP reform involves a mandatory set-aside area, which was 10 % of the cereal area in 1996. In addition, farmers may leave fallow an area that does not exceed the area for which aid for arable crops is applied. Thus the maximum set-aside area is half of the total arable land area. The premium for the additional set-aside is the same as in the case of the mandatory set-aside. The rotational set-aside applied earlier was abolished in 1996.

In 1997 the mandatory set-aside area is only 5 % of the arable land area because of the shortage of cereals in the early part of 1996 and the alarming decrease in the cereal stocks of the world.

11.3. Afforestation of arable land

In Finland the afforestation of arable land has been eligible for aid for some time in order to reduce the overproduction in agriculture, and this activity will be continued. The minimum area to be afforested is 1 ha, and it must have been used for production in the previous growing season as well as in 1991 (or managed as a set-aside area). Afforestation is subject to certain restrictions. Good agricultural land, land that would be suitable for another farm as additional land, or arable land areas located in the middle of open fields should not be afforested.

Aid is paid for three different purposes:

1. Afforestation costs, in which case
 - saplings, hay control substances, etc. are compensated for in full
 - planning and labour management costs are compensated for in full
 - 30-75 % of labour costs are compensated for, depending on the region.

2. A lump sum compensation of FIM 500/ha is paid for the maintenance of the afforested area after two and four years.
3. Compensation for the loss of agricultural income is paid to farmers who receive at least 25 % of their income from agriculture. The compensation is multiplied by 1.5 if the farmer gives up agricultural production by afforesting all of the arable land area or at least 60 % of this and starts practicing forestry or other form of entrepreneurial activity full-time on the farm.

The compensation for the income loss is FIM 1,400-1,150/ha/year, depending on the region, for farmers and FIM 1,040-900/ha/year for others.

The objective is that about 10,000 ha arable land would be afforested annually. The costs of this would total about FIM 150 mill., including FIM 50 mill. afforestation costs and FIM 100 mill. afforestation aid due to the loss of income.

11.4. Production support

The production policy in both Finland and the EU is mainly characterized by measures to restrict the supply. There are, however, some measures that aim at increasing production, too. The most important one is the special beef production premium. In the EU a special beef production premium of 90 ecus/bull is paid twice during the life-time of the animal, at the age of 10 and 22 months. Starting from 1997 the premium is paid only once during the animal's life-time.

Beef production proper is supported through the so-called suckler cow premiums. In the EU the suckler cow premium is paid to farms that produce only beef or less than 120,000 litres milk a year. The amount was 145 ecus/suckler cow in 1996. In addition, 30 ecus/suckler cow can be paid from national funds.

The ewe premium is 16.90 ecus/head, and in the areas eligible for the LFA aid there is an additional premium of about 6.64 ecus/head.

Organic cultivation also contributes to the restriction of the production, even if the main objectives are environmental. The EU supports

organic production according to about the same principles as Finland did before the membership (see Chapter 13).

There are also certain other forms of aid for e.g. poultry meat production, horse husbandry, reindeer husbandry, and apiculture.

12. Structural development

Developing the structure of agriculture is considered a necessary precondition for the adjustment into the EU. In the first place, the size of enterprises must be increased in order to be able to lower the production costs. The use of labour per unit produced decreases, and savings can also be achieved in capital costs, when the machinery and implements are used more efficiently. The costs of livestock buildings per animal unit decrease as the farm size grows.

Structural development also involves developing the cooperation between farmers. It is not always possible to incorporate farms, but similar benefits of scale can be achieved by joint use of machinery, especially in the cultivation of field crops. Through cooperation it may also be possible to save in purchasing the means of production and marketing the products.

The EU supports structural development, but due to overproduction this is usually subject to the condition that the investments made by means of the aid do not increase the production capacity. However, in Finland some increase in the farm size is allowed during the transitional period, because Finnish farms are much too small to be able to compete in the common agricultural markets of the EU. The quotas for milk and meat production in the Accession Treaty set the limits for the production in the whole country, and the state economy imposes constraints on the use of subsidies and loans.

According to the source of financing, the investments can be divided to those part-financed by the EU and those financed in full from the national funds. Investment aids part-financed by the EU are:

1. investment aid according to objective 5a
2. starting aid for young farmers

Investment aids financed nationally are:

1. investment aid to pigmeat, broiler, and egg production based on the Accession Treaty
2. raised investment aid based on Article 141
3. national investment aid proper based on the Act on Rural Business.

12.1. Aid part-financed by the EU

The purpose of the investment aid of the EU is, in the first place, to reduce production costs, improve the quality of the products, and to direct production according to the demand and supply in the markets. Diversification of production is also supported. Further objectives are the improvement of the living and working conditions and the hygiene in livestock enterprises, as well as protecting the environment.

Investment aid is also granted for small-scale industrial activities, processing, and marketing, as well as professional training.

Investment aid part-financed by the EU is subject to the following conditions:

- a) the farmer practices agriculture either full-time, or part-time if
 - the minimum of 50 % of incomes comes from agriculture and forestry, tourist industry, crafts, or management of rural environment that is eligible for aid
 - the minimum of 25 % of incomes comes directly from agriculture, or
 - the farmer spends the minimum of 50 % of his total working time on the farm
- b) the farmer prepares a development plan for the farm
- c) the farmer has adequate professional skills
- d) the farmer commits himself to keeping simple accounts.

Investment aid involves certain additional restrictions. In the case of investments in milk production, the number of dairy cows after the investment may not exceed 50 cows/man-year and 80 cows/farm. In beef production the number of animals may not exceed 2 LU/hectare of fodder (bovine animal of 0.5-2 years = 0.6 LU and over 2 years = 1 LU). In pig, poultry meat, and egg production aid is granted during the transitional period of five years for investments

into expanding pig husbandry and for all investments in pig and egg production. The total production may not grow, and the limits set for the production capacity of farms must be followed. Pig farms must be able to produce at least 35 % of their fodder.

Amounts of aid

Aid is granted for investments that do not exceed 90,000 ecus/man-year (FIM 540,000) or 180,000 ecus/farm (FIM 1.8 mill.). The share of the aid of the total investment may be

- a) LFA area
 - 45 % of investments in real property
 - 35 % of other investments
- b) other areas
 - 35 % of investments in real property
 - 20 % of other investments

Additional aid of the maximum of 25 % of the maximum amounts may be granted to young farmers (under 40 years) who have adequate professional skills.

Aid for young farmers

In Finland young farmers who start practicing agriculture on their own farm have been supported to promote transfers of farms to descendants and to improve the age structure of farmers. In order to take a farm into possession or to establish one the young farmer has to redeem it from the siblings or buy the whole farm, which usually involves very high debts. An attempt has been made to help young farmers get started by means of a so-called starting aid. There is a similar system and aid available for this purpose in the EU.

As starting aid a young farmer (under 40 years) may receive a subsidy of 15,000 ecus (about FIM 90,000) as well calculatory interest aid of 15,000 ecus, which may be the maximum of 5 % for five years.

This is subject to the condition that the farmer starts practicing agriculture full-time on the farm, or shifts from part-time to full-time agriculture. He must have adequate professional qualifications within two years from the time when he starts.

The settlement concerning serious difficulties includes a decision according to which the maximum of FIM 30,000 of the starting costs, but not exceeding 35 % of these, may be paid to young farmers in addition to the basic aid.

12.2. National financing

Before the EU membership the Act on Rural Business was the central means in the development of the structure of agriculture. It is still in force in a revised form. The structural aid from the EU is also administered through the Development Fund of Agriculture and Forestry.

Aid for rural businesses on the basis of the Act on Rural Business is still possible. The Act makes it possible to grant investment, start, and development subsidies, as well as loans for e.g. investments in fixed assets.

Subsidies and loans may be granted to support so-called rural businesses that are outside agriculture proper. Aid 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 labor corresponding to the maximum of 2-3 annual jobs are eligible for the financing. The most important fields that have been eligible for the aid are small-scale labour intensive manufacturing and service enterprises (about a third), horticultural, 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 apiculture.

Investment aid for serious difficulties

The outcome of the negotiations on the so-called serious difficulties (Article 141) includes an investment aid programme for animal husbandry. On the basis of this, investment aid may be granted for the maximum of 50 % of the total costs in the case of farms producing pigmeat, poultry meat, and eggs, and the maximum of 75 % in the case of other farms. This is subject to the condition that the total production capacity may not grow as a result of the investments.

