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FINNISH AGRICULTURE

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Agricultural Economics Research Institute
Luutnantintie 13
00410 HELSINKI
Finland

Mailing address: P.O. Box 3, FIN-00411 HELSINKI

Telephone: + 358-(0)9-504 471
Telefax: + 358-(0)9-563 1164
Internet: <http://www.mttl.fi/>



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FINNISH AGRICULTURE IN 1997

MAATALOUDENTALOUDELLINEN TUTKIMUSLAITOS
AGRICULTURAL ECONOMICS RESEARCH INSTITUTE, FINLAND
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Abstract. Finnish agriculture in 1997

The crop of 1997 was in accordance with the long-term trend, despite the cold early part of the summer, which delayed the sowing. After June the weather was hot and the growth was more rapid than usually. The total amount of cereals harvested was 3.8 bill. kg, and this exceeded that of 1996 by 2.7%. The total yield measured as fodder units was 3% higher than in 1996. There was some increase in both the area and the average yields. The area under set-aside decreased by almost 10%.

Milk production started to grow in 1997. The quantities produced on farms that continued their production grew considerably, because the number of milk suppliers fell by 1,900. The average yield/cow grew by almost 200 l. In terms of the structural development the high price of milk quotas has been considered problematic, and partly administered quota trade was introduced in 1997.

Pigmeat production grew by 5%. The market prices started to rise in June. There was some increase in beef production, too, but the price of beef decreased from the previous year. Poultry meat consumption continued to grow, and the production also grew by almost 10%. The decrease in egg production was not large enough to solve the serious market problems due to over-supply.

Both agricultural imports and exports grew in 1997. Dairy products, meat, and cereals were imported more than in the previous year. Cereal imports decreased clearly, but the imports of more highly processed foods grew.

There were no major changes in the consumer prices or in the consumption. Cheese consump-

tion started to decrease slightly, which is contrary to the trend in the past few years. The consumption of eggs and pigmeat fell, too.

The agricultural income in 1997 was about FIM 6.6 bill., which is about 1% lower than in 1996. The production volume grew, but the agricultural aid declined. The prices of production inputs rose by about 2%, and the producer prices fell a little over 1%.

More investments were made in agriculture than for a long time. Investments were encouraged by public aid. In 1997 loans and subsidies were granted for altogether 15,000 projects, and the cost estimates of these totaled FIM 4.2 bill. The aid amounted to over FIM 900 mill. Investment aid was mainly directed to increasing the farm size and environmental investments. The small size of Finnish farms affects their competitiveness on the single market, and environmental aid requires considerable investments in livestock production.

The year 1997 did not bring along any major changes in agricultural production or prices of the products. The future of Finnish agriculture involves a great deal of uncertainty. National aid consists of many different measures, and the decision on the continuation of many of these must be decided on in the negotiations before the end of 1999. The proposals of the European Commission for a reform of the common agricultural policy are difficult for Finland, where agriculture operates in extremely adverse natural conditions.

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

Preface

The public conception of agriculture is somewhat contradictory. The discussion has been dominated by the fears resulting from Agenda 2000, and very pessimistic views of the future of Finnish agriculture have been presented. The figures indicating the trends in agriculture, however, are not all that bad. Agricultural production has not collapsed. On the contrary, the statistics for 1997 show that the production has increased in almost all production lines. Milk production grew by 2%, meat production 3%, and cereal production by 3%. Instead, agricultural income has continued to decrease, but the rate is not yet alarming.

The future obviously involves a great deal of uncertainty. The price level is going to decrease, and the level of aid will not compensate the farmers for this in full. Agenda 2000 may bring along some surprises, even if Finland is applying for a full compensation of the price reduction. Also, no long-term decisions have been made on the aid for Southern Finland. Consequently, farmers are working under uncertainty.

There has been some discussion on the decrease in the number of farms. The official policy favours the growth in the farm size, because through this the number of farmers sharing the available aid decreases and it is easier to maintain their income level. As no changes are to be expected in the price level, the reduction of costs is very important, and an increase in the farm size helps out in this task. The opposition against the decrease in the number of farms is based on the fear that the countryside might be left uninhabited. The contradiction is

quite understandable. The agricultural policy of the EU is being revised so that the rural policy receives increasing significance alongside with agricultural policy, and even at the cost of the latter.

This report presents the main trends in the development of agriculture in 1997. Some of the statistics are still preliminary. The structure of the annual review is about the same as earlier, and it contains a review of agricultural production, prices, consumption, incomes, and agricultural policy.

The annual report has been prepared by Panu Kallio, Marja Knuutila, Hannu Linjakumpu, Juha Marttila, and Ville Vehkasalo. I wish to thank them for their work. I also thank Jaana Ahlstedt for various kinds of assistance in acquiring the data, drawing of figures, and preparing the layout of the publication. The authors alone are responsible for the estimates and views presented here, 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. 86. I thank Jaana Kola for the translation into English.

Now that I am leaving my positions at the Research Institute I also wish to express my deepest gratitude for the positive feedback concerning this annual report I have received during the past almost twenty years.

Helsinki, April 1998

Lauri Kettunen

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I OVERVIEW OF AGRICULTURE IN FINLAND

1. Agriculture and the national economy

In 1996 the share of agriculture of the gross domestic product was 1.5%. The share of agriculture in the GDP has decreased clearly in the long run. 20 years ago the share of agriculture in the GDP was still 5.5%. The reason for this is that in agriculture the production has grown more slowly than in other sectors of the national economy. The amount of purchased implements and services in agriculture has also increased, which means that an increasing share of the value of agricultural production is transferred to other sectors.

The significance of the total food chain in the national economy is much greater than the share

of agriculture in the GDP alone indicates. The sectors providing production inputs, transportation, and processing increase the share of food economy in the whole national economy considerably. For example, the value added in the food industry was FIM 10.8 bill. in 1996, i.e. clearly higher than that of agriculture.

In 1996 the share of food expenditure in the consumer expenditure of households was about 15%. This does not include expenditures on restaurant services and alcoholic beverages. The food sector employs about 300,000 people, when the production input industry, services, trade, and food industry are included, in addition to agriculture.

In 1992-1995 investments in agriculture dropped to about half of the level of the end of the 1980s. Uncertainty about the future resulting

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

Year	Gross domestic product			Investments		
	total FIM bill.	agriculture FIM bill.	%	total FIM bill.	agriculture FIM bill.	%
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	447.17	12.73	2.8	74.19	2.17	2.9
1995	481.97	8.13	1.7	85.10	2.24	2.6
1996	499.51	7.59	1.5	92.40	2.70	2.9

Source: Statistical Yearbook of Finland from various years.

from the EU membership as well as the overall economic depression made farmers cautious. During the depression the investments fell dramatically in the whole national economy. Even if the investments have increased considerably for the past couple of years, the level is still clearly below that of the end of the 1980s. Agricultural investments increased significantly during 1996. New agricultural machinery was being bought and the construction activity recovered. The growth in agricultural investments continued in 1997.

Agriculture is a very capital intensive industry. A modern farm requires a lot of land, buildings, and machinery, but employs only a couple of people. In 1996 the share of agriculture of the investments of the whole economy was 2.9%. Until the end of the 1970s the investment ratio in agriculture, i.e. the share of investments of the value added, was higher than in the whole national economy on the average. Consequently, the share of capital tied to agriculture clearly exceeds its share in the GDP.

The share of the employed labour force of agriculture in the whole economy is about 6% (Appendix 2). This is considerably larger than the share of agriculture in the GDP. 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

The economic growth in the latter part of 1997 exceeded all expectations. The annual growth in the total production was as high as 5.9%. A continuous and strong long-term growth in the economy is needed in order to reduce the mass unemployment caused by the depression.

The growth in the GDP was mainly a result of

the growth in the manufacturing industry. Both the wood processing industry and metal industry grew quite rapidly, but the most significant growth occurred in the electronics industry. In terms of employment it is very important that the growth in the construction industry increased considerably. Instead, in the food industry the growth has slowed down.

The growth in the manufacturing industry is largely based on exports. Finland is a small open economy, in which foreign trade has always played a decisive role. More than half of the Finnish exports are directed to the EU countries, and, in general, the economies of these grew quite strongly in 1997. According to the statistics of the Board of Customs, the Finnish exports to the EU grew 10%. The growth was even larger in the other exports, and the value of total exports was 14% higher than in the previous year. The rapid growth continues especially in the case of the high technology products like mobile phones. Even if the imports increased as well, the balance of trade showed a surplus of FIM 52 bill (FIM 44 bill. in 1996). The balance of current accounts rose to FIM 33 bill. In 1996 it was FIM 22 bill. However the financial crisis in Asia causes uncertainty in the world economy and affects the outlook for exports, because this region has become an important target for the Finnish exports, too. The growth in exports is expected to slow down considerably in 1998.

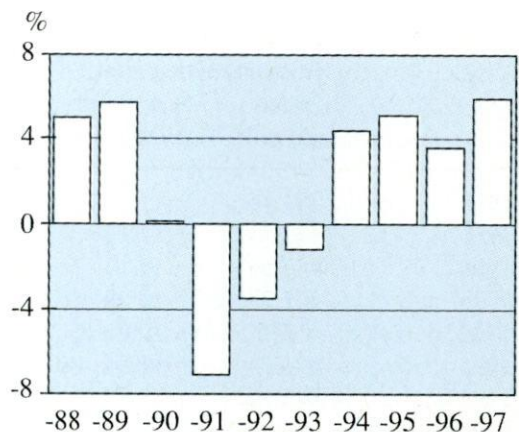


Figure 1. Growth in the volume of market price GDP in 1990 prices (%/year).

The success of the exports of the wood processing industry is very important for Finnish farms, because the income from timber sales play a significant role in the economy of farms. The value of paper exports rose by 11% and that of sawn timber as much as 28% in 1997. The growth in the value of paper exports was mainly caused by the increase in the export quantities. The prices are still below the level of early 1996. Instead, the development in the prices of sawn goods was quite favourable until the autumn of 1997, when the prices started to fall. The increase in exports in the wood processing industry was also reflected in the domestic timber trade. Commercial felling reached about 52 mill. m³, which is an all-time record, and the stumpage prices also rose compared to the previous year. In private forests the felling amounted to 46 mill. m³, which is 15% more than in 1996. According to calculations made at the Forest Research Institute, farmers own 37% of the privately owned forest land. Farmers make more sales at delivered price and they also sell more timber per hectare than other private forest owners, which means that their share of the income from timber sales is larger than the share of the areas. The gross income from timber sales of farms for 1997 is estimated at FIM 3.5 bill.

The value added in agriculture and forestry grew compared to the previous year. However, this is caused by the increase in the income from the stumpage money. In agriculture the value added continued to increase, albeit more slowly than in 1996.

The growth in the economy has started to be reflected in the decrease in the unemployment. According to the labour statistics of the Central Statistical Office, the rate of unemployment was 14.5%, which is 1.3 percentage points lower than in 1996.

In addition to unemployment, another major problem is the deficit in the state economy. The need for net financing has decreased considerably from the record level reached in 1994, but the budget for 1998 was showing a deficit. The state debt is still on the increase, the share of the debt of the GDP began to decrease already in 1997. The gross debt of the whole public sector

was 56% of the GDP in 1997. In 1998 the whole public sector is finally expected to reach a small financial surplus.

Despite the rapid economic growth, consumer prices rose by only 1.2% in 1997. In 1998 the increase in the prices is expected to be a little over 2%. Wage increases that came into force at the beginning of the year were moderate and the increase in the import prices is expected to remain small. As a result of the EU membership food prices fell by 7.4% in 1995, and the decrease continued in the following year. However, 1997 the prices began to increase, when the food prices rose by 3.7%. About half of this was caused by the increase in the price of coffee, and the prices of fruits and meat also rose. In all the rise in the food prices increased the inflation by a little over 0.5%.

The improvement in the state economy and low inflation helped to keep the financing market quite steady in 1997. In the autumn there were some signs of the acceleration of inflation, and the Bank of Finland raised its tender rate slightly as a result. Also the value of the Finnish markka has been quite stable since 1995. At the end of 1997, however, the value of markka fell so that the exchange rate of ECU rose to FIM 5.980, when a year earlier the rate was FIM 5.767.

The strengthened domestic demand has maintained the economic growth. In 1997 the domestic demand grew by 4.1%. The growth in the private consumption was 3.1%, and this is expected to stay at the same level in 1998. The purchases of durable goods, in particular, has increased considerably, which indicates that the expectations of the consumers concerning the economic outlook are quite optimistic. The growth in the domestic demand is indispensable for maintaining the economic growth, because the share of exports in the national economy is less than 40%, and thus the growth cannot be based on exports only. The increase in the wages has been less than half of the rate of growth in the GDP. Taxation has been alleviated to some extent, which has also increased the disposable income of households. However, compared to other countries taxation is still at a very high

level in Finland. The taxes per GDP was 47.3% in 1997. Among the EU countries the taxation is at a higher level than this only in Sweden and Denmark.

Private investments started to grow very rapidly in 1995. This trend has continued, and in 1997 the growth was 12%. Public investments began to grow a year later. In 1997 these grew by less than 5%, when in the previous year the growth was more than double. Housing investments especially in large centers with rapid growth have grown the most strongly.

The state of the national economy of Finland looks quite good. Inflation is low, the trade balance and the balance of the current accounts show surpluses, interest rates are low, investments are on the increase, and the economic growth is excellent. However, the high rate of unemployment and tight state economy cast a shadow over these positive developments. Unfortunately the situation is likely to remain the same for a very long time in these respects.

In terms of joining the EMU the national economy of Finland looks good. According to the convergence programme, the rise in the consumer prices may not exceed the rise in the prices in three community countries with the lowest rate of inflation by no more than 1.5 percentage points. The long-term interest rate level may exceed that of the three countries with the lowest inflation by the maximum of 2 percentage points, and the criteria concerning the budget deficit and debts of the public sector are 3% and 60% of the GDP, respectively. The gross debt may be higher if it is approaching the criterion rapidly enough. It is also required that the external value of the currency should be relatively stable.

Finland fulfilled all the criteria for the EMU in 1997. Earlier it seemed that the deficit and debts of the public sector might become a problem, but the budget cuts and rapid economic growth have changed the situation. Of the countries joining the EMU at the first stage only France, Luxembourg, and Finland fulfilled all the criteria. The criterion concerning the debt of the public sector is the major problem for the other EU countries. However, most of the countries

are approaching the limit set as the criterion, which means that the EMU is likely to be realized at the beginning of 1999 with 11 countries. In fact the Finnish public economy is in a very good condition compared to other EU countries, and in this sense the EMU is not a problem in the management of the state affairs. However, the state debt is proportionally much higher than the debts of the whole public sector. Traditionally the state debt has been very low in Finland, and thus the current level of debt is something quite new for Finland.

The EMU settlement and its effects on Finland dominated the discussion on economic policy in 1997. The EMU brings along a steady monetary economy, but, on the other hand, the means available for the economic policy are reduced. The decision power in monetary policy shifts away from Finland. The counterargument is the stability of the economy, which prevents inflation and, through this, the loss of the competitiveness. However, the one-sided structure of the Finnish exports is still problematic, because it is very sensitive to changes in the trade cycle.

2. The Finnish farm

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

Finland is about 1,100 km long from south to north, and the climatic conditions vary considerably. In Southern Finland the growing season is 170 days, but in the north it is only 100 days. There is a lot of variation in the effective temperature sum, too: in the south it is about 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

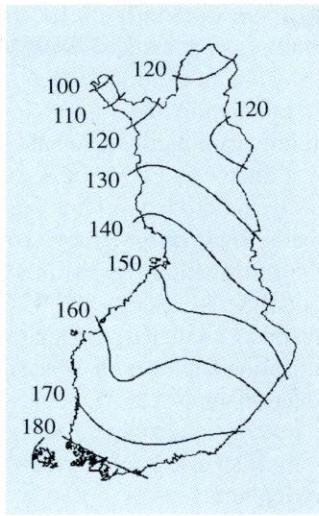


Figure 2. The length of growing season in different parts of Finland.

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. In 1996 private persons owned 80.0% of farms, heirs and family companies 18.9%, corporations, foundations, and cooperatives 0.6%, and the state, municipalities and congregations 0.4%. The share of farms owned by heirs and family companies has decreased slightly. This is significant for agricultural policy because these farms have the lowest productivity, and their existence slows down structural development. The average age of farmers is the lowest in the EU. In 1996 the average age of active farmers was 46.4 years. Of all farms owned by private persons 21.5% were owned by farmers over 64 years of age, but the share of such farms of active farms was only 6.0%.

In 1997 the total area under cultivation was 2.13 mill. ha, including 0.16 mill. ha under set-aside. According to the Farm Register of 1996 the number of farms with over 1 hectare was 155,337, and the number had dropped by 14,370 farms from the previous year. The average farm size of these was 15.8 ha. However, agricultural production was practiced on only 94,114 farms, and their average farm size was 22.9 ha. The number of active farms fell by about 5,850 farms from the previous year. In 1996 91,983 farms applied for the basic forms of agricultural support, and 91,280 of these were eligible for the support. In 1997 the number of farms that applied for the support dropped to about 88,000 farms. About a third of the active farms have quit production during the 1990s.

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

Every year a good number of small farms quit production, but in other respects structural de-

Table 2. The distribution of all farms and active producing farms into farm size classes and the average farm size (over 1 ha) in 1996.