The aid can be paid retroactively starting from 1995.

12.3. Amount of investments

Agricultural investment has dropped to about half of the level of the end of the 1980s (see Table 1). This has been caused by the economic depression and uncertainty about the effects of the EU membership. The preparation of the national investment programme has also been very slow and the funds available for this purpose have been small. In 1995 only FIM 46 mill. from the Development Fund of Agriculture and Forestry were used, when in the earlier years the annual amounts were FIM 600-700 mill. As much as FIM 1,112 mill. were transferred to 1996.

Investment activity recovered during 1996. The investment aid for serious difficulties has encouraged many farmers to renovate and expand their production buildings. It is estimated that in 1996 about FIM 657 mill. were used. In spite of this a considerable amount of the reserved funds, about FIM 700 mill., was transferred to 1997, and thus the investment plans for 1997 can be realized. The aid for serious difficulties may lead to higher investments than earlier, and thus a shortage of funds is also possible. In the long run the funds available for the Development Fund will decrease considerably, which may cause problems for the structural development.

13. Environmental policy

The Accession Treaty includes a quite extensive amount of environmental aid, altogether about FIM 1.6 bill., and the EU accounts for half of this. The aid is paid on the basis of hectares to all farms that make a farm environmental management programme. According to the environmental programmes of the EU, programmes which aim at reducing the load to the environment caused by agriculture and promote the preservation of the rural landscape are eligible for aid.

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 1995 about 78,000 farmers committed themselves to the aid based on the General Agricultural Environment Protection Scheme (GAEPS) and in 1996 the number rose to 82,000, which is about 80 % of active farms. The commitments cover about 1.8 mill. ha, i.e. 90 % of the cultivated area. According to the evaluation group, in terms of the extent of the commitments the objective has been reached.

In 1996 the environmental aid was distributed as follows:

– GAEPS	FIM	1,376 mill.
– organic production	FIM	164 mill.
– other	FIM	38 mill.
<hr/>		
total	FIM	1,578 mill.

In particular, the environmental programme will influence the state of the water courses. It is estimated that the total phosphorus load to water courses will decrease by 40 %, liquid phosphorus by 25 %, total nitrogen 30 %, and the erosion by 40 %. The impact of the aid according to the GAEPS and the Supplementary Protection Scheme should be about equal, except that the aid based on the GAEPS reduces the nitrogen load more than the Supplementary Protection Scheme, whereas the Supplementary Protection Scheme is more efficient in the reduction of the liquid phosphorus load. The risk of pesticides leaching into water courses will be reduced by 30-40 %.

A clear change has occurred in the attitudes towards environmental issues. According to the surveys made, information on the agri-environmental programme has increased the awareness of farmers on environmental issues and environmentally beneficial ways of running a farm.

13.1. Requirements for environmental aid

Farmers who make farm environmental programmes are eligible for aid to compensate for the costs of the environmental measures or the income losses, as well as to secure the livelihood of farmers. Aid based on the environmental programmes may be granted to farmers who are under 65 years old and reside permanently in Finland. There must be at least 3 ha of cultivated arable land on the farm (0.5 ha in the case of horticulture). The aid is paid for arable land that has been cultivated regularly, including land cleared after 1991.

Farmers commit themselves to fulfilling the following conditions for five years in order to receive the aid based on the GAEPS:

1. A farm environmental programme is prepared within three years.
2. In principle the use of fertilizers may not exceed certain basic levels. In areas A and B the minimum arable land area for manure spreading is 1 ha/1.5 LU. Manure and urine should mainly be stored in facilities adequate for the need of 12 months, and manure may not be spread on frozen ground or snow. A transitional period of 3 years is allowed.
3. Headlands or filter strips of 1-3 metres covered by perennial vegetation must be left or established on the sides of main ditches or water courses. This must be done by the end of the growing season following the commitment.
4. In areas A and B the minimum of 30 % of the arable land of farms must be covered by plants or reduced tillage must be applied outside the growing season.
5. The spreading of pesticides may be performed only by trained persons using tested equipment (the transitional period is 3 years).
6. Agricultural landscape and biodiversity must be preserved on the farm.

Environmental aid may be recovered if the commitment is canceled within two years from the date it was made. The commitment becomes void when the farmer starts receiving aid for

giving up production or becomes 65 years old, but in this case the aid is not recovered.

13.2. Special forms of environmental support

The agri-environmental programme is quite extensive, and it includes various special forms of aid, in addition to the environmental aid proper. These are intended for the preservation and maintenance of water courses, landscape, and biodiversity. Riparian zones, treatment of runoff water, and efficient use of manure help keep the water courses clean, and these are eligible for aid. Organic production and extensification of agricultural production reduce the use of fertilizers and other chemicals, and thus they contribute to the protection of the environment. The maintenance of the landscape, biodiversity, and traditional biotopes is also eligible for aid, and so is the raising of local breeds.

In the first place aid based on the Supplementary Protection Scheme has been used for organic production and liming of acid sulphate soil. In 1995 the share of these of all aid based on the Supplementary Protection Scheme was 90 %. The number of contracts based on this scheme was about 7,600, and they covered 100,000 ha, i.e. 5 % of the cultivated area. The number of applications doubled in 1996, but due to the shortage of funds only contracts concerning organic production and the conversion into it could be processed.

Organic production

Organic production serves the environmental objectives, because it involves giving up the use of fertilizers and pesticides. The contract on organic production is made for five years, and the conversion period after which all arable land must be under organic cultivation is three years. The land must be cultivated according to the principles of organic agricultural production for the whole contract period. The contract includes a cultivation map and a crop rotation plan. Farmers must have 3-5 days of training in or-

ganic production, and they must join the control system. Annual inspections are made on farms.

Aid for the conversion period is:

- Area A FIM 1,800/ha
- Area B FIM 1,600/ha
- Area C FIM 1,400/ha

After the conversion period the aid for arable land under organic cultivation is FIM 700/ha/year. The farm must also have made the commitment according to the GAEPs, and the basic aid in question is paid on the basis of this.

The objective for organic production is an arable land area of 120,000 ha by 2000, which is about 5 % of the arable land area. The area under organic production has grown very rapidly. It quadrupled between 1994 and 1996. The number of farms that have made a contract on organic production is about 4,700, and the area converted by the contracts is 110,000 ha. 27,000 ha of this has been approved for organic production. Due to the shortage of funds no new contracts will be made in 1997. It has also been suggested that the markets for organic products may become saturated due to the rapid increase in the production.

Riparian zones

Contracts on the establishment and management of riparian zones are closely connected to the environmental programmes. The purpose of these is to reduce the load on water courses and groundwater, improve the landscape, increase biodiversity, and promote the management of the fish populations. The programme also serves the recreational use and tourist industry of the rural areas.

Riparian zones refer to managed, uncultivated areas covered by perennial vegetation between arable land and water courses or in groundwater areas. These zones are useful or even indispensable if the arable land areas close to shores are very steep or collapse easily, or if the land is frequently flooded.

The minimum width of riparian zones is 15 metres. No fertilizers or pesticides may be used,

the zones may not be used as pasture, and no fodder or non-food products may be harvested from them. The contract period is 20 years and the minimum area is 0.5 ha. The maximum compensation is FIM 3,600/ha. This programme has not aroused any wide interest among farmers.

Landscape and biodiversity

The purpose of the management and protection of the rural landscape is to preserve open field landscapes and to prevent important landscape areas from becoming overgrown by trees or bushes. The management of biodiversity refers to the preservation of the characteristic nature of the agricultural environment of different regions and the organisms living in these, especially endangered species and environments.

This programme has been well received. In 1996 a little under 3,000 farmers applied for aid for projects concerning biodiversity, landscape management, and the preservation of traditional biotopes. Unfortunately there were funds available only for a small share of the applications.

14. Social policy

Membership in the EU changed the legislation on the social policy concerning agricultural producers very little. The Union has no uniform programme for the social policy, but only some minimum requirements that do not affect the Finnish social policy. Consequently, the development of farmers' social security is still a national task.

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

The changes made in the farmers' pension system in 1996 increased the responsibility of farmers for the financing. In the state budget the pension expenditure of farmers was cut by FIM 150 mill.

Aid in the case of giving up production is the Finnish equivalent of the common early retirement system of farmers in the EU. The objective is to ease the burden of elderly farmers and to promote the transfers of farms to the younger generation.