	Farms over 1 ha		Producing farms	
	1,000	%	1,000	%
1-4.9	48.5	31.2	8.6	9.2
5-9.9	29.5	19.0	15.3	16.2
10-19.9	34.8	22.4	28.5	30.3
20-49.9	35.3	22.7	34.4	36.6
50-	7.3	4.7	7.2	7.7
Total	155.3	100.0	94.1	100.0
Arable land				
area 1,000 ha	2,460.1		2,155.6	
Farmsize, ha	15.84		22.90	

Source: The Farm Register of 1996.

Table 3. Arable land and forest areas in different parts of Finland in 1980 and 1996 (half-farm).

	Arable land and garden		Forest land	
	1980	1996	1980	1996
Uusimaa	18.2	22.4	28.2	32.8
Häme	14.1	18.2	31.0	37.5
Kuopio	9.4	13.8	37.2	47.6
Vaasa	11.3	16.9	26.4	32.1
Oulu	9.2	12.7	45.8	77.6
Lappi	6.1	7.9	78.8	86.6
Whole country	11.0	15.8	35.5	46.4

Source: The Farm Register of 1980 and 1996.

velopment 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 1996 altogether 512,789 ha, i.e. 20.8% of the arable land area was rented. On active farms the average rented area was 11.0 ha.

Forest is an integral part of a Finnish farm: an average farm has 15.8 ha arable land and 46.4 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. About a third of the active farms practice dairy husbandry as their main production line, 9% practice some other forms of cattle husbandry, and 8% are engaged in pig or poultry husbandry. In all animal husbandry accounts for 52% of the total return of agriculture. the share of milk production is about 30%, and when beef production is taken into account, the share of cattle husbandry rises to about 40% of the total return. Consequently, the share of hay, silage and pasture is about a third of the total arable land area.

The specialization of agriculture accelerated especially in the 1960s and 1970s. Earlier almost all farms produced milk. The number of milk suppliers has decreased steadily, and in

June 1997 there were only 28,100 farms that supplied milk (Appendix 2). About 44% of the active farms practice crop production only as their main production line.

Finnish farms are highly mechanized. There is usually a tractor and other basic machinery necessary for the production line on the farm. According to a study on the structure of agriculture by the Information Centre, in 1995 there were about 195,000 tractors and 37,800 combine harvesters. Calculated per hectare, the level of mechanization is quite high. When farms quit their production some of the machines are transferred as trade-in machines to other farmers. Tractors are also used for various purposes outside agriculture.

The total capital stock of agriculture has been estimated at FIM 77 bill (Table 4). The share of arable land is about FIM 27 bill., using FIM 11,600/ha as the price of arable land. According to the sale price register of the National Land Survey of Finland indicating the trade in additional arable land, the number of land transactions per year has been about 500 since 1993. Instead, considerable increase has occurred in the number of forest land transactions. According to the register, in 1997 555 transactions concerning arable land and 2,529 concerning forest land were made. In the purchases of additional arable land the price per hectare was close to the level of 1993 after the collapse in the prices, i.e. about FIM 16,000 per hectare. The price of forest land was a little under FIM 8,000 per hectare.

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.

According to the credit portfolio statistics, the debts of farmers amounted to about FIM 21 bill. in the autumn of 1997. The debt is distributed among the farms so that about a third of the farms are completely free of debt.

3. Other rural industries

The number of farms is on the decrease, and an increasing share of forest owners live in population centres. Those living in the countryside earn a significant share of their income from sources other than agriculture proper. Various kinds of business activities play a central role, but the modern computer technology also makes other kinds of employment possible in the rural areas. This chapter presents an overview of certain rural business activities other than agriculture and forestry.

In this report only outdoor garden production is included in agriculture, and greenhouse production is excluded. The total area under greenhouse production is about 485 ha. The value of *greenhouse production* in 1997 was estimated at about FIM 1.1 bill. The most important vegetables grown in greenhouses are cucumber, tomatoes, and potted lettuce. The value of ornamental plant production was about FIM 555 mill. The areas of cut roses, blooming potted plants, and bulbous plants were the largest. The number of greenhouse enterprises is about 3,000.

Greenhouse production is eligible for national support. In 1997 there were 1,800 enterprises receiving the support, which is the same as in the previous year. Production support was paid to 388 ha, and the average area of the plantations receiving the support was about 2,200 m². Of the area receiving production support about 20% was eligible for the support for so-called short-term cultivation (2-7 months) and about 80% of the greenhouse area eligible for support was under so-called long-term cultivation (more than 7 months). About 58% of the eligible area is under vegetables and about 42% under mixed cultivation of ornamental plants. In 1997 the support for greenhouse production was FIM 72/ m² in the long-term cultivation and half of this in

the short-term cultivation. Estimated on the basis of results of the profitability bookkeeping, the share of the support in the returns of greenhouse enterprises was about 20%.

In 1996 there were about 4,100 *professional fishermen* in Finland. About 70% of them practice their trade at sea. The number of fishermen has been decreasing rapidly for some time.

In 1996 the catch of fish of professional fishermen was about 120 mill. kg, and the value of this was FIM 187 million. Most of the fish was caught in the sea areas. In addition, *aquaculture produced* about 17.7 mill. kg fish (mainly rainbow trout), and the value of this was about FIM 239 million in 1996. Rainbow trout is also an important export article. In 1996 about 1.3 mill. kg rainbow trout was exported, and the value of this was FIM 30 mill. Rainbow trout roe was exported for about FIM 29 mill.

An especially important side-line for agriculture is *fur farming*, which is also practiced on its own. It employs about 5,000 people. There are about 2,200 fur farms in Finland. About 90% of the total fur production comes from the province of Länsi-Suomi. In the case of fox the share of Finland in the total production in the world is 60%, but in the case of mink this share is only less than 10%.

The collapse of the world market prices in 1988 forced many fur farms to stop their production. Since the season 1993/94 the prices have been on the increase, and, in particular, in the case of fox the profitability has improved considerably. The prices of mink pelts have also risen in the past couple of years.

Table 5. Some figures on other rural industries.

	Number of enterprises	Value of production FIM mill.
Greenhouse production	3,000	1,070
Fur farming	2,000	1,500
Reindeer herding	6,800	58
Beekeeping	4,000	51
Farm holidays	2,000	170

The role of Russia as a significant buyer of furs has received increasing emphasis due to the fluctuations on the currency markets in the Far East. The importance of the Far Eastern market is largely based on the concentration of the manufacturing of fur clothing in this area. In Europe and the United States the demand for furs is recovering after several bad years.

Fur farming is very sensitive to variations in the economic situation. This field has to adapt itself to the changes in the world market, which may be great. However, Finnish producers have tried to adapt themselves to international competition through breeding.

Reindeer herding is the main source of livelihood for about 700 households in Lapland. In addition, in about 1,500 households it is a very important secondary occupation. In the herding year 1996/97 there were about 6,800 reindeer owners. At reindeer round-ups in 1996/97 there were about 291,000 animals, of which 88,400 were slaughtered. Meat production was about 2.0 mill. kg, and its value was about FIM 58 million. Reindeer meat was mainly consumed in Finland, and hardly any was 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 these days they are very rarely used in farm work. *Horse husbandry* is practiced on about 6,000 farms. Horses are mainly used for riding and trotting. On the farms horse husbandry employs about 1,300 people full-time and about 5,000 part-time.

Beekeeping provides additional income to about 3,800 beekeepers. In 1997 1.7 mill. kg honey was produced, and its value was about FIM 51 mill. The number of bee colonies was about 40,000.

Wild berries (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 5,000 entrepreneurs are offering farm or summer cot-

tage holidays, and about half of them are farmers. In addition to the renting of self-service cabins, bed and breakfast, and half and full board, this activity includes restaurants and feasts and nature-based activities. This has expanded year by year, and the annual return of all holiday and traveling services is estimated at a little over FIM 170 million. Even if the activities based on rural holidays have expanded and diversified in the course of years, there are problems related to the seasonal nature of tourism, resulting in the cottages being empty for a long time during the year.

Various kinds of measures have been introduced to further the vitality and business activities in the rural areas. In the EU the rural areas are being developed by means of the Objectives of the EU programmes, national regional development programmes, as well as the Community initiatives, of which LEADER II is the most important for Finland.

The LEADER II structural programme of the EU, which reached its implementation stage in the summer 1997, is being implemented in areas 5b and 6. The programme aims at improving the conditions for rural industries through the creation of jobs and training. The focal areas in the development plans have been small-scale enterprises, craftsmanship, local services, and rural holidays. In the programme period 1996-1999 the financing share of the EU is FIM 162 mill. 22 local activity groups were selected to implement the programme. In early 1998 FIM 16.6 mill. of the EU money was tied to 429 projects in area 5b, and in area 6 FIM 12.3 mill. was tied to 261 projects.

The nationally financed POMO programme launched in autumn 1997 extended the model of activity applied in LEADER to the whole country. 26 local groups were appointed to implement the programme. FIM 168 mill. of public funding has been reserved for the programme period 1997-1999, and FIM 28 mill. of this was tied to the year 1997.

II PRODUCTION, PRICES AND AGRICULTURAL INCOME

4. Crop production

4.1. Weather conditions

The winter of 1997 was somewhat warmer than usually. There was a lot of snow in Northern Finland, but in Southern Finland there was less snow than normally and it melted away very early. Low temperatures and rains slowed down the drying of fields, and there was frost in the ground late in the spring. The cold weather delayed the growth of grass and thus the pasture season could not be started until in late May. The wintering of winter cereals and grass was quite normal in most parts of the country. In some parts of Finland sowing was started two weeks later than in the previous year. In Lapland the pasture season could not be started until the end of June.

The early part of the growing season was quite cool. Very low night temperatures were measured as late as the end of May. Sprouting proceeded quite normally, but very slowly. After the cold early part of the summer the weather warmed up, and the number of very warm days in June-August in the whole country was 2.5 times the long-term average. The growth put on a spurt after the slow start. The distribution of the precipitation was quite uneven. Southern and Eastern Finland suffered from drought, and in Central Finland there were heavy rains that flattened the crop. The hot summer accelerated the growth so that by early August the development was a week ahead of the normal. Calculated by the effective temperature sum, the growing season was better than normally. Harvesting

was started two weeks earlier than in the previous year. The weather conditions favoured the harvesting, which was quite hectic because all grains ripened at the same time. Autumn sowing were completed in good weather conditions.

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 1997 the area under main crops was 1,968,100 ha, which is about 22,000

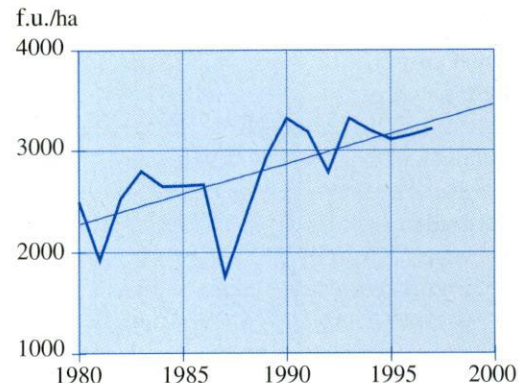


Figure 3. Total yield without straw in 1980-1997, f.u./ha.

ha, i.e. 1.1% more than in the previous year (Table 6). The reason for this is the decrease in the mandatory set-aside. The share of the mandatory set-aside area required by the EU fell from 10% to 5%. Thus the calculatory set-aside area is estimated at only about 35,000 ha, because on many farms the yield remains below 92 tons, which is the limit for set-aside. In 1997 the total set-aside area was 161,000 ha, i.e. there was a decrease of 17,700 ha (9.9%) from the previous year. Thus the share of set-aside of the total cultivable arable land area, 2,129,700 ha, was 7.6% in 1997. In 1994 the set-aside area was still 505,100 ha.

The increase in the cultivated area concerns mainly cereals, and the area under oilseed plants and dry hay have dropped. In all the area under cereals grew 3.5%, i.e. 38,300 ha. The area under winter wheat fell by 900 ha, but the area under spring wheat grew by 13,200 ha (15.1%), and thus the total area under wheat rose to 124,800 ha. After the increase in 1996, the harvested area under rye fell by 12,500 ha (35.4%) to the total of 22,800 ha. In 1997, however, the sown area of rye grew to 35,100 ha due to the favourable weather conditions and increased support. The area under barley increased by 40,300 ha (7.4%), but the area under oats fell by

Table 6. Harvested areas and yields of main crops in 1996 and 1997¹⁾.

	1996			1997		
	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg	Area 1,000 ha	Yield 100 kg/ha	Total mill. kg
Winter wheat	25.2	43.0	108	24.3	34.5	84
Spring wheat	87.3	40.2	351	100.5	37.9	380
Rye	35.3	24.6	87	22.8	20.7	47
Barley	542.5	34.3	1,860	582.8	34.4	2,004
Oats	374.4	33.7	1,261	369.2	33.7	1,243
Mixed cereals	13.8	30.3	42	16.2	29.9	49
Peas	5.7	23.4	13	6.0	21.9	13
Potatoes	34.8	220.0	766	33.2	227.1	754
Sugar beets	34.7	258.4	897	34.9	388.2	1,355
Hay	243.6	43.0	1,047	219.8	39.2	863
Green fodder	30.4	148.3	451	29.9	134.6	402
Silage	302.4	183.6	5,551	314.3	179.1	5,630
Oil-seed plants	61.7	14.5	89	60.6	15.3	93
Other crops	36.1			38.6		
Pasture	118.2			115.0		
Total	1,946.1	3,151²⁾	5,663³⁾	1,968.1	3,214²⁾	5,852³⁾
Set-aside	179.3			161.6		

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.

1.4%. The area under silage grew by 3.9% from 1996.

It has been necessary to reduce the area under oilseed plants because of internal factors of the EU. The GATT settlement imposes certain restrictions on the production of oilseed plants,

and this affects the cultivation possibilities in Finland, too.

The area under potatoes decreased 4.6%, and it was 33,200 ha. The area under sugarbeets was about the same as in 1996. In the case of sugar beets, in particular, the cultivation contracts

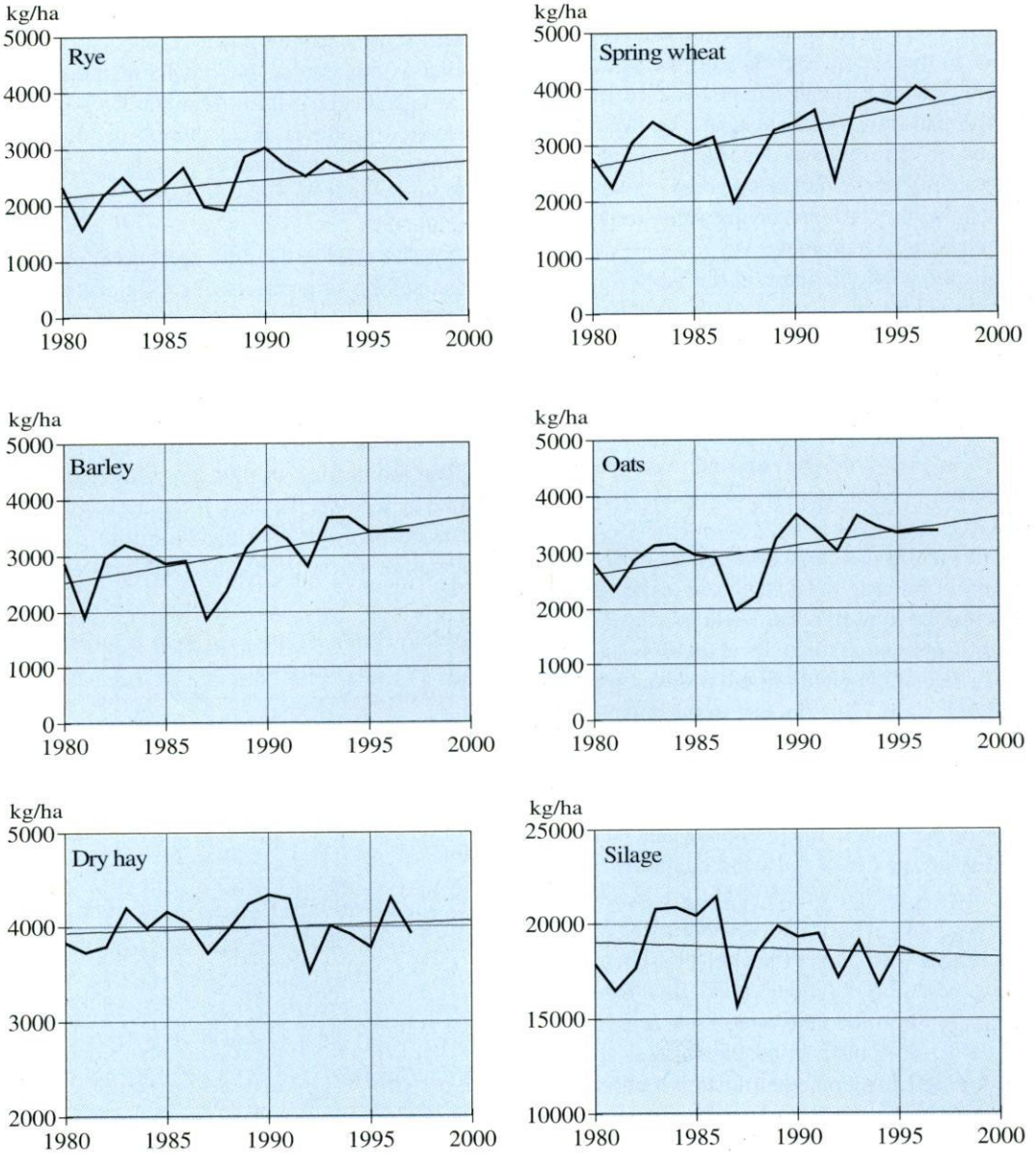


Figure 4. Yields of main crops in 1980-1997.

keep the area about the same, but the cultivation of potatoes is also partly based on contracts.

The hot weather and in some places drought characterized the growing season of 1997. Altogether 3.8 million kg of cereals were harvested, which is 2.7% more than in 1996. The increase was caused by the increase in the cultivated area. The total yield of bread cereals was 6.4% smaller than in the previous year, but the yield of fodder cereals increased by about 4.2%. The hectareage yields of the fodder cereals oats and barley were close to the average levels, and the hectareage yields of winter wheat were below the averages of the past few years. Instead, the hectareage yields of spring wheat exceeded the average. The quality of the harvested bread cereals was excellent, but fodder cereals were too light, which became a problem.

In spite of the increase in the yield level of cereals in Finland, it is still much lower than the average yield level in the EU. Finnish cereal production can never be competitive in the EU. The wheat yield did not quite meet the domestic consumption, but remained about 10% below it. The total yields of barley and oats exceeded the domestic need clearly, and about 600 mill. kg has to be exported.

The yield of dry hay fell by about 17.6% from the previous year, but it was close to the normal level in the long run. The yield of silage grew slightly compared to the level of 1996.

The hectareage yield of potatoes was slightly higher than in 1996, but due to the decrease in the cultivated area the total yield was 2% smaller. As a result of the hot summer the yield of sugar beets was record high, 1,355 mill. kg, which is 50% higher than in the previous year.

Measured as feed units the hectareage yield was 3,214 f.u./ha, which slightly exceeds the normal yield. The total yield was 5,852 mill. f.u., which is 3% larger than in 1996. There was overproduction in fodder cereals as a result of the increase in the cultivated area. Surplus is, however, no longer as problematic as it was before the EU membership, when it 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 support measures, which are paid in many different ways during the transitional period. Support includes both price support, which is paid for each produced kilo or litre, 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 farm gate price is the most impor-

Table 7. *Producer prices of some crop products in 1988-1997, FIM/kg.*

	Rye	Wheat	Barley	Oats
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	0.90	0.91	0.75	0.74
1997	0.89	0.88	0.74	0.70

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

Source: Grain bulletin.

tant 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. Cereal prices, however, are set in the place where the cereals are received, because farmers themselves may take care of the transportation. In this case the price in question is the market price.

In this report 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. However, 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

The cereal prices usually reported are the market prices at the warehouse of the buyer. The price the farmers get is normally not reported, but it can be estimated by deducting the transportation cost from the market price.

In the beginning of 1995 when Finland joined the EU the market prices of cereals fell by 50-60%. After that the prices have been quite stable. In 1996 the prices of barley, wheat, and oats were 2-5% higher, on the average, than in 1995,

Table 8. Market prices of cereals in Finland and some EU countries in 1996, mk/kg¹⁾.

	Rye	Wheat	Barley	Oats
Finland	0.90	0.91	0.75	0.74
Sweden	0.73	0.79	0.72	0.73
Denmark	0.72	0.77	0.83	0.77
Germany	0.70	0.79	0.71	0.74
France	0.75	0.77	0.71	0.70
England	-	0.81	0.74	0.77
Spain	0.79	0.94	0.78	0.85
Italy	0.93	0.97	0.96	1.30

¹⁾According to the average exchange rates of 1996. Source: Eurostat.

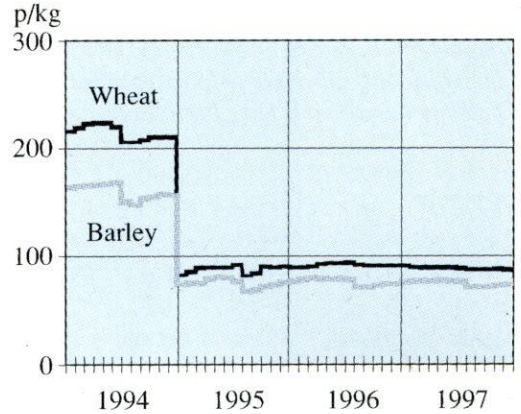


Figure 5. Producer prices of wheat and barley in 1994 and market prices in 1995-1997.

but during 1997 the prices fell back to the level of 1995. Of the prices of the intervention cereals (rye, wheat, and barley), the market price of barley followed the intervention price differentiated by the season, and was even below this. As a result of this there were intervention purchases of barley, unlike in the previous year. Instead, the prices of rye and wheat stayed above the intervention price level, and no intervention purchases were needed. Oats is not an intervention product, and its market prices stayed clearly below the intervention price level.

Price comparison between cereals produced in different EU countries indicate that in 1996

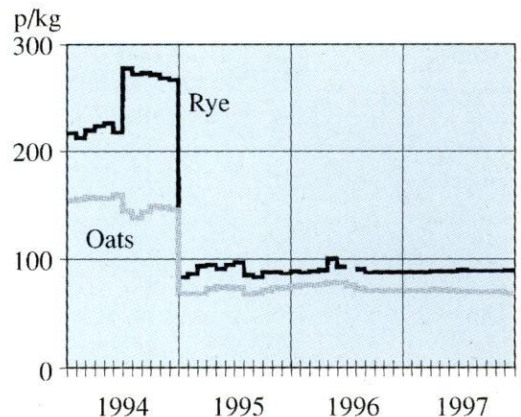


Figure 6. Producer prices of oats and rye in 1994 and market prices in 1995-1997.

Table 9. The producer prices of the most important livestock products in 1990-1997 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
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
1995	284.9	20.73	10.56	5.32
1996	272.2	13.34	7.99	4.18
1997 ^e	272.2	12.53	8.35	3.62

the market price of bread cereals was higher than the average market price level in the EU. This was caused by the fact that bread cereals produced in Finland did not meet the domestic demand, and the price of bread cereals imported from other parts of Europe become higher due to the transportation and other costs related to imports. Instead, the market price of fodder cereals was below the average price level in the EU, because in recent years the domestic supply has clearly exceeded the demand, thus creating a need to export fodder cereals at competitive prices.

Table 10. Market prices of most important livestock products in Finland and some EU countries in 1996, FIM/kg (milk FIM/l)¹.

	Milk	Pigmeat	Beef ²⁾	Eggs ³⁾
Finland	1.81	8.78	15.36	4.18
Sweden	2.05	8.65	16.42	5.24
Denmark	1.83	8.94	16.20	6.16
Germany	1.67	9.19	15.41	7.89
The Netherlands	1.71	..	15.62	4.39
France	1.68	8.90	15.40	4.58
Italy	2.13	..	17.66	7.16

¹⁾According to the average exchange rates of 1996.

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

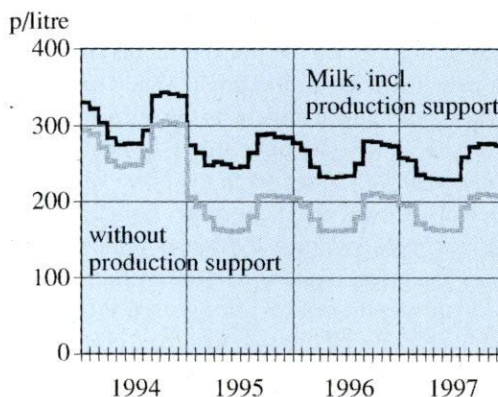


Figure 7. Producer price of milk in 1994-1997.

During 1997 the world market prices fell to some extent from the previous year, and thus they were higher than the intervention prices of the EU. As a result of the decrease in the world market prices, the EU had to support the cereal exports through export subsidies. However, the need for this was quite small, because the strengthening of the US dollar maintained the competitiveness of European cereals on the world market. In fact, in May and September the EU again collected a small export tax on the exports of wheat and wheat flour as the world market prices rose above the intervention prices of the EU. The export tax is based on the desire to keep the prices stable on the single market of the EU. The use of export tax has led to various kinds of

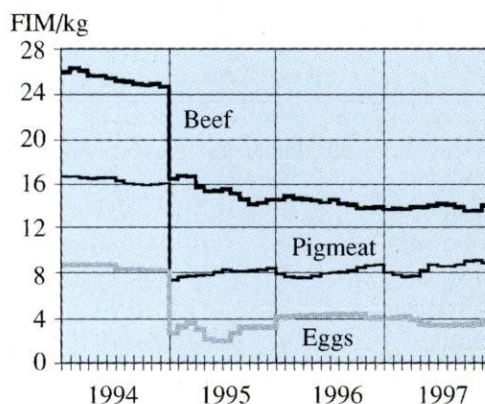


Figure 8. Producer prices of beef, pigmeat and eggs in 1994-1997.

discussions on its justification. When less wheat is brought to the market, the price stays at a high level on the world market. This has a negative effect on e.g. the developing countries that are dependent on cereal imports.

5. Livestock production

5.1. Producer prices

The market prices should in principle be quite uniform on the EU market. The market prices of livestock products in Finland follow the EU markets quite closely, but in the case of certain products the prices differ considerably from the average prices in the EU. The price of milk is the closest to the EU average, and the difference is the greatest in the case of mutton. The reasons for the differences are not quite clear. Finland is a remote country where the distances are long, which might make it possible to maintain a higher price level than in the competing countries. This is not the case, however. The differences in the prices may result from variation in the quality classifications, even if attempts have been made to harmonize the definition of prices. They may also be caused by the development level of the market and costs related to the transportation and marketing. The price differences may reveal the competitiveness of the food industry.

However, the demand-supply situation of the local market may influence the prices more than the possible foreign competition would require. For example, in Finland the overproduction in eggs is still great and it pushes down the market prices. Pigmeat supply has grown, and it exceeds the demand. This has led to an increase in exports. The price is slightly above the average level of the EU. Beef market has been in balance, but the price has been clearly below the average level of the EU.

The average market price of beef in 1997 was FIM 12.44/kg, which is 6% lower than in the previous year. The decrease occurred mainly in the price of cow meat, but the price of bull meat also fell 3% compared to 1996.

The average market price of milk in 1997 stayed at the same level as in 1996, even if towards the end of the year the prices were slightly below the level of the previous year. In general it has been estimated that the increased domestic competition on the milk market would lower the price paid to the producers.

In Finland the market price of pigmeat has increased slightly since 1996. The outbreak of swine fever in the Netherlands in 1997 caused the pigmeat prices to rise strongly in many other countries, e.g. Sweden. In Finland the prices rose only slightly in the summer of 1997, and the producers were criticizing the functioning of the market.

The market price of eggs was at a very low level in 1995 (about FIM 2.5/kg). In 1996 the prices rose to about FIM 4/kg, but they started to decrease again in 1997. The price is clearly below the EU level.

5.2. Production

Milk

Milk production grew 1.8% compared to 1996. The production was at a higher level than in the previous year throughout the year. The long-term trend, however, has been decreasing.

The number of milk suppliers is on the decrease. In 1997, too, their number fell by 1,900, which is not as much as in the previous year. The average yields increased, on the average, by as much as 190 l/cow, and it is now close to 6,200 litres.

In the Accession Treaty the national milk quota of Finland 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 reference quotas should be lowered so that they are in accordance with the national quota. The state has bought some quotas from farmers, but this was not very successful. Free trade on quotas has been possible, except for the condition that half of the sold quotas had to be relinquished to the state free of charge. The price of quotas has been FIM 1.5-

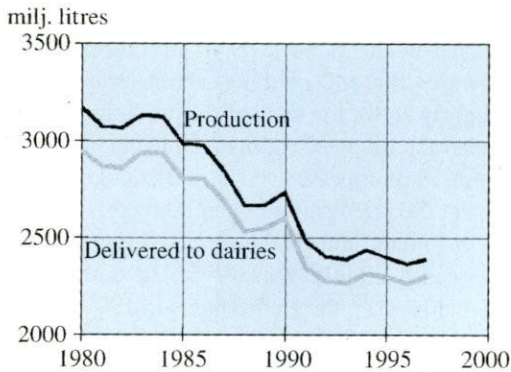


Figure 9. Milk production and the amount of milk delivered to dairies in 1980-1997.

4.5/l. Income from quota sales is taxable income.

After the adjustment measures the farm quotas still exceeded the national quota by 107 mill. litres in the spring of 1997. The milk quotas of farms were cut in the beginning of April, 1997 by 4.5% after the transition period set by the Commission had expired. The Parliament required that the quotas of active farms could not be cut without compensation, and thus the milk producers were compensated for the cuts by raising the transitional aid for milk by FIM 0.04/kg until the end of the year and FIM 0.02/kg in January-March, 1998. The FIM 70 mill. needed to raise the aid is paid on the basis of the stipulations on the national aid for agriculture and horticulture. The cut quotas are returned to two groups of producers, i.e. those who have

been granted investment aid part-financed by the EU as well as producers who lost their suckler cow quota in 1997 due to too high milk quotas.

In the quota period that ended in the end of March, 1998 the milk production was only just below the national quota. At the end of 1997 and in the early part of 1998 it was still expected that the quota would be exceeded. The quota system of the EU allows the exceeding and balancing of the farm quotas at the national level. If the production of the milk year exceeds the national quota, the situation is the most difficult for producers with no farm quota.

Beef

Beef production has been decreasing steadily since 1991, when the production was 122 mill. kg. In 1996 beef production amounted to only 97 mill. kg, but, contrary to the forecasts, it rose to 99 mill. kg in 1997. The number of slaughter animals grew, which compensated for the decrease in the slaughter weights. 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%. In recent years the production and consumption have been quite well in balance. The production is forecast to fall by 5% in 1998, which would be below the domestic consumption.

In the EU beef production is supported by means of bull premiums and suckler cow premiums. Bull premium may be paid for 241,553

Table 11. Livestock production in 1990-1997¹⁾.

		1990	1991	1992	1993	1994	1995	1996	1997 ^e
Dairy milk,	mill. l	2,600	2,345	2,274	2,264	2,316	2,296	2,261	2,301
Beef,	mill. kg	118	122	117	106	107	96	97	99
Pigmeat	"	187	177	176	169	171	168	172	180
Eggs	"	76	67	67	70	72	75	71	67
Poultry meat	"	33	37	36	35	39	42	49	53

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%.

animals. Because beef production is mainly based on slaughter animals produced in connection with milk production, the number of animals eligible for the bull 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. Attempts have been made to encourage the raising of beef breeds, but the number is still well below the maximum. Farmers have not been very interested in this production line, probably due to the low profitability

The BSE disease in the United Kingdom caused the European consumers to have some reservations against beef, and even if imports of beef from the UK were prohibited, the consumption collapsed in other parts of Europe. This has led to serious overproduction problems on the EU market. 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.

Pigmeat

In 1997 the pigmeat output (180 mill. kg) was almost 5% larger than in 1996. The average slaughter weight rose only little, but 4% more pigs were slaughtered than in 1996. As a result of the investments, the production is likely to grow in 1998, too.

Pigmeat consumption grew hardly at all as a result of the BSE disease affecting beef, and in 1997 exports were larger than in the previous year. The swine fever in the Netherlands has confused the pigmeat market of the EU. The reduction in the supply has increased the prices in many EU countries. The Netherlands has to reduce its pig stock, which provides opportunities for the other producers.

The profitability of pigmeat production is probably at a reasonable level, although the

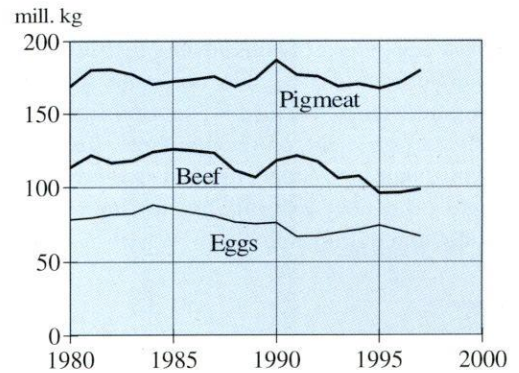


Figure 10. Production of beef, pigmeat and eggs in 1980-1997.

increase in the investments is likely to have been mainly caused by the advantageous investment programmes. Fodder prices continued to grow from the level of the previous year despite the opposite development in the world market prices.

The production costs of pigmeat are clearly higher than the producer price. Consequently, the profitability of the production is largely dependent on the aid paid on the basis of number of animals and hectares. According to the book-keeping results, the production cost of pigmeat was about FIM 14.11/kg in 1995 (FIM 10.44 when labour and capital costs are excluded), and in 1996 this was about 5% higher. The costs are clearly higher than e.g. in Denmark. 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 the major producing countries of the EU.

Mutton

In 1997 1.2 mill. kg mutton came from the slaughterhouses, which is 7% less than in the previous year. 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 1997. In Denmark, too, the price has been about FIM 5/kg higher than in Finland. The markets are not in balance. Mutton

is imported, even if the domestic producer price is very low. The problems are largely caused by slaughterhouses. They do not even want to slaughter sheep, because it is not profitable to construct efficient production lines for such small quantities. Small local slaughterhouses might offer new opportunities for the mutton production in Finland.

Eggs

There have been difficulties in egg production for a long time due to the oversupply. The production exceeds the consumption by about 25%. During 1997 the output decreased by about 5%. However, this did not improve the market situation, because the consumption also decreased by 5%. The import prohibition for eggs set by Russia in 1996 has caused difficulties in egg exports. Egg producers and packaging companies are cooperating to balance the production and consumption by means of a so-called Rusko contract. The objective is to include all 1,200 producers of the central packaging companies in the contract. As a result of the contract the packaging companies have introduced a dual price system, in which the producers get a higher price if they restrict their production.