Full-time farmers who are 55-64 years old are eligible for aid for giving up production. In most cases the arable land area of the farm is rented or sold to the new farmer or to another farm. If there is no one to continue farming, the land may be owned by the old farmer, but it must be used for other purposes or left uncultivated.

The amount of aid in the case of giving up production is close to the full disability pension, and the EU accounts for about half of the costs. Fewer farmers have taken advantage of this system than was expected. The number of applications has been 1,500-2,000 farms a year, but when the programme for giving up production was prepared the annual number of applications was estimated at about 3,000.

In the case of disability resulting from illness farmers are entitled to compensation on the basis of the general *sickness insurance act*. For the waiting period (9 days) those covered by the employment pension are entitled to daily compensation. The act concerning the compensation of the qualifying period for the benefit was changed in November 1996 so that the daily allowance was dropped from 75 % to 70 % of the labour income of the agricultural entrepre-

neur, and a waiting period of three days was set to the daily allowance in the case of sickness. These revisions are similar to those realized earlier in the daily allowances of the general sickness insurance system, and they will enter into force in the beginning of July, 1997.

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 the case of accidents or occupational diseases. Insurance payments are collected from farmers participating in this system.

In November 1996 the Parliament approved the Government proposal on the revision of the Accident Insurance Act for Agricultural Entrepreneurs. Starting in 1998, a bonus system will be used in the insurance payment, which means that the accidents or occupational diseases for which compensations have been paid raise the insurance payments. Thus, in the long run, the insurance payments of agricultural entrepreneurs who have been able to avoid accidents may become lower than they are at present.

Farmers engaged in livestock production are entitled to an *annual leave* of 22 days. Farmers may either get substitute workers for the duration of their vacations or use municipal substitute help services. This system is mainly financed by the state.

Farmers can get *substitute help* in the case of sickness, accidents, rehabilitation, military service, or child birth. The substitute help for the duration of maternity leaves is 320 days. Farmers pay for the substitute help, and the amounts are partly determined according to their income.

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 payment are paid in full through the state budget. The benefits have been cut down gradually due to the state budget constraints.

15. Second year in the EU

The most significant changes caused by the EU membership in agriculture occurred quite rapidly in the very beginning of 1995. The market prices of agricultural products fell, and this was quite rapidly followed by a decrease in the food prices. The prices had become established at the new level by the latter part of 1995.

It will take a few years until the reactions of the production to the EU membership become clear, because the transitional aid will decrease to some extent. Farmers may have some kind of idea of the profitability of the production in the future, but there are also a lot of uncertain factors which make it difficult to make any final decisions. One of these is the aid for serious difficulties in Southern Finland, and the temporary settlement concerning this has reduced the uncertainty at least for the time being.

The production has changed very little. This may have been caused by the fact that no dramatic collapse has occurred in the profitability, or farmers may simply be waiting to see what is going to happen. In the first year the incomes were quite satisfactory as a result of e.g. the stock compensations, but last year the farm income fell considerably below the earlier level. Farm model calculations based on fixed amounts show that the incomes will continue to fall to some extent because of the decrease in the level of aid.

The future does not look too good in the sense that the input prices are likely to rise slightly, whereas the market prices are likely to stay at the present level. The aid from the EU may fall already prior to any further expansion, and after that this will be inevitable.

In 1996 attention was mainly directed to the negotiations on the aid for serious difficulties. Finland was extremely well prepared for the negotiations. The Ministry of Agriculture and Forestry has financed an extensive research programme called MATEUS for research on the effects of the EU membership and the future prospects both nationally and in the different regions. The calculations indicate clearly that without any national aid the incomes of farmers

in Southern Finland would drop dramatically. This was the main reason in favour of the payment of the aid for serious difficulties starting from 1997.

Farmers were not satisfied with the outcome of the negotiations, i.e. not all farmers agreed with the level of aid and the distribution among the different production lines. The emphasis on investment aid in livestock production aroused criticism, because only farmers who are able to make investments can benefit from this. However, the most significant constraints on the payment of aid are those imposed by the state economy, not the negotiation outcome reached with the Commission.

The fact that the aid is only temporary, i.e. it will be paid until 2001, was also criticized, because the continuation requires further negotiations. The Minister of Agriculture has promised that the aid will be continued in the future, too. This is likely to be the case, because without any aid the preconditions for agricultural production would be dramatically weakened.

Another major topic in 1996 was the need to cut the milk quotas. The total of the farm quotas exceeds the national quota granted to Finland by 5-6 %, and thus the farm quotas will have to be cut in 1997 at the latest. The question whether the cuts should be compensated to farmers has aroused some discussion, and this is still open. Many producers wish that the negotiations on this could be continued with the Commission. The national quota has not been exceeded, and thus no penalties have been necessary.

Food imports have stayed at the same level as in 1995, and the fears that the markets would be lost to foreign imports seem to have been unnecessary. There are some imports that take over the markets from the domestic production, but exports to both the other member states and the third countries have continued quite well, and the markets have been in balance. The domestic supply has not decreased and the consumers favour the domestic products even more than earlier. This is probably caused by the fear that

food of inferior quality might be imported to Finland. There are buyers for the domestic products even at a higher price compared to the imports.

At least so far the food industry has been able to meet the challenges brought along by the EU membership, and the growth in exports has been quite satisfactory. The actions of the food industry are being monitored very carefully, because it is responsible for the market price paid to the producers. When the competition is hard, it might be tempted to dump the domestic prices. This is not likely to have happened, however, even if some criticism has been put forward.

The evaluation of the effects of the EU membership is mainly concerned with agriculture. The other aspect is the increase in the purchasing power and welfare as a result of the decrease in the food prices. The consumers are satisfied with the EU membership in this respect.

The consumer prices became established at a lower level already in 1995. During 1996 there was some increase in the prices. This was caused by various factors. Some increase occurred in both the market prices and import prices of meat. The prices of vegetables were clearly higher in 1996 than in 1995. Variations in the single market of the EU are reflected in Finland, too.

The next stage of the European integration is the economic and monetary union (EMU) and the common currency (euro). The Government is very strongly in favour of joining the EMU. There is a lot of discussion on this, and the Finnish people is divided into two, those in favour and those against the EMU. For the part of agriculture the EMU should not bring along any major problems. The only question concerning agriculture directly is how the green rates of the ecu will be applied in the EMU. The present rate of the green ecu is higher than the commercial rate, and thus agriculture might lose some of the aid, if this was paid as euros instead of the present green ecus.

IV SUMMARY

The growth in the national economy slowed down in the early part of 1996, but towards the end of the year it was again very rapid. However, the growth in the GDP was only 2.5 %, which is too small to result in any major improvement in the employment. The prospects for 1997 are very good, and the growth should be 4-5 %.

In terms of agriculture the year was both good and bad. The yield was good and livestock production continued at about the same level as earlier. However, the agricultural income fell considerably from the previous year as a result of the decrease in the transitional aid. A considerable amount of compensations for the reduction in the value of the stocks were paid in 1995, and this also increased the incomes that year. The uncertainty about the future continues, but investments have increased, which indicates that all hope has not been lost.

The early part of summer 1996 was rainy and cool, and the crop outlook was not too good. Instead, in August it was very warm and dry, which seems to have been favourable for agriculture, because the yield rose to the normal level. The cereal yield was 3.7 bill. kg, and the total yield measured as fodder units was 5,663 mill. f.u., which exceeds the yield of 1995 by 3 %.

The cultivated area grew by almost 10 % from the previous year, which explains the increase in the total yield. The set-aside area decreased, and it was only 10 % of the total arable land area. Prior to the EU membership the set-aside area was at its largest about 20 % of the arable land area. A considerable share of the set-aside is still voluntary, because the mandatory set-aside area of small farms is only about 57,000 ha, i.e. 3 % of the arable land area.

The earlier trends continued in livestock production. Milk production fell by about 1.5 %, and about 2,000 milk producers quit their production every year. The growth of dairy farms is very slow because of the quotas. The quotas are tradable, but purchasing them is a major investment for the producers. The prices of quotas have been FIM 1-3/litre.

The total of the farm quotas exceeds the national quota granted to Finland by 5-6 %, and the farm quotas will be cut by this amount in the beginning of April, 1997. Many producers wish that the negotiations on this could be continued with the Commission. The national quota has not been exceeded, and thus so far no compensations collected at the farm level have been necessary.