6. Retail prices and consumption

6.1. Retail prices

The retail prices of Finnish foodstuffs were very higher compared to the other countries prior to the EU membership, even if the prices were supported through the lower level of taxation. The membership in the EU resulted in a considerable decrease in the retail prices, which in turn resulted in a slight increase in the consumption of many products. The most remarkable change in the prices occurred at the beginning of 1995, when Finland joined the EU. After this it has

been more difficult 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.

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. In January 1995 the price index for food decreased by 4.4%, 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. In 1997 the food price index rose to 3.7%. In spite of the increase in the price of meat, this was mainly caused by the rise in the prices of imported foods like coffee and fruits.

The decrease in the prices in the beginning of 1995 was mainly caused by the decrease in the prices of raw materials. 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. For example, the retail prices of bananas and rice rose. For the part of these products the foreign trade used to be quite free, whereas the EU restrict these imports by means of high duties and import quotas.

Development of margins

The rationalization of the food industry was started already in the beginning of the 1990s, but the Finnish companies are still very small on the European scale. Competition between the domestic food companies continues, and, in addition to export efforts, the development of quality programmes and contract production receives special emphasis in the food industry. Like the food industry, the retail trade of foodstuffs is highly concentrated. The liberalization of the foreign trade has strengthened the position of trade in the negotiations compared to suppliers.

According to calculations made at the Agricultural Economics Research Institute, the margins of dairy products rose in the first year as EU member. The values of the fat and protein in milk were changed, 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 prices of dairy products are only a little lower than prior to the EU

Table 12. Retail prices of some products in December 1995-1996 and in November 1997 and the change XII/96-XI/97, %.

	1995 XII	1996 XII	1997 XI	change %
Milk, l	3.91	3.87	3.93	2
Cream, 2 dl	4.71	4.71	4.72	0
Butter, 500 g	12.12	12.85	13.46	5
Cheese, kg	46.96	47.12	48.36	3
Margarine, 400 g	6.54	6.18	6.15	-1
Pigmeat, kg	32.72	33.00	34.92	6
Beef, kg	44.91	42.38	40.32	-5
Broiler, kg	19.14	17.28	16.51	-5
Eggs, kg	9.75	10.86	10.30	-5
Wheat flour, kg	3.43	3.61	3.34	-8
Rye bread, kg	14.99	14.76	14.45	-2
French bread, kg	12.27	11.73	11.10	-5

Source: The Central Statistical Office, Consumer price statistics.

membership, despite the decrease in the market price of milk. The margins decreased slightly in 1996. The share of the total margin in the consumer prices of dairy products, excluding sour milk and cream, is less than 50%.

The EU membership brought along significant changes in the pricing of meat. Depending on the product, the margins of pigmeat fell by about 7-14% in 1995 and 5-8% in 1996. The total margin of ground beef has fallen by almost a fourth in the past two years, and that of other beef by 13-15%. The average share of the total margin in the consumer price of meat is 61%, but the margin is the lowest, 51% in the case of ground beef.

The consumer prices of eggs fell by as much as 45% from 1994 until 1995. This was mainly caused by the fall in the producer price, but the margins decreased as well. In 1996 the retail price for eggs rose by about FIM 1.0/kg, almost solely as a result of the increase in the producer price. Oversupply has kept the prices down, there have been no export markets, and the packaging companies have been forced to cut their margins.

The prices of cereal products have followed quite closely the decrease in the prices of the raw material and the level of the value added tax. The margins have both increased and decreased. In 1995 the margins of rye flour and rye bread increased by a few percentage points, while those of wheat flour and white bread fell. In 1996 the total margins of cereal products, except for rye bread, were reduced by about 10%.

The decrease in the consumer prices in 1996 was mainly caused by the decrease in the total margins, but the fall in the raw material prices continued, as well. In 1996 there were no changes in the taxation.

Prices in 1997

Retail prices are dependent on the producer prices, margins of the processing and trade, as well as the overall market situation. During 1997 the producer prices of pigmeat rose. Instead, the producer prices of cereals as well as those of eggs and beef fell.

In 1997 the consumer prices were quite stable. There was some increase in the prices of pigmeat and dairy products. The prices of beef, broiler, eggs, and cereal products decreased slightly.

The consumer prices of food in Finland are close to the average level of the EU. In Finland the value added taxes 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, but it also varies by a few percentage units within a year, and thus the timing of the comparison has some influence on the prices.

6.2. Consumption

Changes in the disposable income of consumers influence the food consumption very little. The consumption is largely determined by the prices as well as factors like advertising and health aspects rather than small changes in incomes.

Compared with 1996, no significant changes occurred in the consumption last year. In 1995

Table 13. Consumption of dairy products and margarine per capita in 1988-1997.

	Liquid milk litres	Butter kg	Cheese kg	Marga- rine kg	Butter mixes ¹⁾ kg
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	6.1	12.8	7.9	2.6
1992	208.0	5.8	13.1	8.6	2.8
1993	205.3	5.6	13.5	8.7	2.9
1994	201.1	5.4	13.5	8.2	2.8
1995	196.4	5.3	14.8	8.3	2.6
1996	197.3	4.8	14.9	8.6	2.7
1997 ^e	194.3	4.5	14.7	8.7	2.6

¹⁾butter-vegetable oil mixes

Source: The Yearbook of Farm Statistics 1997 and ETT.

Table 14. Consumption of meat and eggs in 1988-1997, kg/capita¹⁾.

	Beef and veal	Pigmeat	Poultry meat	Eggs
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	19.1	32.7	9.9	11.0
1997 ^e	19.3	32.2	10.7	10.4

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 1997 and ETT.

the retail prices of many products fell considerably, but after that the prices have changed very little. Consequently, there were no special reasons for any major changes in the consumption.

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 any increase in the consumption.

The consumption of butter and butter mixes has decreased slightly. In 1997 there was also some decrease in the cheese consumption.

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 again to the level of 11 kg/capita. The decrease continued in 1997, reaching the level of 1994, which was 10 kg/capita.

The growth in the meat consumption shifts to poultry meat, in the case of which the increase was 8% from 1996. However, the consumption of poultry meat is still as low as 11 kg/capita, and thus, in quantitative terms, the growth was only 0.8 kg/capita. The consumption of pigmeat fell by about 1.5%, and that of beef stayed at about the same level as in the previous year. The total meat consumption rose by about 0.3 kg/capita. 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.

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. 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

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. Certain products, e.g. cheese, were excluded from this agreement.

Very significant changes occurred in the 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.

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,

Table 15. Exports and imports of agricultural products in 1988-1997, FIM mill.

	Exports total	Imports total	Imports Coffee, tea and spices	Fruits	Beverages and tobacco
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
1996	5,310.3	10,083.3	962.3	1,284.4	988.7
1997 ^e	6,044.0	11,529.1	1,475.7	1,294.4	1,124.0

Source: National Board of Customs, Foreign trade.

Table 16. Exports of some agricultural products in 1988-1997, mill.kg.

	Butter	Cheese	Milk powder	Pigmeat	Beef	Eggs	Cereals
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	14.5	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	7.3	4.1	13.8	384.9
1996	21.9	28.6	6.7	13.4	5.8	14.1	379.8
1997	26.8	31.6	19.8	19.8	7.4	12.9	619.0

Source: *Monthly Reviews of Agricultural Statistics*.

however, become more difficult due to the import protection practised by Russia. New regulations are being issued frequently, and exporters are often not aware of these. Despite these difficulties, in 1997 Finnish exports to Russia increased by about a third from the previous year, and in the case of foodstuffs the increase was about 25%.

The trade between Finland and Estonia is difficult to estimate because of the extensive tourism. Finns buy a lot of foodstuffs from Estonia or from the boats 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 1997

Foreign trade of dairy products continued to grow in 1997. In the case of cheese exports grew by 10%, but there were also problems. The European cheese markets were filling up, and the support for cheese exports outside the EU fell considerably. On the other hand, the rise in the exchange rate for the US dollar improved the profitability of exports. Imports of cheese grew more than the exports.

The imports of yoghurt stayed at about the same level as in 1996, and the value of exports fell by 6%. Exports to Sweden and Russia account for over 95% the yoghurt exports. Imports continued to grow, but in the case of Swedish yoghurt there was some decrease. Considerable growth occurred in the imports of French yoghurt.

In the 1970s and 1980s meat exports consisted almost solely of surplus exports by means of state support. The first major change occurred in the beginning of the 1990s when the imports of meat and meat products to Russia came to an end. The next turning point was the EU membership, resulting in the abolition of border controls

Table 17. Imports of some agricultural products in 1996 and 1997, mill. kg.

	1996	1997 ^e
Beef ¹⁾	7.8	8.2
Pigmeat ¹⁾	13.1	10.9
Poultry meat ¹⁾	2.6	2.7
Butter	0.9	0.5
Cheese	11.6	17.3
Cereals	263.4	198.1

¹⁾Carcass weight

Source: *ETT, Trade Statistics*.

and opening of the market to Europe. In 1997 Finland was still a net exporter of meat. The consumption of pigmeat fell by 1.5% compared to 1996 and, at the same time, the domestic production increased by 4.7. This was reflected as an increase in pigmeat exports and a decrease in import quantities. The situation is similar for the part of beef, except that the quantities are smaller.

The consumption of poultry meat grew again as the prices continued to fall. Like in 1996, poultry meat had to be imported last year. The domestic supply increased in spite of the decrease in the prices.

Fodder 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 it is very difficult to present any forecasts.

In 1997 the cereal exports grew considerably compared with the past couple of years. In terms of exports outside the EU, the oats exports to the USA increased again considerably after a couple of slower years. Because of the high quality of the domestic bread cereals the need for importing special wheat was smaller. Cereal exports dropped to about 25% of the level of 1996.

Even if the intervention purchases of fodder cereals exceeded those made in the previous year, the intervention activity is not very significant in Finland. Cereals and livestock products have been exported directly either to the single market at the market prices or to the third countries by means of export support from the EU. The world market prices for cereals stayed at a high level in 1997, which made it easier to export cereals.

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 fruits, coffee, tea, spices, and tobacco.

8. Income trends in agriculture

8.1. Sources of income

The average taxable income of farm families was FIM 167,721 in 1995 (Table 18). This information is based on the income and tax statistics of agriculture and forestry, the basic sample of which included 107,277 farms owned by natural persons in 1995. The average arable land area of these farms was 20.6 ha and the forest area 41.5 ha.

The average calculation distorts the picture of income formation to some extent. One factor causing this are pensions. 9% of the farms included in the statistics are owned by farmers who are over 65 years old.

The taxation of the forest area was revised in 1993 so that it is now based on the actual income from timber sales. However, the taxation of the area may also be used during the transitional period 1993-2005, and thus forestry incomes are still partly based on taxation, i.e. they do not correspond to the real incomes.

Table 18. The taxable income of farmer and spouse according to source of income in state taxation in 1995.

	Income FIM/farm	%
Agriculture	70,958	42.3
Forestry	13,328	7.9
Wages	45,666	27.2
Other	15,152	9.0
Transfers	22,617	13.5
Total	167,721	100.0

Source: Income and tax statistics of agriculture and forestry 1995.

On 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 1995 the number of these farms was about 31,000. On these farms farm income was FIM 80,100/person. In the same year the wage income of a skilled industrial worker was FIM 123,000.

8.2. Farm income in 1997

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 in 1997 calculated at the Agricultural Economics Research Institute was FIM 6.6 bill. in 1997. This is FIM 0.1 bill. lower than in 1996. No major changes occurred in the production activity. The support decreased, and so did the value of production of beef and eggs. The return on livestock products fell by 1% despite the 4% increase in the total return on meat. The return on crop products rose by FIM 0.2 bill., i.e. 9%, as a result of the growth in the amount of cereals entering the market and increase in the return on potatoes.

The costs of agriculture were FIM 13.6 bill., and they were at about the same level as in 1996. The cost of purchased fodder increased by FIM 100 mill. as a result of the rise in the prices. The increase in the investments is not yet reflected in the costs as the depreciation costs are transferred to the coming years.

When comparisons are made concerning the

Table 19. Development of farm income in 1988-1997, FIM mill. and as an index.

	Gross return	Total costs	Farm income	Index	
1988	24,027.5	16,469.2	7,558.3	100.0	
1989	25,830.1	17,780.6	8,049.5	106.5	
1990	27,525.5	18,020.7	9,504.8	125.8	
1991	25,756.8	17,648.9	8,107.9	107.3	
1992	24,989.9	17,282.1	7,707.8	102.0	
1993	23,383.5	17,331.5	6,052.1	80.1	
1994	24,169.1	16,408.8	7,760.3	102.7	
1995	20,996.6	13,707.0	7,289.6	96.4	90.0 ¹⁾
1996	20,301.9	13,624.8	6,677.1	88.3	83.4 ¹⁾
1997 ^e	20,220.0	13,608.1	6,612.0	87.5	80.7 ¹⁾

¹⁾ Estimate of farm income when the method of calculating depreciations is the same as before 1995.

agricultural income before and after 1995, it should be noted that the series are not comparable with each other due to the changes in the calculation of the depreciations. In the new method the old investments are also valued at the replacement price when calculating the depreciations. Consequently, the sales tax included in the investments prior to 1995 is excluded from the calculations. The total depreciations according to the new system are about FIM 400-500 mill. smaller.

The total amount of aid decreases every year. In 1997 the aid related to the production activity was FIM 400 mill. smaller than in 1996. Because the calculation based on the calendar years is made on the payment basis, the transfer of the payments of aid to the following year affects the result. From the previous year FIM 1.1 bill. of aid was transferred to 1997.

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 small-scale entrepreneurs who are required to keep books for taxation purposes only.

The depreciations of machinery and implements can be the maximum of 25%, those of production buildings the maximum of 10%, and those of subsurface drainage no more than 20% 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: heating 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 (15-19.75%), 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 1995 the average taxable income of a farmer and spouse (earned income and capital income) in the state taxation was FIM 167,421, and the tax on this was about 27.4%.

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 1998 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 can be 18% of the net assets. Prior to 1997 the share of capital income was 15%.

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. If the value of the taxable property is below FIM 1.1 mill., no tax is collected. For the value of property exceeding this the tax is 0.9%. Unlike in other forms of entrepreneurial activity, the property used in the production (except for animals and stocks) is liable to taxation.

8.4. Value added tax

Finland shifted to the value added tax system in the beginning of June, 1994, except for agriculture, in which the new taxation system was introduced in the beginning of 1995. The overall tax rate was 22%. At first the tax rate for foodstuffs and their raw materials as well as feeding stuffs was set at 12%, but during the transitional

period 1995-1997 it was 17%. However, contrary to the earlier legislation, the tax rate of the transitional period will remain in force. The tax rate of 12% was abolished, because Finland will shift to the three value added tax rates applied in the EU, i.e. 8, 17, and 22%. The tax rate of 22% is applied to animals sold to slaughterhouses.

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 pays the value added tax to the farmer, and the farmer accounts this to the state. However, the farmer may deduct the value added tax he pays in the production inputs from this. Thus the tax does not burden the producer, but it is transferred to be paid by the final consumer. If the farmer has no other activities liable to the VAT than primary production, the payments are made once a year by the end of February. Other enterprises must pay the taxes on a monthly basis.

Various forms of aid account for a considerable share of the incomes in agriculture. Additional prices and aid based on the area or the number of animals are not liable to the VAT. However, VAT of 22% is collected on the sale of a milk quota. No tax is collected if the whole farm or part of it is sold at the same time.

III

AGRICULTURAL POLICY

9. The price systems

Price arrangements for the different products form the core of the Common Agricultural Policy (CAP) of the EU. Through these the price level on the single market can be stabilized against market changes both within and outside the EU. The details of the arrangements for different products differ from each other, but the principles are largely the same. The prices of products coming from outside the EU are raised at least to the price level on the single market by means of tariffs, the decrease of the single market prices below a certain level is prevented through public intervention, and exports are subsidized. There are also other forms of aid paid to many products. The system is financed through the Guarantee Section of the European Agricultural Guidance and Guarantee Fund (EAGGF).

The 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 marketing year. The market situation and the projections on its development influence the decision-making. Administered prices are usually set for each marketing year, i.e. from the beginning of July till the end of June. The management committees for different products play a central role in agricultural policy. Among other things, they make the decisions on the payment and level of export subsidies.

The names used for the administered prices of different products vary, but the principles are largely the same. Prior to the major reforms introduced in the 1990s, target price formed the starting point, and the producer price was hoped

to be close to this. The lowest import price for imports from third countries was determined on the basis of the target price. Variable import levies were set according to the difference between the lowest import price and the world market price. If necessary, the level of the import levies could be adjusted in order to prevent the sudden price changes on the world market from being reflected on the EU market.

As a result of the GATT Uruguay Round the EU lost part of its sovereignty in agricultural policy. The adjustable import levies and other obstacles to imports have been replaced by tariffs, the maximum level of which is lowered by degrees in 1995-2000. The average reduction must be 36%, and for individual products the minimum reduction is 15%. Exports may still be subsidized through export refunds, but these will also have to be lowered as a result of the GATT agreement. The quantities of subsidized exports must also be reduced. In addition, the GATT agreement includes a commitment to a decrease of the internal agricultural support by altogether 20% during the transitional period.

The administratively set lowest import price was in principle abolished as a result of the GATT settlement. Thus the import price of a product should be determined according to the world market price and tariff. However, in the case of many important agricultural products the EU may still raise the duties within the limits of the GATT agreement if the world market prices fall considerably. The initial level of the different obligations was determined according to the situation at the end of the 1980s, when the import levies, prices, and exports subsidies were in general a lot higher than today.

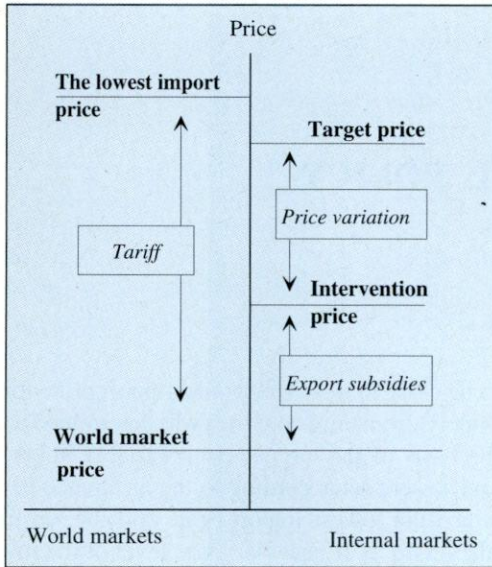


Figure 11. The price system of the EU.

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 should not be lower than this. This system concerns only certain products, like cereals, beef, and some dairy products. Private storage is also eligible for aid. The intervention stocks are sold either on the single market or to third countries as exports. Exports usually require subsidies, which are 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 world market prices cause the price on the single market to become too high.

Making the GATT agreement became possible for the EU only after a major reform of the Common Agricultural Policy according to an agreement made in 1992. The CAP reform thus introduced was the most significant development in the history of the CAP so far. The most important part of the reform was the lowering of the price level of certain agricultural products closer to the world market prices as well as the introduction of direct aid. The significance of

the role of aid based on the area or number of animals will increase further when the next CAP reform is being implemented.

9.1. Arrangements for different products

The price system of the EU includes special product arrangements for almost all agricultural products, and the system covers the processed products, too. Among these, clearly the largest share of funds in the EU budget is allocated to the arrangements for cereals. Other financially significant products are beef, dairy products, mutton, and olive oil. In the following, the ones that are the most important for Finland are presented.

Dairy products

Milk has a target price, which is set for milk with the fat content of 3.7%. In the production year 1996/97 it was 309.8 ECU/ton (FIM 1.82/kg), and it is the same in the production year 1997/98. The price level on the single market is regulated by means of tariffs, export subsidies, 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 adjustable import levies have been replaced by fixed tariffs. 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, and thus no additional levy is collected from producers who have exceeded their farm quota if the national quota is not exceeded. If there is excess production over the national quota, the adjustment makes it possible to lower the additional levies of producers who exceeded their quota. 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 launched in 1993 has dropped the target prices by degrees close to the world market prices for cereals. The farmers have received compensation for the income loss as compensatory payments per hectare.

In the marketing year 1996/97 the intervention price for cereals (except for oats) was 119.19 ECU/ton (FIM 0.71/kg), and the price is the same in the marketing year 1997/98. The price is monthly raised by ECU 1/ton from November to May.

The compensatory payment is determined according to the average hectare yield of the region, and since 1995/96 when the CAP reform was completed it has been 54 ECU/ton. The reform is continued by further reductions in the intervention price and raising the aid per hectare starting from the year 2000.

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 ECU/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 ECU/100 kg (carcass weight, quality class R3). Intervention purchases are made if the market price is clearly lower than the intervention price. Export subsidies and duties are also used in the regulation of beef prices. A fixed tariff is determined for different breeds of animal and parts of the carcass. In addition to the percentage duties,

duties in ECU 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 ECU/100 kg in the economic year 1997/98). The price on the single market is regulated by means of import control, export subsidy, and aid for private storage.

As a result of the GATT agreement the earlier sluice gate price and the import controls based on adjustable import levies have been replaced by duties. An attempt is being made to fix the amount of export subsidy 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.

9.2. Green ecu

Because of the changes in the exchange rates, the so-called green ECU introduced in the EU to calculate agricultural support and for converting the administered prices in ECU into national currencies. The exchange rate for green ECU deviates 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 problems the green rates of ECU are continuously adjusted so that the deviation of the exchange rates from the green

ECU would not be too large.

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). Since then the value of markka has varied so that the green ECU has been devalued altogether five times. Until May 1996 the rate of green ECU was FIM 6,028. At times markka has strengthened, even exceeding this rate by 5%, but not for a period of time long enough to make it necessary to revalue the green ECU rate of markka. In the beginning of 1997 the green rate was more than 4% higher than the commercial rate, but by the end of the year the difference was less than 1%.

The forms of aid included in the CAP 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. Thus the Finnish farmers may lose some of their aid when the common currency is introduced, if there is no compensation of the differences in the exchange rates in this connection. The market prices proper are based on the commercial rates, and these have not reacted to the changes in the green rate of ECU.

9.3. Agenda 2000

In July 1997 the European Commission published its opinion on the reform of the CAP from the year 2000. The section concerning agriculture was published as a part of an extensive Agenda 2000 Communication, which outlines the development trends for the whole Union in the next millennium. The report also contains the statements of the Commission concerning the possibilities of countries applying for the EU membership to fulfill their membership obligations.

The outlines for agriculture were as expected. The reform of 1992 should be continued and expanded by increasing the share of direct payments compared to price aid. Earlier at the preparation stage much more radical reforms

were also put forward. According to the Commission, the activities of the agricultural and rural development policies should be harmonized. The state of the environment, new income and employment opportunities, as well as food safety received increasing emphasis as objectives of agricultural policy.

In the crop production an attempt is made to abolish export subsidies, fulfill the obligations of the GATT agreement, as well as prepare for the challenges of the coming WTO negotiations. The Commission proposes that the intervention price for cereals be lowered by 20% i.e. to the level 95.35 ECU/ton in 2000. At the same time the area payment would be raised to 66 ECU/ton. Unlike in the reform of 1992 there would be no full compensation, because the Commission does not expect the cereal prices to fall to the level of the new intervention price. The area payment for oil-seed plants and set-aside would be at the same level as that of cereals. Set-aside would not, however, be compulsory. Through the harmonization of the support an attempt is made to reduce the dependence of the aid on the production according to the requirements of the WTO. It was proposed that silage maize be excluded from the system. A supplementary aid of 6.5 ECU/ton would be paid for protein crops.

The Commission proposes that the price support for beef be lowered by degrees by about 30% in 2000-2003. At the moment intervention purchases are launched if the price of beef (quality class R3) falls below 2,780 ECU/ton in a member state. According to the proposal, this would be lowered to 1,950 ECU/ton. In addition, aid for private storage would be introduced. It was proposed that the suckler cow premium be raised to 215 ECU (now 145 ECU), bull premium to 368 ECU (now 135 ECU), and a new yearly payment of 70 ECU for dairy cows be introduced.

The proposals for the dairy regime were quite moderate. According to the Commission, the milk quota system could be extended at least until 2006. The intervention prices would be lowered by 10%. To compensate for the decline in milk yield, a payment for dairy cows of 145 ECU would be introduced. No exact require-

ments in terms of the production intensity or e.g. dependence of the payment for dairy cows on average yields have not yet been set.

Agenda 2000 was discussed in the Agricultural Council during autumn 1997. The main trends of the agricultural reform received wide support, although there was considerable disagreement on the details. Finland emphasized, among other things, the fact that the cuts in cereal prices should be compensated for in full. With respect to this, in the opinion of the European Council in December it was pointed out that it should be possible to practice agriculture in areas with special problems, too. This is believed to have paved way for Finland in solving the special difficulties caused by the reform for Finland.

The proposals of the Commission have been revised to some extent during spring 1998. It is no use making actual proposals if these have no realistic possibilities of being approved. The views of the member states differ from each other, and thus it was impossible for the Commission to present a proposal that would satisfy everybody. The final reform will be formulated as a political compromise.

The most significant change in the proposal was that silage maize will not be excluded from area payments. This benefits livestock farms, and thus the total aid for livestock production is cut. It is proposed that the intervention prices for milk products be lowered by 15%, and the bull premium has also been lowered from the original proposal. The payments to livestock are becoming extremely complicated. Part of the payments to the member states would be made from a total aid package, and the details on the payment of aid could be decided on at the national level.

An attempt is made to compensate for the decrease in the price of milk by raising the milk quotas. The EU quota would increase by 2%, most of which would be directed to young producers and less favoured agricultural areas. Consequently, the national quota of Finland would grow as much as 8%. The effects of this would be twofold. It would provide new opportunities for expanding enterprises, but the growth

in the production would cause pressures on the market prices.

From the Finnish point of view the changes are a step to a worse direction. Maize is not cultivated in Finland, and thus retaining this form of aid has no positive impact on the economy of farmers. Cuts in the aid for cattle production affect Finnish agriculture considerably, because it is dominated by livestock production. The partial compensation of the intervention price for cereals is hardly a problem in countries where mainly wheat is produced, because the outlook for wheat on the world market is quite favourable. In Finland most of the cereals are fodder cereals, and the prices of these are likely to fall more than that of wheat.

The reforms proposed in Agenda 2000 have been estimated to cause losses as high as FIM 900 mill. to Finnish farmers. The losses may remain smaller because the market prices are not likely to fall as much as the intervention prices e.g. due to growth in the demand, and the farmers will adjust their production according to the new situation. Thus, in its present form the proposal is unfavourable for Finnish Agriculture. Appropriate special arrangements are being sought for in the negotiations so that the extremely adverse production conditions in Finland would be adequately taken into account.

10. Systems of support

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

Earlier the support applied in the EU was almost solely market price support, which was maintained by means of border controls, export subsidies, as well as public storage. More extensive application of the direct income aid began only after the agricultural policy reforms of 1992.

There are various forms of aid in Finland. The most important ones are the so-called CAP support (aid for arable crops and livestock), aid for less favoured areas (LFA), environmental aid, and national aid, which consists of the aid for the transitional period and northern aid, national aid for arable crops, as well as certain other support measures. The Finnish system of support is illustrated in Figure 12.

The LFA and CAP aids are regular aid measures granted by 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 also generally applied in the EU, but in Finland it is more extensive than in the other EU countries, except in Austria. Environmental aid covers almost the whole agriculture. The EU pays half of it.

Transitional aid is intended to compensate for the adjustment costs resulting from the EU membership. Northern aid is long-term income aid in order to compensate the farmers for the weak productivity and competitiveness of Finnish agriculture due to the northern location.

Because Southern Finland was excluded from the northern aid, in support areas A and B a so-called aid in the case of serious difficulties has been paid on the basis of Article 141 of the Accession Treaty starting from 1997. In the case of livestock products, horticultural production,

and storage aid for horticultural products the aid for serious difficulties is paid as raised transitional aid. National aid for arable crops is part of the settlement concerning the serious difficulties, too. The aid package based on Article 141 also contains the so-called raised investment aid (see Chapter 12.2), additional aid for young farmers, as well as temporary income aid for changing the production line.

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 13). Forms of aid paid in the whole country are CAP support, environmental aid, and transitional aid. The LFA aid is paid in areas B and C, and northern aid in area C. In order to differentiate this aid, area C is divided further into five parts.

The national aid package has been prepared so that the agricultural income should stay at about the same level as before the EU membership. The changes expected to occur in the producer prices and the prices of production inputs as well as the aid from the EU was taken into account in the calculations. Considerable development was also anticipated to occur in the productivity of agriculture. An attempt was made to determine the aid so that the income level could be maintained in all regions and production lines.

According to a decision in principle made by the Council of State in 1994 the national aid should be gradually reduced to about FIM 3.85 bill. by the year 2000. However, starting in 1996 the annual aid was cut by FIM 750 mill. At the same time agriculture receive some compensation (FIM 25 mill.) from the raise in the energy taxes. There is some flexibility in the annual level of aid, because it is possible to postpone annual expenditure to be paid from the funds allocated for the coming years.

The reduction of the aid was reduced from the original plan due to the poor outlook concerning the profitability of agriculture. In the first supplementary budget for 1998 the Government allocated an additional FIM 100 mill. together with another FIM 50 mill. based on authority to assign funds for agricultural aid. Earlier a decision had been made to use an authority to assign funds of altogether FIM 62 mill. for the pay-

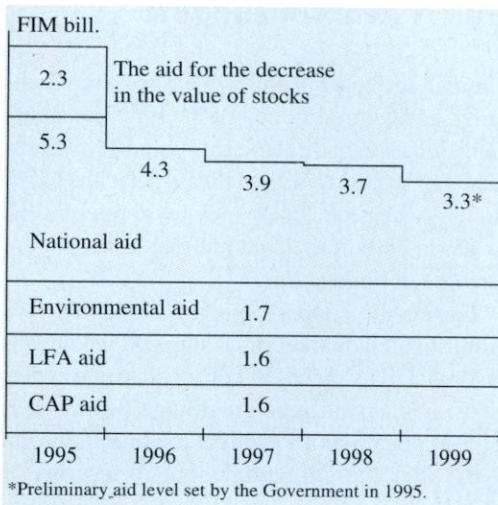


Figure 12. Agricultural aid in 1995-1999.

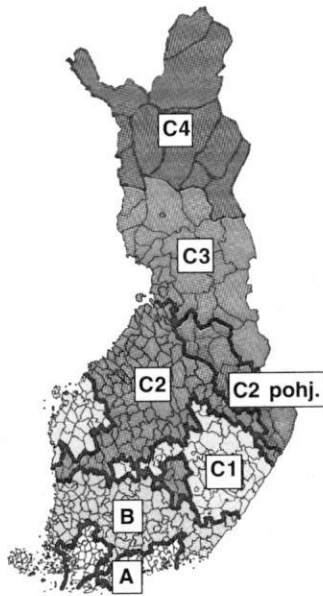


Figure 13. Support areas.

ment of additional aid. Consequently, in 1998 the funds available for national aid total 3,837 mill. Because the annual level of aid depends on the national budget decisions, the aid for 1999 presented in Figure 12 is only preliminary. After the year 2000 there is a great deal of uncertainty concerning both the national and EU aid due to the changes proposed in e.g. Agenda 2000.

The general principles of the different support measures are presented in the following. For more details on the level and regional distribution of support, see Appendix 6.

10.1. CAP support

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 compensatory payments based on the arable land area.

The compensatory payment is paid for cereals, oil-seed plants, protein crops, oil flax and set-aside. The aid is paid within either the general or the simplified system.

a) Within the general system the aid is paid for as large an area as the farmer wishes. It involves a set-aside obligation, which was 5% of the arable land area in 1997. The farmer may also receive a premium for set-aside for an area exceeding the obligation. In this case the set-aside area may not exceed the area eligible for the aid for arable crops.

The amount of aid is different in the case of cereals, oil-seed plants, protein crops, and oil-flax. The aid for cereals is determined on the basis of the regional average yield, and it is 54 ECU/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 this basic information. The aid for oil-seed plants can be changed if the world market prices differ considerably from the reference price of the EU. The aid is the same in all parts of Finland.

b) In the simplified system the aid is the same for all arable crops, and it is the same as the aid for cereals in the general system. This system is intended for small farms with no set-aside obligation that mainly cultivate cereals. The possibility for obtaining premiums for voluntary set-aside has been excluded. The maximum area 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.

The total CAP reform aid area granted to Finland is 1.59 mill. ha. In 1997 the area included in the support system for arable crops was 1.33 mill. ha and the share of cereals in this was 1.1 mill. ha. Thus a large share of the area eligible for the CAP reform aid remained unused.

Aid for livestock in the CAP

In connection with the CAP reform the administered prices of beef were lowered to maintain the competitiveness of beef in relation to pig and poultry meat. The fall in the prices was partly

compensated by the decrease in the fodder prices due to the fall in the prices of cereals. To compensate for the income loss, livestock premiums for suckler cows and bulls were introduced. The ewe premiums were also revised.

a) The suckler cow premium is about FIM 873/suckler cow. In addition there is national supplement of FIM 181. If there are fewer than 1.4 LU/ha, an additional premium for extensive production of about FIM 217/suckler cow is paid. The payment for extensive production is raised to FIM 313 if the animal density is under 1 LU/ha.

b) The bull premium is now paid only once in the bull's lifetime, and it is FIM 814/LU. The additional payments for extensive production are the same as in the case of suckler cows. The EU has also paid additional aid for beef producers due to the market disturbances caused by the BSE disease.

c) The ewe premium is determined separately for each year, and it is intended to compensate the producers for the income loss if the average price in the EU falls below the set basic price. The aid is paid as two advance payments and the final amount is paid in the autumn of the following year. The ewe premium for 1997 is estimated at about FIM 90/head. In the LFA area and additional premium of FIM 40/head is paid.

The limits for extensive production are determined as livestock units per hectare of fodder (bulls of over 2 years = 1 LU, bull of 8-24 months = 0.6 LU, and ewe = 0.15 LU). The number of animals may not exceed 2.0 LU/ha (in 1996). Livestock density always includes dairy cows necessary to fulfill the milk quota of the farm, as well as suckler cows, bulls, and ewes.

10.2. Aid for less favoured areas

The aid for less favoured areas (LFA aid) 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.

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 ECU, 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. The final amount is determined in the autumn of each year, when the total amount of applied units is known. Because the number of LFA units has exceeded that approved by the Commission, it has been necessary to cut the aid. In 1997 FIM 970/unit was paid.

The number of units of farms raising cattle, sheep, or horses is obtained by calculating the livestock units and the total area under fodder cereals separately and choosing the smaller one of these figures. When aid is applied for on the basis of both animals and hectares, the area not included in the fodder area is added to the number of units in the calculation. In the case of other farms the LFA aid is applied for on the basis of the arable land area, from which the area under wheat and apples is deducted. Natural meadows and pastures are not included in the arable land area.