Whether the quota cuts will be compensated for to the producers is still open. The trade on quotas will become administered again in order to be able keep the costs of the expanding dairy farms in control. The price of the administered quotas has not been decided yet.

Pigmeat production grew by 3 % in 1996, and the market situation was quite good. The market prices were on the increase almost throughout the year as the meat consumption was transferred from beef to pigmeat because the mad cow disease confused the beef markets in the EU.

In Finland beef production stayed at about the same level as earlier, and the BSE disease did not influence the Finnish beef markets. The consumption of poultry meat continues to grow, and in 1996 the production increased by about 18 %.

There has been some increase in the foreign trade of meat. Pigmeat, in particular, is being

imported and exported to an increasing extent because of the free trade on the single market of the EU. Exports to Russia have grown, too.

No major changes occurred in the consumer prices and, consequently, consumption stayed at about the same level as earlier. Like in the past few years, cheese consumption grew to some extent, and poultry meat consumption also continued to grow very strongly. Instead, there was some decrease in the egg consumption. This was probably caused by the increase in the retail prices, as a result of the rise in the market prices, which was to be expected as the market prices had been extremely low.

According to a preliminary estimate, agricultural income fell by about 7 %. This was mainly caused by the decrease in the amount of aid by about FIM 1.0 bill. Agricultural income calculated at the market price rose by FIM 0.5 bill., mainly as a result of the increase in the amount of cereals entering the markets. The crop was good and stocks were discharged.

The agricultural income of 1995 calculated at the Agricultural Economics Research Institute was still relatively good, especially because of the stock compensations. Changes in the pro-

duction remained small, and they did not have any major impact on the development of incomes. The producer prices also stayed at about the earlier level. Instead, the prices of inputs rose by about 2 %, and this had a negative impact on income development.

The second year did not bring along any significant changes in the agricultural production or prices. The markets are already quite well adjusted to the single market of the EU. However, there is still a great deal of uncertainty about the future among the producers. The settlement on the aid to Southern Finland concerns only the next few years, and it is not possible to estimate the total impact of the reduction of the aid.

The number of farms decreases quite rapidly, and this has aroused speculations about the collapse of agriculture especially in the more remote areas. This development follows the long-term trend quite closely, except that the EU membership has accelerated it. No alarming changes are foreseen in the production, and investments have also been made, which indicates that there is still faith in the Finnish agriculture.

Exchange rate: 1 ecu = FIM 5.76 December 30, 1996
1 green ecu = FIM 6.0288

Symbols: e Preliminary data
- Magnitude nil
.. data not available or uncertain

Sources:

Monthly Reviews of Agricultural Statistics, Information Centre of Ministry of Agriculture and Forestry
Bulletins of Statistics, Central Statistical Office
Statistical Yearbook of Finland 1996, Central Statistical Office
Statistics of Agricultural Economics Research Institute
Economic Survey 1996, the Ministry of Finance
Statistics of Elintarviketieto - Food Facts Ltd (ETT)
Report of the "Agriculture 2000" Commission, 1987:24
Compendium of Laws and Statutes
Kettunen, L. & Niemi, J. 1994. The EU Settlement of Finnish Agriculture and National Support. MTTL.
Laurinen, H. 1996. Elintarvikkeiden hintamarginaalit vuosina 1985-1996. MTTL.
Pyykkönen, P. 1996. Maatalouden pääomakanta ja investointitarve eri rakennekehitysvaihtoehdoissa. PTT.

Appendix 1. Producer price index and cost price index in agriculture with subsidies (1990=100).¹⁾

	Producer price index of agriculture	Total index	Production inputs		Buildings
			Goods and services	Investments	
1990	100.0	100.0	100.0	100.0	100.0
1991	96.6	103.8	105.5	99.5	101.6
1992	96.5	105.5	107.8	99.8	98.8
1993	96.4	108.2	109.4	105.4	98.6
1994	96.0	107.6	107.1	108.8	101.0
1995	71.5	86.6	83.6	93.0	91.0
1996	61.3	88.0	85.5	93.4	90.4

¹⁾Indices are based on EU's classifications. The calculation method and weighting of indices have changed compared to previous.

Source: Statistics Finland.

Appendix 2. Some figures of the agricultural structure.

	Number ¹⁾ of farms 1,000	Average ¹⁾ size of farms, hectares	Number of milk suppliers 1,000	Employed in agriculture ²⁾	
				1,000 persons	% of total employed
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	189.9	13.65	34	142	7.0
1995	169.7	14.88	32	130	6.3
1996 ^{e)}			30		

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 1,000	Yield per cow litres	Pigs 1,000	Hens 1,000
1980	719.5	4,478	1,410.2	6,040.7
1981	700.8	4,450	1,467.1	5,200.2
1982	689.2	4,493	1,475.3	5,291.5
1983	663.1	4,778	1,440.7	5,440.4
1984	659.5	4,799	1,381.8	6,025.3
1985	627.7	4,812	1,295.2	5,922.4
1986	606.8	4,935	1,322.7	5,532.1
1987	589.0	4,905	1,341.9	5,341.6
1988	550.6	4,990	1,305.1	5,237.6
1989	506.6	5,246	1,290.7	4,923.3
1990	489.9	5,547	1,394.1	4,844.8
1991	445.6	5,619	1,344.3	4,138.0
1992	428.2	5,613	1,297.9	3,968.9
1993	426.4	5,648	1,272.7	4,024.9
1994	416.7	5,869	1,298.3	4,089.8
1995 ¹⁾	398.7	5,982	1,400.3	4,175.1
1996 ¹⁾

¹⁾1.5.

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

	N	P	K
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
1994-95	101.6	20.0	38.5
1995-96

Source: Kemira

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

	1990	1991	1992	1993	1994	1995 ^{e)}
CROP PRODUCTION						
- Rye	430.8	492.6	121.5	89.8	98.1	13.6
- Wheat	1,415.0	954.7	938.4	577.6	820.6	159.1
- Barley	1,552.8	1,510.9	1,730.6	1,409.8	1,779.9	434.1
- Oats	1,377.3	997.3	865.5	887.3	935.8	101.1
- Potatoes	313.4	359.7	489.7	331.2	496.0	498.5
- Potatoes of processing	226.2	164.8	163.1	180.4	178.6	89.9
- Seed potatoes	9.3	6.2	7.9	6.9	5.7	5.8
- Sugar beets	545.8	472.2	475.3	475.6	505.0	433.7
- Oil plants	526.6	439.9	326.3	416.5	336.7	71.0
- Peas	19.3	28.4	32.7	23.9	17.0	9.8
- Grass seeds	62.4	44.7	21.3	13.1	20.1	13.6
Total	6,478.8	5,471.4	5,172.4	4,412.1	5,193.6	1,830.1
GARDEN PRODUCTION						
- Root crops	94.0	110.5	76.8	85.2	129.8	115.4
- Vegetables	571.2	554.4	561.5	571.3	630.4	481.2
- Berries	192.9	155.0	187.7	181.8	185.2	146.7
- Fruits	20.0	21.2	22.9	23.5	20.3	17.3
Total	878.1	841.1	848.9	861.8	965.7	760.6
ANIMAL PRODUCTION						
- Milk	8,439.2	7,730.4	7,391.6	7,615.6	7,723.7	6,533.0
- Beef	3,794.7	3,582.6	3,522.6	3,117.6	3,278.9	1,993.4
- Veal	0.5	0.5	0.3	0.3	0.3	0.3
- Pork	3,302.0	2,942.3	2,869.9	2,751.1	2,753.1	1,770.5
- Mutton	43.2	38.1	41.6	43.7	50.0	29.4
- Horse meat	17.3	18.5	21.3	17.9	13.9	3.3
- Poultry	438.6	494.8	449.9	423.1	476.1	347.5
- Eggs	902.3	793.4	806.9	807.4	799.5	374.7
- Wool	2.4	2.5	3.1	3.6	4.4	0.5
- Export of animals	9.9	1.2	2.5	2.2	1.6	1.5
Total	16,950.2	15,604.2	15,109.6	14,782.5	15,101.5	11,054.1
STORAGE COMPENSATIONS						2,281.9
Production total	24,307.1	21,916.8	21,130.9	20,056.4	21,260.8	15,926.7
INCOME FROM RENTS						
- Means of production	581.1	461.5	460.4	345.4	317.8	282.6
- Buildings and land	184.9	175.1	180.7	169.8	163.9	160.8
Total	766.0	636.6	641.1	515.2	481.7	443.5
SUBSIDIES						
- by farm size	961.5	840.3	758.6	678.6	611.1	
- by number of cows	191.8	188.8	206.9	203.7	201.9	
- Premium of feed grains	45.7	33.6	27.4	25.2	0.2	
- "Start money"	107.0	97.2	85.3	61.4	55.5	
- Premium for suckler cows	20.3	27.0	37.8	47.5	50.9	
- Support for field area	564.1	827.0	1,116.3	959.3	1,160.9	
Total	1,890.4	2,013.9	2,232.4	1,975.6	2,080.4	0.0
COMPENSATIONS TO REDUCE PRODUCTION						
- Production guiding (4a§)	7.8	5.1	3.1	1.7	1.3	0.9
- Milk bonus	140.5	335.9	330.8	197.6	0.1	
- Egg bonus	41.8	61.4				
- Fallowing compensations	347.3	729.3	567.8	457.9	364.7	
- Premium for ecological cultivation	16.5	29.4	40.5	32.0	26.1	17.2
- Premium for pea cultivation		23.5	27.4	13.1	5.8	
- Premium for green hay		0.3	0.9	1.1	0.9	
Total	553.9	1,184.9	970.5	703.3	398.9	18.2
EU-SUBSIDIES						
- CAP arable area payments						1,153.7
- CAP aid for animal husbandry						104.0