10.3. Environmental aid

According to the Accession Treaty, the EU pays annually 135 mill. ECU as environmental aid to Finland. This has been raised by 10 mill. ECU. In addition to this, Finland must use at least the same amount of national environmental aid, and thus there is altogether about FIM 1.7 bill. available for environmental aid. The level of aid is higher in 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 an important part of the total aid package of agriculture. It is intended to compensate for the increase in the production costs and income losses due to the restrictions the aid is based on. The aid is mainly paid on the basis of hectares to farmers who commit themselves to measures that reduce the environmen-

tal 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).

10.4. National 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 total 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. The Commission has set the maximums for the level of aid. Aid based on these maximum amounts is now being paid to sheep husbandry, beef production, and the cultivation of rye, which are facing considerable difficulties. In the case of other products the aid is generally below the maximums set by the Commission, because the poor economic situation has also been reflected in the amount of national aid.

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 (see Appendix 6).

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 maintenance of the border controls was considered impossible on the single market, and the EU did not agree to this. Consequently, the market prices fell 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 severe 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. ECU, was very significant. The transitional aid for agriculture paid in 1995 amounted to about FIM 4.3 bill. In addition, FIM 2.3 bill. was paid as stock compensations.

The aid for transitional period decreases by degrees during the period in question. For the production of 1997 about FIM 2.8 bill. was paid. More than half of this was used for the production aid for milk and meat. One reason why the aid for the transitional period has stayed at this level is the settlement concerning the so-called serious difficulties. According to this, the national aid for the livestock production in Southern Finland is paid as raised transitional aid.

Whether the transitional period comes to an end in 1999 is open to both interpretation and 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. The starting point is that the aid will be continued after 1999. Thus the transitional period will go on in the next millennium, even if it is a matter of taste whether this is called transitional aid or long-term national aid for the whole country.

Northern aid

In the Accession Treaty Finland is granted the right to pay national northern aid north of the 62nd parallel and adjacent areas, 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. Because of the cold climate building costs are also 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 the main agricultural countries of the EU, 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 the Middle and Northern Finland (area C). The area was mainly determined on the basis of the regional distribution of aid applied earlier.

The northern aid for the production of 1997 amounted to about FIM 1.1 bill. The most important single aid measures were the northern production aid for milk (FIM 570 mill.) and northern aid per livestock unit (FIM 194 mill.). The gradual increase in the northern aid compensates partly for the decrease in the transitional aid.

National aid for crop production

National aid for crop production was introduced in 1997 as a part of the settlement concerning the so-called serious difficulties. The aid is paid as national supplementary payments to the environmental aid, and farmers have to meet the criteria for environmental aid in order to receive the aid. In 1997 the aid was paid in areas A and B only, except in the case of fodder cereals.

In 1997 the aid was paid for crops eligible for the aid for arable crops of the EU, excluding set-aside. Area under starch potatoes, sugar beets, vegetables grown in the open, and apples are also eligible for the aid. This aid measure also includes the aid for grass paid to suckler cow farms. The national aid for crop production totaled about FIM 120 mill. in 1997, and in 1998 it will be about double this amount.

Other national aid measures

There are also other national aid measures paid through the state budget. The most significant single form of aid is the aid for potatoes. This amounted to about FIM 44 mill. in 1997. In

addition, there is aid available e.g. for the promotion of the marketing of agricultural and horticultural products, training of farmers, as well as domestic seed production.

11. Production policy

11.1. Production objectives

The history of the production policy of the EU is very similar to that of Finland. Agriculture plays a central role in maintaining the vitality of the countryside. Agricultural production was increased through support, the aim being to benefit the rural areas as a whole. Gradually the agricultural production grew to the extent that it exceeds the own consumption. Thus, the emphasis in the production objectives has shifted from increasing to restricting the production. In particular, in the 1980s various kinds of production restriction measures were introduced, both in Finland and the EU. Since then the prices of agricultural products have been lowered closer to the world market prices, and thus the need for restrictions is decreasing. However, maximums must be set for the payment of support, which will in practice prevent the expansion of the production potential.

The production objectives of Finland have usually been determined on the basis of proposals of agricultural committees or other work groups. In 1996 the work group for agricultural policy, headed by the Minister of Agriculture and Forestry, 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 order to secure the food supply. The supply should be large enough to meet the demand in case there should be two consecutive poor crop seasons.

11.2. Measures to restrict production

Prior to the EU membership Finland applied dual price systems for milk and eggs, licences for the establishment of production units, a set-aside system, and collected funds from farmers to partly cover export subsidies. After the EU membership the milk quotas 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.

The purpose of the early retirement system, i.e. aid for giving up production, which is based on the EU stipulations, is to lower the average age of farmers and increase the farm size. If there is nobody to take over the farm or no suitable buyers to continue the agricultural production, the arable land can be transferred to other uses or afforested. The farmer may also make a commitment to leave the land permanently uncultivated. Farmers who are 55-64 years old and quit commercial agricultural production for good are eligible for the aid. According to the settlement for the serious difficulties, in support areas A and B aid for giving up production may be granted as a lump sum payment to farmers who have practiced agriculture for ten years (i.e. who sell their farm, land, and milk quotas). The maximum amounts of aid for 1997-1999 are FIM 1/l for selling milk quotas, FIM 5,000/ha for cultivable land, and FIM 3,000/livestock unit.

National milk quotas play a central role in the dairy policy of the EU. The quotas are necessary to restrict the overproduction, because the prices of dairy products in the EU are clearly higher than the world market prices. The details of the quota system, e.g. the collection of payments if the national quota is exceeded, vary in different EU countries.

If the quantity of milk delivered to dairies exceeds the quota, i.e. the reference quantity at the farm level, a quota charge is collected if the national quota is exceeded. In Finland this has

not happened, and thus it has been possible for farms to exceed their quotas free of charge. If there is excess production over the national quota, the charge is 115% of the target price. In the EU the quota year is from the beginning of April till the end of March.

In spring 1997 the reference quantities of dairy milk granted to Finnish milk producers were cut by 4.5% in order to adjust the farm quotas to the national quota of 2,394 mill. kg.

In summer 1997 a system which is a combination of administered and free trade was introduced in the trade on milk quotas. In the administered trade the sale and purchase price of a milk quota is FIM 0.65/l (+VAT). Milk producers have been divided into three buyer groups: farms with free places in the cowhouse, investors, and others. A farmer has to sell at least half of the milk quota that is being sold to the state in order to be allowed to sell the other half freely to another farmer. Instead of the earlier division into Rural Business Districts it is now possible to trade quotas in a larger area within three trade zones. When whole farms are sold, the quota can be sold as a whole together with arable land. The first round of purchases in the administered trade was organized in autumn 1997. Purchases offers, which amounted to almost 170 million litres, exceeded clearly the sale offers, which were only 11 million litres. Among the buyers preference was given to young investors. The new system has resulted in a decrease in the prices paid for the quotas in the free trade between farmers. In July-December 1997 the average price of a quota litre was a little over FIM 1, while in the previous year the price was more than twice as high.

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 cultivated or managed as a set-aside area in 1991. 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 afforestation costs and maintenance of the afforested area as a management premium of FIM 500/ha for the sapling stand after two and four years from the afforestation. In addition, compensation is paid for the loss of income for ten years from the afforestation. The compensation is FIM 900-2,100/ha/year. The compensation to farmers is higher than in the case of other forest owners.

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. compensations due to the loss of income.

The afforestation programme has not been fully realized, however. In 1995 about 4,000 ha of arable land was afforested and in 1996 this was about 9,000 ha.

12. Structural development

Developing the structure of agriculture is considered a necessary precondition for the adjustment into the EU. The objective of the structural policy is to direct structural support primarily to family farms that fulfill the preconditions for profitable production as well as to farms practicing diversified rural industries. In the first place, the size of enterprises must be increased in order to be able to lower the production costs.

Structural development also involves developing the cooperation between farmers. Similar benefits of scale as in the case of increasing the farm size can be achieved by joint use of machinery. Through cooperation it may also be possible to save in purchasing of the means of production and marketing of 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.

Besides the structural development of agriculture, efforts are also made to diversify the entrepreneurial activities in the rural areas. The rural and regional policies are being implemented through objectives 2, 5b, and 6 of the EU, community initiatives, as well as national regional development programmes. However, the EU objectives do not cover the whole country, and thus they constitute only part of the means of the rural policy (see Section 12.4).

12.1. Investment aid part-financed by the EU

The support for structural development in Finnish agriculture consists of support part-financed by the EU included in the EU programmes, structural support during the transitional period, which is financed nationally, as well as other national structural aid. In the case of the support part-financed by the EU in Finland the structural support for agriculture proper is so-called 5a support (promoting the development of rural areas by accelerating the adjustment of the structures of agriculture) and other support applied to the whole country. Objective 5a includes the following measures: investment aid for agriculture, aid for young farmers, supplementary aid measures (e.g. aid for bookkeeping, LFA aid, aid for food processing and marketing, and aid for the establishment of producer organizations). In the area of objective 6 the measures include, in addition to the above-mentioned, development projects for rural areas.

The most important form of structural support is the investment aid. 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. Further objectives are the improvement of the living and working conditions and the hygiene in livestock enterprises, as well as protecting the environ-

ment. Investment aid is also granted for diversification of the production, processing, marketing, as well as professional training.

The EU stipulates a certain framework for the investment aid part-financed by the EU, and more detailed provisions may be issued nationally. The requirements of the EU concern e.g. practicing of agriculture full-time, preparation of a development plan for the farm, adequate professional skills, and bookkeeping. Investment aid may be granted as subsidies, interest support, or a combination of the two. Usually the farmers must be under 55 year old to be eligible for the aid. Young farmers (under 40 years old) who has started running the farm no more than five years ago is eligible for additional aid. The maximum amount of this is 25% of the maximum aid granted to other farmers. The farmer must also have adequate professional skills.

Objective 6 was established for Sweden and Finland in the Accession Treaty, concerning the development and structural adjustment of sparsely populated areas, which also involves aid for investments. The share of the EU in financing the investments depends on whether the investment occurs in region 6 or outside this. In area 6 the share of the EU is 50%, and in other areas it is 25%. In the case of the additional investment aid for young farmers the share of the EU is 50% in all areas.

In 1997 structural aid according to objective 5a was used for investments, aid for young farmers, and development of marketing systems. Because of the shortage of funds, in 1997 the investment aid part-financed by the EU was directed to the building and expansion of cowhouses. Aid part-financed by the EU was granted to support area C only. There are certain restrictions on the investments eligible for the aid. The minimum size of the new cowhouses as well as old ones after the expansion is 23 dairy cow places, and the milk quota of the farm must be at least 128,800.

In Finland young farmers who start practicing agriculture on their own farm have been supported in order 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 to 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, which also belongs to the aid system part-financed by the EU. In 1997 the maximum amount of aid was FIM 140,000, the maximum amounts of both subsidies and interest aid being FIM 70,000. The national share of the financing comes from the Development Fund of Agriculture and Forestry, through which the structural aid of the EU for agriculture and forestry are also channeled.

12.2. National financing of investment aid

The most important objective in the development of the structure of agriculture is to create possibilities for the practicing of profitable and competitive production through the increase in the farm size, diversification of the business activities, improving the capital structure of farms, as well as reducing costs. The development of small farms with weak production potential can be promoted expanding the basis of the business activities to something else than agriculture proper.

It is possible to support the investments of farms from the national funds on the basis of the Act on Rural Business. Within this act, investment, starting, and development subsidies as well as loans for e.g. investments in fixed assets may be granted. The main source of the national financing is the Development Fund of Agriculture and Forestry.

In 1997 national investment aid was directed, among other things, to increasing the farm size clearly in dairy production in the first place in support areas A and B. Aid was also granted to the expansion and renovation of existing cowhouses that were smaller than the required minimum size. In support area C the investment aid to dairy farms is mainly aid part-financed by the EU, and other aid to area C and all investment aid in areas A and B are financed nationally.

According to the exception granted to Finland in the Accession Treaty, during the transitional period of five years aid may also be granted for the investments in the expansion of pig husbandry as well as investments in poultry husbandry and egg production. The total production may not grow, and restrictions on the production capacity at the farm level must be followed. At least 35% of the fodder needed in the production must be produced on the farm. Thus in 1997, too, investment aid was directed to a considerable expansion of farms practicing piglet or pigmeat production. In the case of new buildings eligible aid the number of pig places required is 400-3,000 in the case of fattening pigs and 65-400 in the case of sows. After the expansion and renovation the farm size should be 300-3,000 fattening pig places or 50-400 sows. Investments in 7,500-75,000 broiler places were eligible for the aid. In the case of hen-houses the shift from cages to floor hen houses was eligible for aid in the case of buildings with 2,000-30,000 hen places.

National investment aid was also directed to investments in horticulture, purchase of jointly-owned machinery, investments in subsurface drainage, environmental protection, purchase of additional land, preservation of traditional environments, as well as improvement of the living and working conditions and financing of purchases of residential farms. The law also allows the granting of aid for the diversification of the production or change of the production line. Voluntary debt rearrangement was continued as part of the national adjustment measures. In addition, aid was also directed to a number of other smaller purposes. In the case of the national aid the maximum amounts of the investments are the same as in the aid part-financed by the EU, except in aid based on article 141.

According to the outcome of the negotiations on serious difficulties (article 141), raised investment aid may be granted until 2001 in areas A and B for investments related to the rationalization of the production. These include investments in livestock buildings and other production buildings, machinery, and purchase of additional arable land. The total production capac-

ity may not grow as a result of these investments. According to the EU stipulations, in pigmeat, poultry meat, and egg production the investment aid may not exceed 50% and in other production lines 75% of the total costs. In practice the maximum percentages remain much lower. Part of the aid based on the settlement concerning article 141 is based as a raise of the starting aid for young farmers in areas A and B. The maximum amount of starting aid paid as a subsidy is FIM 30,000, but no more than 35% of the starting costs of the farming. Farmers giving up farming are also eligible for national aid.

However, the implementation of the investment aid system could not be started immediately after the EU membership, and thus it was also possible to apply for the aid for investments started or made in 1995 and 1996 retroactively. In the case of projects for which retroactive aid was paid the amount of aid was 25-30% smaller than in projects launched in 1997, except in the case of purchasing arable land. The terms for the aid based on article 141 are not so strict, because the subsidiary incomes of farmers are not taken into account and there are no maximum amounts for the investments receiving the aid.

12.3. Investments on the increase

Agricultural investments are on the increase for the first time in years, but we cannot yet talk about any investment boom. The level of investment in the late 1980s is still far away (see Table 1). The low level of investment in recent years was caused by the economic depression and uncertainty about the effects of the EU membership. The preparation of the national investment programme was also very slow and the funds available for this purpose were small.

Investment activity recovered during 1997. The raised investment aid based on the outcome of the negotiations concerning serious difficulties has encouraged many farmers to renovate and expand their production buildings. In 1997 altogether loans and subsidies were granted for altogether 15,000 purposes, and the cost estimates of these totalled FIM 4.2 bill. About 2,100 of the targets of the aid were retroactive, and

these were mainly located in areas A and B. At the end of 1997 there were still about 4,000 applications pending, and the cost estimates of these totalled FIM 1.1 bill. Last year about FIM 908 mill. of aid was granted, including FIM 500 mill. as subsidies and FIM 408 mill. as interest benefit. The amount of retroactive aid was about FIM 124 mill. In 1996 aid was granted for about 9,000 projects.

However, the aid for serious difficulties may encourage farmers to make higher investments and thus result in a shortage of funds. In areas A and B altogether FIM 458 mill. of aid was granted for about 6,100 projects. Most of the aid in these areas was granted for investments in production buildings. Of the investments in pig husbandry receiving the aid three fourths were made in areas A and B. In area C altogether FIM 450 mill. was granted for a little over 8,800 projects in 1997.

In terms of the number of projects, the largest group of agricultural investments in the whole country are the investments in environmental protection, mainly manure storage. The number of new investments to cowhouses receiving the aid was 720, and the number of investments in pig houses was 309. In addition, retroactive investment aid was granted to 129 cowhouses and 300 pig houses.

12.4. Development of rural areas

One of the leading ideas in the EU is the promotion of a regionally balanced development of the Union by means of joint measures. Because there is enormous variation in the possibilities for development within the Union, the EU aims at equalizing the regional differences both within the member states and between them. In addition to the agricultural policy, the importance of rural policy, which is part of the regional and structural policies of the EU, is increasing. Agriculture and structural policy measures account for about 80% of the EU budget. The EU part-finances the development work, supplementing the national financing coming from the budgets of the member states as well as regional financing. In 1995-1999 Finland receives altogether

about FIM 10 bill. of aid from the structural funds. The total funds available for the structural funds of the EU in the current programme period are about FIM 872 bill.

In order to promote the balanced development of the different regions, the EU has defined seven objectives for the financial period that comes to an end in 1999. Objective 6 was defined in connection with the last enlargement of the EU to concern Finland and Sweden only. Objectives 2, 5b, and 6 are regional, but the other objectives 3, 4, and 5a concerning Finland may be implemented in the whole country.

Except for objective 2, all objectives may be directed to the rural areas, although the actual means of the rural policy are objectives 5a and 5b of the structural funds. The most rural areas in Southern Finland have been approved as the objective 5b region. The purpose of objective 5b is, in particular, the development of the vitality and industries of the rural areas. Objective 6 region is located in Eastern and Northern Finland, where the purpose of the objective is to alleviate the problems caused by the remote location and sparse population. During the funding period until 1999 the total costs of objective 5b in Finland will amount to about FIM 3.6 bill., and the costs of objective 6 about FIM 7.7 bill. The EU will account for about a third of these costs. 68% of the funds from the structural funds in the current programme period are directed to objective 1 regions, i.e. the least developed areas.

In addition to the objectives, the rural and regional policies are implemented through national regional development programmes as well as community initiatives. Community initiatives are part of the activity of the structural funds, and 9% of their funds are allocated to these. In 1994-1999 the focal areas in the community initiatives are cooperation in border areas, rural development, the peripheral regions of the EU, unemployment and spiritual resources, as well as reducing the effects of the industrial change. The most significant community initiative for Finland is LEADER II, which emphasizes the local initiative in the preservation of the rural employment opportunities and vitality of

the rural areas. LEADER II-programme will be implemented in 1996-1999 in objective 5b and 6 regions. In spring 1997 the activity was extended to the whole country by means of the nationally financed Rural Programme for Local Initiative (POMO).

Proposal of Agenda 2000 for the reform of regional and structural policy

One important part of the Agenda 2000 proposal of the Commission is the proposal for the reform of the regional and structural policies. The objective is to further reduce the regional differences and to alleviate the structural problems. The proposals aim at centralization of the funds and measures, simplification of the administration, clarification of the distribution of labour, as well as increasing the efficiency in the monitoring of the implementation of the programmes and the use of funds. It is proposed that the number of objectives be reduced from the current 7 to 3, two of which would be regional objectives and one would be a horizontal objective concentrating on the development of human resources. The number of community initiatives would be reduced from 13 to 3.

The Commission also proposes that the requirement concerning the share of the popula-

tion to be covered by the objectives be reduced from the current over 50% to 35-40% of the EU population. In Finland about 48% of the population would live in the regions covered by the objectives, 17% living in objective 1 region and 30% in objective 2 region. Eastern Finland fulfills the GDP criterion and would thus be included in objective 1, which is very important for Finland, but according to the proposal the sparsely populated objective 6 regions would also be included in objective 1. Those losing the current aid based on objectives 5b and 2 would be granted a transitional period of four years, during which the aid would be lowered by degrees.

According to the new proposal, too, about two thirds of the aid from the structural funds are directed to objective 1 regions. The funds reserved from structural measures in the proposal during the financial period total 275 bill. ECU, which would be 33% of the EU budget. 45 bill. ECU has been reserved for the structural aid related to the enlargement of the EU.

The Commission proposes that the regional development policy be combined into a more uniform whole, which would supplement the CAP and be more closely linked to this than is the case at present. The current ancillary measures of agriculture (LFA aid, environmental aid, early retirement systems, and aid for afforesta-

Objectives for the financial period 1994-1999

- Objective 1: Promotion of development and structural adjustment of the least developed regions
- Objective 2: Assisting regions affected by industrial decline
- Objective 3: Reduction of long-term unemployment and alleviation of the entry of young people and those outside the labour market to working life
- Objective 4: Adjustment of workers to the structural change of industries
- Objective 5a: Alleviation of structural problems in agriculture, forestry, and fisheries
- Objective 5b: Development and structural adjustment of rural regions
- Objective 6: Development and structural adjustment of northern, very sparsely populated regions

Proposal for 2000-2006

- Objective 1: Development of regions lagging behind in development
- Objective 2: Development of rural and urban regions with structural difficulties and in need of economic and social restructuring
- Objective 3: Development of human resources, including e.g. promotion of local employment initiatives, lifelong education, and combating social exclusion

tion of arable land) as well as most of the structural aid for agriculture and part of the general aid for rural areas would be transferred under a single basic regulation as the rural aid of the EU. The aid would cover whole countries, and the financing share of the EU would come from the Guarantee Section of the EAGGF. Consequently, in Finland the LFA aid, which is very important, could be paid in the whole country.

The most important shares of the funds of the financing framework for the years 2000-2006 are 370 bill. ECU for the CAP, 275 bill. ECU for structural measures, and 75 bill. ECU for the enlargement. The expenditure would be covered through incomes collected from the member states without raising the current ceiling, which is 1.27% of the total GNP of the member states. The shares of the different member states are dependent on the development of the GDP in each state.

13. Environmental policy

In 1997 there was various kinds of public discussion on environmental protection. The Ministry of Agriculture and Forestry and the Ministry of the Environment were engaged in a heated debate over the implementation of the so-called nitrate directive. The disagreement was caused by different interpretations of the EU regulations. The Finnish application of the directive was finally approved in March 1998. According to the decision, however, the maximum quantities of nitrogen fertilization were so high that much lower levels must be applied on farms that have made a commitment to the environmental aid. Thus environmental aid retains its position as the primary means of environmental protection of agriculture.

Another heated debate concerned the proposal for the environmental protection programme called Natura 2000 prepared at the Ministry of the Environment. Land owners made more than 14,000 objections concerning the land areas to be protected according to the proposal. About 95% of the Natura areas were

already included in the protected areas, so that the changes in the land use in question were not very significant. At the local level, however, the effect of the changes may be considerable.

In summer 1997 there was again a lot of blue-green algae, and in many places swimming had to be prohibited in the middle of the hottest part of the summer. Agriculture is estimated to be the main source of nutrient loading to inland and coastal waters, and thus solving the algae problem will inevitably concern agriculture, too. In order to reduce the total load of the Gulf of Finland, measures should be taken, in particular, to reduce the load coming from the St. Petersburg region, but the lack of resources hinders the building of new sewage treatment plants.

The Accession Treaty with the EU includes a quite extensive amount of environmental aid, altogether about FIM 1.6 bill., and the EU accounts for half of this. In 1997 the EU approved an additional amount of aid of about FIM 120 mill., so that the total amount of aid available in 1998-99 is about FIM 1.7 bill. The aid is paid on the basis of hectares to all farms that make a farm environmental management programme and commit themselves to taking certain protection measures. The aid is divided into aid based on the General Agricultural Environment Protection Scheme (GAEPS) intended for all farmers and aid based on the Supplementary Protection Scheme (SPS), which requires more efficient environment protection measures.

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 1997 about 78,000 farms committed themselves to the aid based on the GAEPS, which is about 85% of active farms. The commitments cover about 1.87 mill. ha, i.e. over 90% of the cultivated area. According to the evaluation group, in terms of the scope the objective of the environmental aid has been reached.

In 1997 the environmental aid was distributed as follows:

- GAEPS	FIM	1,382 mill.
- organic production	FIM	123 mill.
- other	FIM	72 mill.
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- total	FIM	1,577 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 SPS should be about equal, except that the aid based on the GAEPS reduces the nitrogen load more than the Supplementary Protection Scheme, whereas the SPS 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 farming.

13.1. Requirements for aid based on the GAEPS

Farmers who commit themselves to the GAEPS have to implement various kinds of environmental protection measures on their farms. The aid is intended 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 GAEPS 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 4 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 is 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. Aid based on the SPS

The agri-environmental programme is quite extensive, and it includes various special aid measures, in addition to the aid based on the GAEPS. 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 thus 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 SPS has been used for organic production and liming of acid sulphate soil. In 1997 the share of these of all aid based on the SPS was 80%. The number of contracts based on this scheme in force in 1997 was about 13,300, and they covered 173,000 ha, i.e. 9% of the cultivated area. Shortage of funds has slowed down the processing of new contracts based on the SPS.

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

Starting from 1997 the aid for the conversion period has been FIM 1,000/ha in the whole country. No new contracts were made in 1997 because there were no funds available. Contracts were made only with organic producers who wished to expand their production. Additional funds for aid based on the SPS is available for 1998 and 1999, and thus new contracts are again being made during 1998. Preliminary funds have been budgeted for 20,000 additional hectares.

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. In 1997 the number of farms that have made a contract on organic production was about 4,450, and the

area converted by the contracts is 105,000 ha. 43,000 ha of this has been approved for organic production.

Riparian zones

Contracts on the establishment and management of riparian zones are closely connected to the environmental aid schemes. 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. In 1997 the number of these contracts in force was less than 800.

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 1997 the number of aid contracts based on the Supplementary Protection Scheme concerning the traditional biotopes, biodiversity, and preservation of landscapes was about 2,500.

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 make insurance payments according to their labor income, which is mainly determined by the area of the farms. They are entitled to, for example, old-age pensions, part-time pensions, disability pensions, unemployment pensions, as well as a pension in case of early retirement. The amount is determined by the insurance payments based on labour income. The state also contributes to financing the pension costs.

Support 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 transfer 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 for giving up production is close to the full disability pension. The EU accounts for about a half of the costs of this

system. This system has been used less than was expected. The number of application has been 1,500-2,000 farms per year, when it was estimated at about 3,000 a year when the programme for the aid for giving up production was prepared.

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. In the beginning of July 1997 the level of the daily compensation was lowered from 75% to 70%, and no compensation is paid for the first three days.

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 the beginning of July 1997 a bonus system was introduced, i.e. the insurance payments of farmers avoiding accidents are lowered.

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 financed by the state.

Farmers can get *substitute help* in the case of sickness, accidents, rehabilitation, military service. Substitute help due to pregnancy or childbirth can be obtained for the period of time determined by the National Pensions Institute. 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 Institute and the state account for the rest. The social security payment are paid in full through the state budget.

IV SUMMARY

The growth in the state economy accelerated towards the end of 1997, and the annual growth in the GDP was as high as 5.9%. Inflation was low and the interest rates and exchange rates were quite stable. Budget balance is gradually being achieved in the public sector. Finland fulfilled all the criteria for the EMU, and we are ready to join the Economic and Monetary Union in the beginning of 1999. Among the general public, there was a lot of discussion on the advantages and disadvantages of the EMU.

The extent of agricultural production and the price level of the most important products were about the same as in the previous year. Agricultural income decreased, mainly as a result of the fall in the different forms of aid. Felling reached record quantities and the increase in the income from timber sales improved the economic result of farms. Increase in the investments show that most farms believe in the future of Finnish agriculture. However, there is still a lot of concern among farmers due to the uncertainty related to the agricultural policy in the coming years, concerning both the CAP and the level of national aid.

Agricultural production and markets

The beginning of the growing season was quite weak. The spring and early summer were very cold, and sowing was delayed. However, after June the summer was quite hot, and towards the end of the summer the growth was more rapid than usually. All cereals ripened at about the same time, which was very demanding for the farms in terms of the labour and machinery. Altogether 3.8 bill. kg cereals were harvested, which is 2.7% more than in 1996. The total yield

as fodder units grew by about 3% from the previous year. Positive developments in the crop season of 1997 include the excellent quality of spring wheat, top yield in sugar beets, and high quality of grass for feeding stored for the next year.

Milk production started to increase in spite of the fall in the number of farmers delivering milk to dairies by 1,900 in 1997. One reason for the increase in the milk yields on farms continuing their production was the growth of almost 200 l/cow in the average yield. The majority of farms exceeded their reference quantities for dairy milk, which were cut by 4.5% in spring 1997. Exceeding the reference quantities is profitable as long as the national quota is not fulfilled, because in this case no charges are collected for the excess and national aid is also paid for the production exceeding the reference quantity. The prices of milk quotas fell considerable as a partly administered system was introduced in the trade on quotas. The market price of milk was at the same level as in 1996. However, there are pressures on the future price level, because competition on the milk market is increasing.

Pigmeat production grew by 5% in 1997. In early summer the market prices started to increase, but not as much as in the other EU countries on the average. The long-term contracts with slaughterhouses in Finland reduced the pressures to raise the price due to the swine fever epidemic in the Netherlands. There was some discussion of the BSE disease affecting cattle in 1997, too.

There was some increase in beef production, but the price fell from the previous year. The consumption of poultry meat continued to grow, and the production also increased by 10%. The

reduction in the egg production is far too small to solve the marketing problems due to oversupply. The producers and packaging companies are cooperating to balance the markets.

Agricultural imports and exports both grew in 1997. The exports of dairy products, meat, and cereals exceeded the quantities of 1996. Cereal imports fell, but more highly processed foods were imported to an increasing extent from the single market of the EU. What is quite promising in terms of the future development is that the exports to Russia continued to grow. Besides the growth in exports, Finnish food companies are also becoming more international through foreign direct investments. Purchases of companies from abroad play a central role in the strategies of the food industry.

There were no major changes in the consumer prices in 1997, and the consumption did not change very much, either, except for a few special cases. Cheese consumption started to decrease, which is contrary to the trend in the past few years. The considerable increase in the egg consumption after joining the EU was only a temporary phenomenon, because the consumption is now back at the same level as in 1994. Pigmear consumption fell as a result of the price increase.

The agricultural income in 1997 was about FIM 6.6 bill., which is about 1% lower than in the previous year. The reduction was mainly caused by the decrease in the support. Input prices rose by about 2%, and producer prices fell by a little over 1%.

Agricultural policy

The development of the CAP of the EU continued along the lines introduced by the reform of 1992. However, there were no major changes in the prices of the most important products and in the level of the CAP support compared to the previous year. Consequently, the decrease in the real market prices of agricultural products in the whole EU was caused by changes in the demand and supply.

In early 1997 the agricultural policy of the EU concentrated on solving the problems caused by

the extensive outbreak of swine fever in the Netherlands. In the WTO the EU had to defend its position in issues concerning e.g. the imports of hormone-treated meat, because WTO's dispute settlement body ruled that the EU ban on meat containing hormones discriminates against imported products. The latter part of the year was dominated by the Agenda 2000 proposal, especially the outlines for the reform of the agricultural policy as well as structural and regional policies presented in the proposal.

In the Finnish agricultural policy, too, the authorities and politicians spent a lot of time on Agenda 2000. There was a lot of discussion on the level and details of national aid. Advancing the interests of the dairy sector became more aggressive. Environmental issues, like Natura 2000 programme and the nitrate directive were also on the foreground in the Finnish agricultural policy. The settlement concerning the aid for Southern Finland based on Article 141 of the Accession Treaty came into effect in 1997. According to this, in Southern Finland the aid for livestock production is paid as raised aid for the transitional period until the end of 1999, and the aid for crop production as a national supplement to the environmental aid. The extensive investment aid programme is an important part of the settlement. The farmers criticized the temporary nature of the aid as well as the strong emphasis on investment.

The aid for investments increased the agricultural investments. In 1997 loans and subsidies were granted for altogether 15,000 investments, for which cost estimates were FIM 4.2 bill. Over FIM 900 mill. of aid was granted for these, about FIM 124 mill. of this being retroactive aid for investments started or made in 1995-96. Investment aid was mainly directed to the growth in the farm size. The largest number of projects concerned environmental protection, mainly the construction of manure storage facilities.

National income aid for agriculture paid in 1997 was about FIM 300 mill. lower than in the previous year. The outlook for the profitability of agriculture is weak, but both the maximum levels of aid imposed by the EU and the national budget cuts would require cuts in the national

aid. Negotiations on the agricultural income of 1998 were conducted between the state and the producer organization in the latter part of 1997. The outcome of the negotiations was that the national income aid for 1998 will be further reduced by FIM 300 mill., even if the final decision remained to be made by the Government as the producer organizations rejected the solution. Later on, however, in a supplementary budget the Government has allocated FIM 100 mill. and based on the authority to assign funds FIM 62 mill. to the national aid for agriculture.

The most important issue raised in 1997 in the long term is the Agenda 2000 proposal presented by the Commission, including proposals for the reform of the CAP as well as structural and regional policies. According to the Commission, the reform of the CAP is necessary due to the eastern enlargement and challenges imposed by the WTO negotiations. At the same time efforts are made to secure the competitiveness of the foodstuffs of the EU on the growing world market.

The Commission published its opinion on the necessary changes in the agricultural policy in July 1997. According to this, the development introduced by the reform of 1992 should be continued. The administered prices of arable crops and beef would be further lowered to bring them closer to the world market prices, and, unlike in the reform of 1992 the producers would receive compensation as direct aid for only part of the reduction. It was also proposed that a similar reform be implemented in the dairy sector. The Commission also wishes to harmonize the agricultural and rural policies.

The views of the member states concerning the reforms were contradictory. The only thing in common was that the basic outlines for the agricultural policy were considered correct. The final reform will be a compromise between the member states and the Commission, and it may be postponed to 1999. After the political round the Commission presented partly revised proposals for the reform.

From the Finnish perspective the problems involved in Agenda 2000 concern e.g. the level of the aid for arable crops and cattle production.

In Finland mainly fodder cereals are cultivated, and the prices of these are expected to fall more than the wheat prices. Thus the new level of aid is not adequate to compensate for the income losses, and the case would be the same in the cattle husbandry. No maize is cultivated in Finland, but the production of roughage is based on grass. The proposal weakens the competitiveness of grass.

The year 1998 brings along enormous challenges for the agricultural policy in Finland. Concerning Agenda 2000 Finland applies for special arrangements that would take into account the permanent disadvantages due to the natural conditions affecting the competitiveness of Finnish agriculture. Concrete solutions can be expected before the summer. The proposals put forward include e.g. special aid for cereals based on the additional cost due to drying of cereals in Finland. It has been suggested that the position of cattle husbandry could be improved by means of aid for grass production, because the Finnish farmers cannot take advantage of the aid for maize silage, which is an integral part of cattle production in Central Europe. The negotiations on the continuation of the aid for Southern Finland should be launched during 1998.

1999 will be a year of major decisions in many ways both in the whole EU and in Finland. Issues concerning the future of the common agriculture, negotiations on the enlargement of the EU, preparation for the WTO negotiations, as well as transition to the third stage of the EMU will all have to be settled at that time. Finland will be the chairman of the EU during the second half of 1999, which will probably influence the negotiations on the special issues concerning Finland. It is possible, that no agreement on the reform of the agricultural policy can be reached prior to the latter half of 1999.