Appendix 5, continued.

	1990	1991	1992	1993	1994	1995 ^{e)}
- LFA aid						1,614.8
- Environmental aid						1,411.2
- Northern aid per livestock unit						80.1
- Transitional aid per headage						282.6
- Other national aid per headage						42.5
- Transitional aid per hectare						0.0
- Other national aid per hectare						0.0
- Aid for hortic. products grown in the open						0.9
- Other national aid						0.0
Total						4,689.7
COMPENSATIONS FOR CROP DAMAGES	8.1	4.6	15.0	133.0	7.9	11.9
GROSS RETURN TOTAL	27,525.5	25,756.8	24,989.9	23,383.5	24,229.6	21,090.0
COSTS						
- Fertilizers	1,681.7	1,509.9	1,579.6	1,691.9	1,532.6	1,183.8
- Lime	146.3	118.6	85.2	145.5	153.1	109.7
- Feed concentrates						
- mixture	3,056.3	2,966.0	2,655.5	2,584.0	2,722.3	1,927.7
- other	87.8	38.7	42.0	39.3	52.5	41.3
- Feed conserving chemicals	162.3	142.8	122.6	103.0	145.0	102.9
- Pesticides	308.6	328.4	289.1	289.2	283.4	240.2
- Purchased seeds	388.7	317.2	260.9	304.0	337.2	259.1
- Fuel and lubricants	709.6	633.3	663.4	713.7	573.9	481.9
- Electricity	386.2	411.7	434.3	462.9	454.1	356.1
- Agricultural firewood and timber	140.5	77.9	67.7	60.9	61.1	65.3
- Delivery of calves and pigs	53.6	55.6	55.4	52.7	53.4	46.6
- Overhead costs	1,526.1	1,639.7	1,681.9	1,729.2	1,793.5	1,488.3
- Hired labor						
- wages	418.2	456.5	441.7	400.0	395.2	367.3
- social expenses	273.1	283.2	280.4	282.2	268.5	241.5
- Machinery and equipment						
- depreciations	3,380.0	3,269.0	3,193.0	3,224.0	3,040.0	2,737.0
- maintenance	936.0	876.8	961.2	898.2	737.3	802.6
- Equipment	168.4	154.3	157.1	167.3	167.7	137.8
- Building expenses						
- depreciations	1,082.0	1,120.0	1,108.0	1,114.0	1,146.0	1,132.0
- maintenance	318.9	326.7	304.2	244.9	211.4	218.3
- Drainage, bridges, etc.						
- depreciations	282.0	285.0	301.0	259.0	248.0	243.0
- maintenance	169.2	163.4	161.2	140.4	108.2	107.0
- Interest payment	1,688.5	1,882.1	1,896.0	1,784.7	1,296.4	1,122.5
- Imports of animals	6.7	5.5	5.7	3.1	4.2	3.5
- Rent expenses						
- means of production	358.5	297.0	289.4	283.7	179.1	166.0
- buildings and land	346.0	335.2	339.3	350.8	353.0	358.1
- Farmers' share of costs from						
- accident insurance payment	58.9	48.5	42.9	40.0	61.3	55.7
- outside help	20.1	25.6	25.0	36.7	46.2	40.0
- days-off scheme	13.7	17.2	17.0	12.6	11.2	14.8
COSTS TOTAL	18,168.0	17,785.7	17,460.5	17,417.9	16,435.6	14,049.9
GROSS RETURN TOTAL	27,525.5	25,756.8	24,989.9	23,383.5	24,229.6	21,090.0
COSTS TOTAL	18,168.0	17,785.7	17,460.5	17,417.9	16,435.6	14,049.9
FARM INCOME	9,357.5	7,971.0	7,529.4	5,965.7	7,794.0	7,040.1

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

	1990	1991	1992	1993	1994	1995 ^{e)}
CROP PRODUCTION						
- Rye	430.8	533.2	140.6	132.5	125.8	50.5
- Wheat	1,415.0	1,108.8	1,105.5	683.3	985.0	489.5
- Barley	1,552.8	1,657.5	1,849.5	1,526.5	1,990.0	1,102.8
- Oats	1,377.3	1,107.8	962.9	989.6	1,087.0	266.8
- Potatoes	313.4	337.6	304.4	290.2	345.7	364.0
- Potatoes of processing	226.2	146.1	174.4	190.6	187.7	173.6
- Seed potatoes	9.3	6.1	7.4	7.7	6.4	7.6
- Sugar beets	545.8	532.9	509.5	469.8	545.5	538.3
- Oil plants	526.6	465.2	381.7	520.0	432.5	249.0
- Peas	19.3	34.0	37.8	28.3	21.6	17.5
- Grass seeds	62.4	50.1	20.6	15.2	23.8	33.9
Total	6,478.8	5,979.3	5,494.3	4,853.8	5,751.1	3,293.5
GARDEN PRODUCTION						
- Root crops	94.0	108.1	76.5	87.9	143.6	128.2
- Vegetables	571.2	552.7	569.9	537.1	629.9	592.7
- Berries	192.9	171.4	209.2	162.7	162.9	156.3
- Fruits	20.0	25.4	31.5	35.3	19.9	34.3
Total	878.1	857.6	887.1	823.0	956.0	911.5
ANIMAL PRODUCTION						
- Milk	8,439.2	7,615.6	7,388.3	7,341.6	7,502.3	7,399.6
- Beef	3,794.7	3,908.1	3,767.1	3,415.5	3,455.7	3,089.5
- Veal	0.5	0.5	0.3	0.3	0.3	0.5
- Pork	3,302.0	3,126.5	3,109.2	2,987.8	3,013.6	2,959.1
- Mutton	43.2	40.6	47.3	51.4	58.8	62.3
- Horse meat	17.3	20.6	27.3	25.9	22.0	10.8
- Poultry meat	438.6	493.6	473.6	458.2	521.1	561.9
- Eggs	902.3	790.1	797.2	823.2	846.8	882.2
- Wool	2.4	2.3	2.4	2.8	2.9	1.8
- Export of animals	9.9	1.3	2.6	2.4	1.6	2.0
Total	16,950.2	15,999.2	15,615.2	15,109.2	15,424.9	14,969.6
STORAGE COMPENSATIONS						2,089.2
Production total	24,307.1	22,836.1	21,996.6	20,786.0	22,132.0	21,263.9
INCOME FROM RENTS						
- Means of production	581.1	446.3	448.8	331.2	309.8	298.0
- Buildings and land	184.9	174.1	175.8	158.2	150.3	147.3
Total	766.0	620.4	624.6	489.4	460.1	445.3
SUBSIDIES						
- by farm size	961.5	835.6	738.0	632.3	560.3	
- by number of cows	191.8	187.8	201.3	189.8	185.1	
- Premium of feed grains	45.7	33.4	26.7	23.4	0.1	
- "Start money"	107.0	96.6	83.0	57.2	50.9	
- Premium for suckler cows	20.3	26.9	36.8	44.3	46.7	
- Support for field area	564.1	822.4	1,086.0	893.9	1,064.4	
Total	1,890.4	2,002.7	2,171.8	1,840.9	1,907.6	0.0
COMPENSATIONS TO REDUCE PRODUCTION						
- Production guiding (4a§)	7.8	5.1	3.0	1.6	1.2	0.9
- Milk bonus	140.5	334.0	321.8	184.1	0.1	
- Egg bonus	41.8	61.1				
- Fallowing compensations	347.3	725.3	552.4	426.7	334.5	
- Premium for ecological cultivation	16.5	29.2	39.4	29.8	24.0	15.8
- Premium for pea cultivation		23.4	26.7	12.2	5.3	
- Premium for green hay		0.3	0.9	1.0	0.8	
Total	553.9	1,178.3	944.2	655.4	365.8	16.6
EU-SUBSIDIES						
- CAP arable area payments						1,056.3
- CAP aid for animal husbandry						95.2

Appendix 6, continued.

	1990	1991	1992	1993	1994	1995 ^{e)}
- LFA aid						1,478.4
- Environmental aid						1,292.0
- Northern aid per livestock unit						73.4
- Transitional aid per headage						258.7
- Other national aid per headage						38.9
- Transitional aid per hectare						0.0
- Other national aid per hectare						0.0
- Aid for hortic. products grown in the open						0.8
- Other national aid						0.0
Total						4,293.8
COMPENSATIONS FOR CROP DAMAGES	8.1	4.6	14.6	123.9	7.2	10.9
GROSS RETURN TOTAL	27,525.5	26,642.1	25,751.8	23,895.6	24,872.7	26,030.5
COSTS						
- Fertilizers	1,681.7	1,209.2	1,148.1	1,226.7	1,380.9	1,228.9
- Lime	146.3	111.5	81.0	136.2	139.2	118.5
- Feed concentrates						
- mixture	3,056.3	2,966.3	2,729.4	2,626.4	2,815.7	3,074.2
- other	87.8	40.0	42.7	39.2	52.5	52.3
- Feed conserving chemicals	162.3	139.4	143.3	118.1	158.0	136.4
- Pesticides	308.6	308.7	241.7	229.7	226.9	255.0
- Purchased seeds	388.7	327.6	289.0	337.6	363.9	346.0
- Fuel and lubricants	709.6	613.1	609.2	540.3	475.9	500.0
- Electricity	386.2	404.1	417.6	412.4	410.5	405.0
- Agricultural firewood and timber	140.5	82.4	82.4	79.7	70.7	70.0
- Delivery of calves and pigs	53.6	51.6	50.9	46.5	45.4	42.1
- Overhead costs	1,526.1	1,634.8	1,632.9	1,604.1	1,674.6	1,650.0
- Hired labor						
- wages	418.2	408.0	385.2	356.7	351.0	314.1
- social expenses	273.1	253.1	244.5	251.7	238.5	206.5
- Machinery and equipment						
- depreciations	3,380.0	3,322.0	3,143.0	2,907.0	2,664.0	2,442.0
- maintenance	936.0	826.4	855.9	741.7	627.0	625.0
- Equipment	168.4	153.8	150.9	148.1	145.8	143.2
- Building expenses						
- depreciations	1,082.0	1,103.0	1,121.0	1,130.0	1,135.0	1,140.0
- maintenance	318.9	321.9	307.9	248.4	209.3	200.0
- Drainage, bridges, etc.						
- depreciations	282.0	285.0	291.0	293.0	295.0	294.0
- maintenance	169.2	163.4	156.0	158.9	128.9	125.0
- Interest payment	1,688.5	1,717.3	1,734.5	1,552.3	1,444.0	1,293.1
- Imports of animals	6.7	5.6	5.7	3.3	4.4	4.7
- Rent expenses						
- means of production	358.5	287.2	282.1	272.0	174.6	175.0
- buildings and land	346.0	333.3	330.1	326.9	323.7	327.7
- Farmers' share of costs from						
- accident insurance payment	58.9	48.2	41.7	37.3	56.2	51.0
- outside help	20.1	25.5	24.3	34.2	42.4	36.6
- days-off scheme	13.7	17.1	16.5	11.7	10.3	13.6
COSTS TOTAL	18,168.0	17,159.7	16,558.4	15,870.1	15,627.5	15,270.1
GROSS RETURN TOTAL	27,525.5	26,642.1	25,751.8	23,895.6	24,872.7	26,030.5
COSTS TOTAL	18,168.0	17,159.7	16,558.4	15,870.1	15,627.5	15,270.1
FARM INCOME	9,357.5	9,482.3	9,193.4	8,025.5	9,245.2	10,760.4

Appendix 7. Agricultural aid.

AID FINANCED COMPLETELY OR PARTLY BY THE EU IN 1996

FIM/ha or FIM/LU

Aid area	A	B	C1	C2	C2 North	C3	C4
CAP ARABLE AREA PAYMENT							
General scheme							
Cereals	1,114	917	917	753	753	753	753
Oil seed plants	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Seed flax	2,154	1,774	1,774	1,457	1,457	1,457	1,457
Protein crops	1,609	1,325	1,325	1,088	1,088	1,088	1,088
Set-aside	1,411	1,162	1,162	954	954	954	954
Simplified scheme							
Cereals, oil seed plants, protein crops and seed flax	1,114	917	917	753	753	753	753
Average regional cereal yield, tn/ha	3.4	2.8	2.8	2.3	2.3	2.3	2.3
Av. regional oil seed plants yield, tn/ha	1.59	1.59	1.59	1.59	1.59	1.59	1.59
Mandatory set-aside, lower limit ha	27.1	32.9	32.9	40.0	40.0	40.0	40.0
CAP AID							
Special beef premium	639	639	639	639	639	639	639
extensification premium	213	213	213	213	213	213	213
Suckler cow premium	1,027	1,027	1,027	1,027	1,027	1,027	1,027
extensification premium	213	213	213	213	213	213	213
Annual ewe premium	102	142	142	142	142	142	142
LFA AID							
- objective 6-area: FIM 990/unit							
- other LFA areas: FIM 950/unit							
ENVIRONMENTAL AID							
Cereals, oilseed plants, protein crops, starch potatoes	1,053	597	400	253	253	253	253
Grass and other crops	1,727	850	850	850	850	850	850
Perennial plants	4,409	4,409	4,409	4,409	4,409	4,409	4,409
- vegetables (field production)	1,727	1,727	1,727	1,727	1,727	1,727	1,727
- set-aside, perennial green fallow	597	400	0	0	0	0	0

NATIONAL AID FOR AGRICULTURE AND HORTICULTURE

		Preliminary aid level				
		1996	1997	1998	1999	2000-
Unit		FIM/unit	FIM/unit	FIM/unit	FIM/unit	FIM/unit
A. TRANSITIONAL AID						
Production aid for animal husbandry						
A- and B-areas excl. Archipelago						
Milk	FIM/kg	0.52	0.45	0.42	0.37	0.35
Male bovines ≥15 months	FIM/slaughtered animal	1,787	1,609	1,447	1,304	1,174
- " - , beef races and crossings	- " -	2,184	1,966	1,769	1,594	1,435
Heifers ≥12 months, male bovines 11-14 months	- " -	1,024	922	830	746	671
Dairy cows	- " -	138	124	113	101	91
Ewes	- " -	226	203	183	165	148
Pigs	- " -	210	192	168	151	143
Broilers	FIM/100 slaughtered animals	240	213	192	173	164
Laying hens	FIM/animal	32	26	24	20	18
C-area excl. Archipelago						
Milk	FIM/kg	0.52	0.33	0.19	0.08	0
Male bovines ≥15 months	FIM/slaughtered animal	1,787	1,279	794	510	0
- " - , beef races and crossings	- " -	2,184	1,564	970	624	0
Heifers ≥12 months, male bovines 11-14 months	- " -	1,024	648	388	178	0
Dairy cows	- " -	138	46	0	0	0
Ewes	- " -	226	162	108	51	0
Pigs	- " -	210	163	89	43	0
Broilers	FIM/100 slaughtered animals	240	179	106	44	0
Laying hens	FIM/animal	32	21	11	3	0
Archipelago, A- and B-areas						
Milk	FIM/kg	0.62	0.55	0.49	0.45	0.42
Male bovines ≥15 months	FIM/slaughtered animal	2,864	2,578	2,319	2,087	1,878
- " - , beef races and crossings	- " -	3,501	3,151	2,835	2,551	2,296
Heifers ≥12 months, male bovines 11-14 months	- " -	1,730	1,558	1,402	1,262	1,136
Dairy cows	- " -	138	124	113	101	91
Ewes	- " -	349	314	283	255	229
Pigs	- " -	247	215	198	179	169
Laying hens	FIM/animal	40	31	29	25	23
Archipelago, C-areas						
Milk	FIM/kg	0.62	0.44	0.23	0.08	0
Male bovines ≥15 months	FIM/slaughtered animal	2,864	2,357	1,064	510	0
- " - , beef races and crossings	- " -	3,501	2,880	1,300	624	0
Heifers ≥12 months, male bovines 11-14 months	- " -	1,730	1,354	700	178	0
Dairy cows	- " -	138	46	0	0	0
Ewes	- " -	349	278	169	90	0
Pigs	- " -	247	200	105	43	0
Laying hens	FIM/animal	40	26	14	4	0
Production aid for arable crops						
Starch potatoes	FIM/kg	0.027	0.018	0.011	0.006	0
Malting barley	FIM/kg	0.16	0.11	0.08	0.04	0
Wheat	FIM/kg	0.23	0.18	0.11	0.05	0
Rye	FIM/kg	0.25	0.19	0.11	0.05	0
Sugar beet	FIM/kg	0.046	0.032	0.020	0.009	0

Appendix 7, continued.

	Unit	Preliminary aid level				
		1996 FIM/unit	1997 FIM/unit	1998 FIM/unit	1999 FIM/unit	2000- FIM/unit
Transitional aid per hectare						
Pea (for human consumption)	FIM/ha	600	415	267	120	0
Hectareage support for other crops excl. set-aside and pea (for human consumption)	FIM/ha	190	125	68	23	0
Aid for horticultural products grown in the open						
Apples (max.)	FIM/ha	2,750	1,970	1,267	608	0
Vegetables, A (max.)	FIM/ha	4,800	3,450	2,270	1,132	0
Vegetables, B (max.)	FIM/ha	4,100	3,000	1,998	1,040	0
Vegetables, C (max.)	FIM/ha	4,100	2,600	1,649	770	0
Berries, A (max.)	FIM/ha	2,750	1,950	1,267	608	0
Berries, B ja C (max.)	FIM/ha	1,900	1,350	850	385	0
Aid for young farmers, A- and B-areas	FIM/ha	200	150	85	39	0
Storage aid for horticultural products, AB-areas (max.)						
Storage with heating systems	FIM/m ³	114	108	105	95	90
Other storages	FIM/m ³	76	72	71	67	63
Aid for horticultural products A- and B-areas (max.)						
>7 months	FIM/m ²	100	72	68	62	55
2-7 months	FIM/m ²	50	36	34	31	28
Aid for horticultural products C-area (max.)						
>7 months	FIM/m ²	100	72	44	20	0
2-7 months	FIM/m ²	50	36	22	10	0
Transitional aid per headage or per livestock unit						
A- and B-areas						
Aid for animal husbandry, suckler cows	FIM/animal	570	540	486	437	393
- " -, sows	FIM/animal	1,440	1,380	1,246	1,122	1,063
- " -, hatching broiler	FIM/animal	58	52	47	42	40
- " -, hatching turkey and other hatching poultry	FIM/animal	85	75	69	62	59
- " -, goats incl. aid for milk	FIM/animal	1,500	1,386	1,211	1,085	1,028
Additional aids, Archipelago and some local authorities						
Cattle and ewes	FIM/LU	1,615	1,530	1,377	1,239	1,115
Dairy cows, Ikaalinen etc.	FIM/LU	380	360	324	292	263
Hartola, Mäntyharju	FIM/LU	285	270	243	219	197
Male bovines, Ikaalinen etc.	FIM/LU	315	297	267	241	217
Kiikoinen etc.	FIM/LU	95	90	81	73	66
Ewes (in local authorities mentioned above)	FIM/LU	650	585	527	474	427
Aid for animal husbandry, chickens	FIM/animal	2.46	1.50	1.43	1.36	1.22
- " -, horses	FIM/LU	2,900	2,250	2,210	1,925	1,800
C-areas						
Aid for animal husbandry, suckler cows	FIM/animal	570	450	298	154	0
- " -, sows	FIM/animal	1,440	1,132	638	270	0
- " -, hatching broiler	FIM/animal	58	42	26	12	0
- " -, hatching turkey and other hatching poultry	FIM/animal	85	65	38	17	0
- " -, goats incl. aid for milk	FIM/animal	1,500	1,157	822	374	0
- " -, chickens	FIM/animal	2.46	1.10	0.35	0.00	0
- " -, horses	FIM/LU	2,900	2,250	1,530	770	0

Appendix 7, continued.

	Unit	Preliminary aid level				
		1996 FIM/unit	1997 FIM/unit	1998 FIM/unit	1999 FIM/unit	2000- FIM/unit
B. NORTHERN AID						
Aid per livestock unit						
Aid for animal husbandry, suckler cows						
C1	FIM/LU	100	495	850	1,117	1,368
C2	FIM/LU	150	540	900	1,167	1,418
C2North.	FIM/LU	600	945	1,350	1,617	1,868
C3	FIM/LU	1,050	1,395	1,800	2,067	2,318
C4	FIM/LU	2,150	2,495	2,900	3,167	3,418
Aid for animal husbandry, male bovines >6 months						
C1	FIM/LU	650	1,100	1,550	2,000	2,450
C2	FIM/LU	700	1,150	1,600	2,050	2,500
C2North.	FIM/LU	1,150	1,600	2,050	2,500	2,950
C3	FIM/LU	1,600	2,050	2,500	2,950	3,400
C4	FIM/LU	2,700	3,150	3,600	4,050	4,500
Aid for animal husbandry, ewes and goats						
C1	FIM/LU	650	1,100	1,550	2,000	2,450
C2	FIM/LU	700	1,150	1,600	2,050	2,500
C2North.	FIM/LU	1,150	1,600	2,050	2,500	2,950
C3P1-P2	FIM/LU	3,100	3,550	4,000	4,450	4,900
C3P3-P4	FIM/LU	3,700	4,150	4,600	5,050	5,500
C4P4	FIM/LU	4,800	5,250	5,700	6,150	6,600
C4P5	FIM/LU	6,400	6,850	7,300	7,750	8,200
Aid for animal husbandry, horses						
C1	FIM/LU	0	0	680	1,155	1,800
C2	FIM/LU	0	0	680	1,155	1,800
C2North.	FIM/LU	0	0	680	1,155	1,800
C3	FIM/LU	0	0	680	1,155	1,800
C4	FIM/LU	0	0	680	1,155	1,800
Aid for animal husbandry, pigs						
C1	FIM/LU	0	355	1,042	1,416	1,764
C2	FIM/LU	0	370	1,066	1,452	1,814
C2North.	FIM/LU	590	920	1,586	1,937	2,264
C3	FIM/LU	590	920	1,586	1,937	2,264
C4	FIM/LU	900	1,240	2,016	2,377	2,714
Aid for animal husbandry, poultry						
C1	FIM/LU	0	385	1,042	1,416	1,764
C2	FIM/LU	0	397	1,066	1,452	1,814
C2North.	FIM/LU	590	952	1,586	1,937	2,264
C3	FIM/LU	900	1,272	2,016	2,377	2,714
C4	FIM/LU	2,400	2,672	3,216	3,477	3,814
Northern aid paid for slaughtered animals						
Male bovines						
P1-P2	FIM/animal	780	780	780	780	780
P3-P4	FIM/animal	1,080	1,080	1,080	1,080	1,080
P5	FIM/animal	1,980	1,980	1,980	1,980	1,980
Heifers						
C1	FIM/animal	460	730	1,080	1,380	1,680
C2	FIM/animal	470	740	1,100	1,410	1,720
C2North. and Archipelago	FIM/animal	780	1,050	1,400	1,700	2,000
C3	FIM/animal	1,060	1,310	1,650	1,940	2,240
C4	FIM/animal	1,640	1,840	2,160	2,440	2,720

Appendix 7, continued.

	Unit	Preliminary aid level				
		1996 FIM/unit	1997 FIM/unit	1998 FIM/unit	1999 FIM/unit	2000- FIM/unit
Northern production aid for milk						
C1	FIM/kg	0.16	0.26	0.34	0.39	0.45
C2	FIM/kg	0.17	0.28	0.34	0.39	0.45
C2North.	FIM/kg	0.28	0.37	0.44	0.49	0.53
C3P1	FIM/kg	0.46	0.54	0.61	0.67	0.71
C3P2	FIM/kg	0.56	0.64	0.71	0.77	0.81
C3P3-P4	FIM/kg	0.71	0.79	0.86	0.92	0.96
C4P4	FIM/kg	0.98	1.06	1.13	1.19	1.23
C4P5	FIM/kg	1.50	1.58	1.65	1.71	1.75
Northern aid per hectare						
C1-, C2- and C2North. and Archipelago						
Wheat, rye	FIM/ha	0	200	340	462	576
Malting barley	FIM/ha	0	70	170	231	288
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	70	128	173	216
Sugar beet	FIM/ha	500	785	1,063	1,251	1,440
Starch potatoes	FIM/ha	400	495	595	655	720
Vegetables grown in the open (also C3 and C4)	FIM/ha	0	845	1,199	1,425	1,692
Apples	FIM/ha	0	205	391	531	662
General aid per hectare C2-C4						
C2	FIM/ha	200	200	170	154	144
C2North. and Archipelago	FIM/ha	200	200	170	154	144
C3	FIM/ha	400	360	340	308	288
C4	FIM/ha	800	720	680	616	576
Hectarage aid for young farmers C1-C4	FIM/ha	200	180	170	154	144
Aid for greenhouse products, C-areas (max.)						
>7 months	FIM/m ²	0	0	24	42	58
2-7 months	FIM/m ²	0	0	12	21	29
Northern storage aid for horticulture products (max.)						
Storages with heating systems	FIM/m ³	114	108	102	92	86
Other storages	FIM/m ³	76	72	68	62	58
C. NATIONAL AID FOR ARABLE CROPS						
A-area incl. Archipelago in A- and B-areas						
Rye	FIM/ha	0	260	446	606	756
Wheat	FIM/ha	0	260	446	606	756
Malting barley	FIM/ha	0	110	298	404	540
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	110	213	289	360
Starch potatoes	FIM/ha	0	135	255	347	432
Sugar beet	FIM/ha	0	270	510	693	864
Vegetables grown in the open	FIM/ha	0	900	1,445	1,848	2,412
Apples	FIM/ha	0	205	391	531	662

Appendix 7, continued.

Unit	Preliminary aid level					
	1996	1997	1998	1999	2000-	
	FIM/unit	FIM/unit	FIM/unit	FIM/unit	FIM/unit	
B-areas						
Rye	FIM/ha	0	200	361	491	612
Wheat	FIM/ha	0	200	361	491	612
Malting barley	FIM/ha	0	70	213	289	396
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	70	128	173	216
Starch potatoes	FIM/ha	0	135	255	347	432
Sugar beet	FIM/ha	0	270	510	693	864
Vegetables grown in the open (incl. Archipelago)	FIM/ha	0	450	850	1,155	1,692
Apples	FIM/ha	0	205	391	531	662
Other national aid for arable crops						
A- and B-areas, grass (suckler cow farms)	FIM/ha	0	330	510	693	864
C1-, C2- and C2North., feed grains	FIM/ha	0	70	128	173	216

Aid during the transtitional period:

Conversion factors with which the average number of animals is multiplied:

Dairy cows	1	Horses >6 months	
Suckler cows	1	Mares for breeding, incl. ponies	1
Other bovines >2 years	1	Finnish horses	0.85
Other bovines 0.5-2 years	0.6	Other horses and ponies, 1-3 years	0.6
Ewes, goats	0.15		

Nordic aid:

Conversion factors with which the average number of animals is multiplied:

Dairy cows	1	Broilers	0.0053
Suckler cows	1	Chickens	0.0027
Male bovines, other bovines >2 years	1	Hatching broilers and other poultry	0.026
Male bovines, other bovines >0.5-2 years	0.6	Horses >6 months	
Ewes, goats	0.15	Mares for breeding, incl. ponies	1
Sows, boars	0.7	Finnish horses	0.85
Pigs	0.23	Other horses and ponies, 1-3 years	0.6
Laying hens, turkeys, other poultry	0.013		

The local authorities in different areas:

- P1 = County of Oulu: Haukipudas, Kiiminki, Oulu, Utajärvi, Ylikiiminki, Parts of Oulunsalo
P2 = County of Lapland: Kemi, Keminmaa, Simo, Tervola, Tornio
County of Oulu: Hailuoto, Hyrynsalmi, Ii, Kuhmo, Kuivaniemi, Yli-Ii
P3 = County of Lapland: Kemijärvi, Pello, Ranua, Rovaniemen mlk, Rovaniemi, Ylitornio
County of Oulu: Pudasjärvi, Puolanka, Suomussalmi, Taivalkoski
P4 = C3: County of Lapland: Posio, County of Oulu: Kuusamo
C4: County of Oulu: Kolari, Pelkosenniemi, Salla, Savukoski; Parts of Kittilä and Sodankylä
P5 = County of Lapland: Muonio, Enontekiö, Inari, Utsjoki; Parts of Sodankylä and Kittilä
Archipelago: Parts of areas C1 and C2.

Maatalouden taloudellisen tutkimuslaitoksen julkaisuja
Publications of the Agricultural Economics Research Institute

- No 70 KETTUNEN, L. Suomen maatalous vuonna 1992. 59 s. Helsinki 1993.
- No 70a KETTUNEN, L. Finnish agriculture in 1992. 59 p. Helsinki 1993.
- No 71 KETTUNEN, L. (ed.). Finnish Agriculture and European Integration. 119 p. Helsinki 1993.
- No 72 AGRICULTURAL DEVELOPMENT PROBLEMS AND POSSIBILITIES IN BALTIC COUNTRIES IN THE FUTURE. Finnish-Baltic Joint Seminar Saku Estonia 1993. 87 s. Helsinki 1993.
- No 73 KETTUNEN, L. Suomen maatalous 1993. 61 s. Helsinki 1994.
- No 73a KETTUNEN, L. Finnish agriculture in 1993. 62 p. Helsinki 1994.
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- No 76 KETTUNEN, L. Suomen maatalous 1994. 62 s. Helsinki 1995.
- No 76a KETTUNEN, L. Finnish agriculture in 1994. 63 p. Helsinki 1995.
- No 77 MAATALOUS TIENHAARASSA. Agriculture at the Crossroads. Lauri Kettusen 60-vuotisjuhlajulkaisu. Lauri Kettunen's Jubilee Publication. 179 s. Helsinki 1995.
- No 78 TUTKIMUKSIA SUOMEN MAATALOUDEN KANNATTAVUUDESTA. Tilivuodet 1991-1993. Summary: Investigations of the profitability of agriculture in Finland business years 1991-1993. 167 s. Helsinki 1995.
- No 79 KETTUNEN, L. Suomen maatalous 1995. 60 s. Helsinki 1996.
- No 79a KETTUNEN, L. Finnish agriculture in 1995. 61 p. Helsinki 1996.
- No 80 MARTTILA, J. The effect of oligopolistic competition on economic welfare in the Finnish food manufacturing. 163 p. Helsinki 1996.
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- KETTUNEN, L. Adjustment of the Finnish Agriculture in 1995. p. 7-25.
- HOKKANEN, M., KETTUNEN, L. & MARTTILA, J. Changes in Foreign Trade in the First Year in the EU. p. 27-42.
- AALTONEN, S. Adjustment of the Finnish Food Industry. p. 43-56.
- HEIKKILÄ, T. & MYHRMAN, R. Food Sector Facing Changes and Challenges. p. 57-68.
- RYHÄNEN, M. & SIPILÄINEN, T. Economic Analysis of Finnish Farm Enterprises in the Changing Operational Environment. p. 69-81.
- SIKAMÄKI, J. Finnish Agri-environmental Programme in Practice - Participation and Farm-level Impacts in 1995. p. 83-98.
- LEHTIMÄKI, S. & LASSHEIKKI, K. Finnish Horticulture within the EU. p. 99-110.
- KERÄNEN, R. Integration and Regional Development Policy; Food-chain in Finland. p. 111-121.
- NIEMI, J. & LINJAKUMPU, H. Regional Structural Development of Finnish Agriculture until 2005. p. 123-141.
- KOLA, J. From the CAP to a RAP. p. 143-157.