Farmers have been forced to adjust to a situation characterized by expectation and uncertainty. Even if we know very little about the situation after 1999, farmers need long-term information in order to be able to make investment and other decisions extending far into the future.

Exchange rate: 1 ecu = FIM 5.79 December, 1997
1 green ecu = FIM 6.0281

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

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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		
			Goods and services	Investments	Buildings
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
1997	60.5	90.0	87.8	94.6	94.2

¹⁾Indices are based on EU's classifications.

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	155.3	15.84	30	122	5.8
1997 ^e			28		

¹⁾over 1 hectare

²⁾Source: Finnish Labour Review, Ministry of Labour.

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	4,178.8
1996 ¹⁾	392.2	5,993	1,395.4	4,183.5
1997 ¹⁾	390.9	6,183	1,467.0	4,151.5

¹⁾1.5.

Appendix 4. Sales of fertilizers (kg/ha) per crop year.

	N	P	K
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	92.3	16.1	34.2
1996-97	86.0	11.8	32.5

Source: Kemira.

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

	1992	1993	1994	1995*	1996*	1997e*
CROP PRODUCTION						
- Rye	121.5	89.8	98.1	10.7	61.1	56.7
- Wheat	938.4	577.6	820.6	148.0	451.0	431.1
- Barley	1,730.6	1,409.8	1,779.9	457.2	654.6	749.8
- Oats	865.5	887.3	935.8	169.4	276.8	327.0
- Potatoes	489.7	331.2	496.0	392.7	260.0	369.2
- Potatoes of processing	163.1	180.4	178.6	113.1	130.9	116.1
- Seed potatoes	7.9	6.9	5.7	5.8	6.7	6.1
- Sugar beets	475.3	475.6	505.0	433.7	431.9	431.5
- Oil plants	326.3	416.5	336.7	71.0	126.3	122.6
- Peas	32.7	23.9	17.0	9.8	14.8	12.7
- Grass seeds	21.3	13.1	22.3	11.5	13.1	13.9
Total	5,172.4	4,412.1	5,195.7	1,822.8	2,427.3	2,636.8
GARDEN PRODUCTION						
- Root crops	76.8	85.2	129.8	112.9	107.4	112.0
- Vegetables	561.5	571.3	630.4	474.0	509.3	531.1
- Berries	187.7	181.8	185.2	147.9	187.1	143.9
- Fruits	22.9	23.5	20.3	16.8	18.8	17.4
Total	848.9	861.8	965.7	751.6	822.6	804.4
ANIMAL PRODUCTION						
- Milk	7,391.6	7,615.6	7,723.7	6,533.0	6,264.3	6,285.1
- Beef	3,522.6	3,117.6	3,278.9	1,993.0	1,678.9	1,589.4
- Veal	0.3	0.3	0.3	0.2	0.4	0.7
- Pork	2,869.9	2,751.1	2,753.1	1,770.5	1,788.5	1,863.8
- Mutton	41.6	43.7	50.0	29.4	28.1	21.8
- Horse meat	21.3	17.9	13.9	3.3	3.6	3.0
- Poultry	449.9	423.1	476.1	348.4	423.2	437.2
- Eggs	806.9	807.4	799.5	374.7	438.0	338.4
- Wool	3.1	3.6	4.4	0.5	0.6	0.6
- Export of animals	2.5	2.2	1.6	2.3	1.4	1.4
Total	15,109.6	14,782.5	15,101.5	11,055.3	10,627.0	10,541.5
STORAGE COMPENSATIONS				2,281.8		
Production total	21,130.9	20,056.4	21,262.9	15,911.5	13,876.9	13,982.6
INCOME FROM RENTS						
- Means of production	460.4	345.4	255.2	204.5	189.3	188.6
- Buildings and land	180.7	169.8	163.9	160.8	161.8	162.3
Total	641.1	515.2	419.1	365.4	351.1	350.9
SUBSIDIES						
- by farm size	758.6	678.6	611.1			
- by number of cows	206.9	203.7	201.9			
- Premium of feed grains	27.4	25.2	0.2			
- "Start money"	85.3	61.4	55.5			
- Premium for suckler cows	37.8	47.5	50.9			
- Support for field area	1,116.3	959.3	1,160.9			
Total	2,232.4	1,975.6	2,080.4	0.0	0.0	0.0
COMPENSATIONS TO REDUCE PRODUCTION						
- Production guiding (4a§)	3.1	1.7	1.3	0.9		
- Milk bonus	330.8	197.6	0.1			
- Fallowing compensations	567.8	457.9	364.7			
- Premium for ecological cultivation	40.5	32.0	26.1	17.2		
- Premium for pea cultivation	27.4	13.1	5.8			
- Premium for green hay	0.9	1.1	0.9			
Total	970.5	703.3	398.9	18.2	0.0	0.0
EU SUPPORT						
- CAP arable area payments				1,153.7	1,361.9	1,310.9
- CAP aid for animal husbandry				104.0	278.3	235.6
- LFA aid				1,614.8	1,604.0	1,604.6

Appendix 5, continued.

	1992	1993	1994	1995*	1996*	1997e*
- Environmental aid				1,411.2	1,577.6	1,625.3
- Northern aid per livestock unit				80.1	87.6	193.7
- Transitional aid per headage				282.5	256.8	227.6
- Other national aid per headage				42.5	41.3	34.2
- Transitional aid per hectare				0.0	299.6	213.2
- Other national aid per hectare				0.0	316.5	314.9
- Aid for hortic. products grown in the open				0.9	115.2	106.4
- Other aids				0.0	101.0	13.1
Total				4,689.7	6,039.9	5,879.5
COMPENSATIONS FOR CROP DAMAGES	15.0	133.0	7.9	11.9	34.0	7.0
GROSS RETURN TOTAL	24,989.9	23,383.5	24,169.1	20,996.6	20,301.9	20,220.0
COSTS						
- Fertilizers	1,579.6	1,691.9	1,532.6	1,183.8	1,149.1	1,018.8
- Lime	149.2	257.5	269.3	208.5	240.7	260.2
- Feed concentrates						
- mixture	2,655.5	2,584.0	2,722.3	1,927.7	1,988.8	2,092.0
- other	42.0	39.3	52.5	55.4	55.4	57.1
- Feed conserving chemicals	122.6	103.0	145.0	102.9	106.2	108.9
- Pesticides	289.1	289.2	283.4	240.2	226.3	209.8
- Purchased seeds	260.9	304.0	337.2	259.1	173.2	207.8
- Fuel and lubricants	663.4	713.7	573.9	510.0	562.0	616.1
- Electricity	434.3	462.9	454.0	377.0	418.0	432.4
- Agricultural firewood and timber	67.7	60.9	61.1	60.3	54.7	55.0
- Delivery of calves and pigs	55.4	52.7	53.4	46.6	51.5	53.4
- Overhead costs	1,681.9	1,729.2	1,793.5	1,611.8	1,576.1	1,600.8
- Hired labor						
- wages	441.7	400.0	395.2	395.4	361.5	375.6
- social expenses	280.4	282.2	268.5	260.0	230.2	242.6
- Machinery and equipment						
- depreciations	3,193.0	3,224.0	3,040.0	2,332.0	2,172.0	2,027.0
- maintenance	961.2	898.2	737.3	742.0	777.0	792.5
- Equipment	157.1	167.3	167.7	137.8	201.0	200.8
- Building expenses						
- depreciations	1,108.0	1,114.0	1,146.0	1,038.0	1,041.0	1,108.0
- maintenance	304.2	244.9	211.4	207.0	217.0	229.7
- Drainage, bridges, etc.						
- depreciations	301.0	259.0	248.0	243.0	247.0	259.0
- maintenance	161.2	140.4	108.2	97.0	100.0	102.5
- Interest payment	1,653.6	1,586.3	1,151.4	977.5	907.0	764.0
- Imports of animals	5.7	3.1	4.2	1.6	2.2	2.2
- Rent expenses						
- means of production	289.4	283.7	179.1	168.0	169.0	170.0
- buildings and land	339.3	350.8	355.0	414.0	465.0	474.0
- Farmers' share of costs from						
- accident insurance payment	42.9	40.0	61.3	55.7	63.0	81.9
- outside help	25.0	36.7	46.2	40.0	56.0	56.0
- days-off scheme	17.0	12.6	11.2	14.8	14.0	10.0
COSTS TOTAL	17,282.1	17,331.5	16,408.8	13,707.0	13,624.8	13,608.1
GROSS RETURN TOTAL	24,989.9	23,383.5	24,169.1	20,996.6	20,301.9	20,220.0
COSTS TOTAL	17,282.1	17,331.5	16,408.8	13,707.0	13,624.8	13,608.1
FARM INCOME	7,707.8	6,052.1	7,760.3	7,289.6	6,677.1	6,612.0

*Since the calculation method of the depreciation was changed the calculations of the years before 1995 are not comparable with year 1995 and thereafter (places where comparisons can not be made: all cost depreciations as well as total costs and farm income).

Appendix 6. Agricultural aid^{*)}.

AID FINANCED COMPLETELY OR PARTLY BY THE EU IN 1997

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	1,567	1,567	1,567	1,567	1,567	1,567	1,567
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 SUPPORT							
Special beef premium	814	814	814	814	814	814	814
extensification premium							
- 1-1,4 LU/ha	217	217	217	217	217	217	217
- < 1 LU/ha	313	313	313	313	313	313	313
Suckler cow premium	1,054	1,054	1,054	1,054	1,054	1,054	1,054
extensification premium							
- 1-1,4 LU/ha	217	217	217	217	217	217	217
- < 1 LU/ha	313	313	313	313	313	313	313
Annual ewe premium	90	130	130	130	130	130	130
LFA AID							
- objective 6-area: FIM 970/unit							
- other LFA areas: FIM 970/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

^{*)}This appendix includes only the main agricultural products and therefore the list of various support measures is not complete.

Appendix 6, continued.

NATIONAL AID FOR AGRICULTURE AND HORTICULTURE

	Unit	1996 FIM/unit	1997 FIM/unit	1998 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
Male bovines ≥15 months	FIM/slaughtered animal	1,787	1,609	1,447
- " - , beef races and crossings	- " -	2,184	1,966	1,768
Heifers ≥12 months, male bovines 11-14 months	- " -	1,024	922	830
Dairy cows	- " -	138	124	112
Ewes	- " -	226	203	183
Pigs	- " -	210	192	169
Broilers	FIM/100 slaughtered animals	240	213	169
Laying hens	FIM/animal	32	26	23
C-area excl. Archipelago				
Milk	FIM/kg	0.52	0.33	0.21
Male bovines ≥15 months	FIM/slaughtered animal	1,787	1,279	793
- " - , beef races and crossings	- " -	2,184	1,564	970
Heifers ≥12 months, male bovines 11-14 months	- " -	1,024	648	388
Dairy cows	- " -	138	46	0
Ewes	- " -	226	162	107
Pigs	- " -	210	163	104
Broilers	FIM/100 slaughtered animals	240	179	125
Laying hens	FIM/animal	32	21	14
Archipelago, A- and B-areas				
Milk	FIM/kg	0.62	0.55	0.52
Male bovines ≥15 months	FIM/slaughtered animal	2,864	2,578	2,319
- " - , beef races and crossings	- " -	3,501	3,151	2,834
Heifers ≥12 months, male bovines 11-14 months	- " -	1,730	1,558	1,402
Dairy cows	- " -	138	124	0
Ewes	- " -	349	314	282
Pigs	- " -	247	215	180
Laying hens	FIM/animal	40	31	27
Archipelago, C-areas				
Milk	FIM/kg	0.62	0.44	0.27
Male bovines ≥15 months	FIM/slaughtered animal	2,864	2,357	1,063
- " - , beef races and crossings	- " -	3,501	2,880	1,300
Heifers ≥12 months, male bovines 11-14 months	- " -	1,730	1,354	700
Dairy cows	- " -	138	46	0
Ewes	- " -	349	278	169
Pigs	- " -	246	200	124
Laying hens	FIM/animal	40	26	18
Production aid for arable crops				
Starch potatoes	FIM/kg	0.027	0.018	0.013
Malting barley	FIM/kg	0.16	0.11	0.09
Wheat	FIM/kg	0.23	0.18	0.13
Rye	FIM/kg	0.25	0.19	0.13
Sugar beet	FIM/kg	0.046	0.032	0.024

Appendix 6, continued.

	Unit	1996 FIM/unit	1997 FIM/unit	1998 FIM/unit
Transitional aid per hectare				
Pea (for human consumption)	FIM/ha	600	415	310
Hectarage support for other crops excl. set-aside and pea (for human consumption)	FIM/ha	190	125	80
Aid for horticultural products grown in the open				
Apples (max.)	FIM/ha	2,750	1,970	1,480
Vegetables, A (max.)	FIM/ha	4,800	3,450	2,410
Vegetables, B (max.)	FIM/ha	4,100	3,000	2,155
Vegetables, C (max.)	FIM/ha	4,100	2,600	1,835
Berries, A (max.)	FIM/ha	2,750	1,950	1,480
Berries, B ja C (max.)	FIM/ha	1,900	1,350	1,000
Aid for young farmers, A- and B-areas	FIM/ha	200	150	100
Storage aid for horticultural products, AB-areas (max.)				
Storage with heating systems	FIM/m ³	114	108	100
Other storages	FIM/m ³	76	72	67
Aid for horticultural products A- and B-areas (max.)				
>7 months	FIM/m ²	100	72	65
2-7 months	FIM/m ²	50	36	33
Aid for horticultural products C-area (max.)				
>7 months	FIM/m ²	100	72	43
2-7 months	FIM/m ²	50	36	22
Transitional aid per headage or per livestock unit				
A- and B-areas				
Aid for animal husbandry, suckler cows	FIM/animal	570	540	486
- " -, sows	FIM/animal	1,540	1,380	1,214
- " -, hatching broiler	FIM/animal	58	52	45.8
- " -, hatching turkey and other hatching poultry	FIM/animal	85	75	60.2
- " -, goats incl. aid for milk	FIM/animal	1,500	1,386	1,275
Additional aids, Archipelago and some local authorities				
Cattle and ewes	FIM/LU	1,615	1,530	1,377
Dairy cows, Ikaalinen etc.	FIM/LU	380	360	324
Hartola, Mäntyharju	FIM/LU	285	270	243
Male bovines, Ikaalinen etc.	FIM/LU	315	297	267
Kiikoinen etc.	FIM/LU	95	90	81
Ewes (in local authorities mentioned above)	FIM/LU	650	585	527
Aid for animal husbandry, chickens	FIM/animal	2.46	1.50	1.0
- " -, horses	FIM/LU	2,900	2,250	1,800
C-areas				
Aid for animal husbandry, suckler cows	FIM/animal	570	450	350
- " -, sows	FIM/animal	1,540	1,132	625
- " -, hatching broiler	FIM/animal	58	42	30.6
- " -, hatching turkey and other hatching poultry	FIM/animal	85	65	45
- " -, goats incl. aid for milk	FIM/animal	1,500	1,157	821
- " -, chickens	FIM/animal	2.46	1.10	1.00
- " -, horses	FIM/LU	2,900	2,250	1,800

Appendix 6, continued.

	Unit	1996 FIM/unit	1997 FIM/unit	1998 FIM/unit
B. NORTHERN AID				
Aid per livestock unit				
Aid for animal husbandry, suckler cows				
C1	FIM/LU	100	495	680
C2	FIM/LU	150	540	730
C2North.	FIM/LU	600	945	1,180
C3	FIM/LU	1,050	1,395	1,630
C4	FIM/LU	2,150	2,495	2,720
Aid for animal husbandry, male bovines >6 months				
C1	FIM/LU	650	1,100	1,550
C2	FIM/LU	700	1,150	1,600
C2North.	FIM/LU	1,150	1,600	2,050
C3	FIM/LU	1,600	2,050	2,500
C4	FIM/LU	2,700	3,150	3,600
Aid for animal husbandry, ewes and goats				
C1	FIM/LU	650	1,100	1,550
C2	FIM/LU	700	1,150	1,600
C2North.	FIM/LU	1,150	1,600	2,050
C3P1-P2	FIM/LU	3,100	3,350	4,000
C3P3-P4	FIM/LU	3,700	4,150	4,600
C4P4	FIM/LU	4,800	5,250	5,700
C4P5	FIM/LU	6,400	6,850	7,300
Aid for animal husbandry, pigs				
C1	FIM/LU	0	355	841
C2	FIM/LU	0	370	862
C2North.	FIM/LU	590	920	1,382
C3	FIM/LU	590	920	1,382
C4	FIM/LU	900	1,240	1,812
Aid for animal husbandry, poultry				
C1	FIM/LU	0	385	693
C2	FIM/LU	0	397	720
C2North.	FIM/LU	590	952	1,240
C3	FIM/LU	900	1,272	1,650
C4	FIM/LU	2,400	2,672	2,850
Northern aid paid for slaughtered animals				
Male bovines				
P1-P2	FIM/animal	780	780	780
P3-P4	FIM/animal	1,080	1,080	1,080
P5	FIM/animal	1,980	1,980	1,980
Heifers				
C1	FIM/animal	460	730	1,080
C2	FIM/animal	470	740	1,100
C2North. and Archipelago	FIM/animal	780	1,050	1,400
C3	FIM/animal	1,060	1,310	1,650
C4	FIM/animal	1,640	1,840	2,160

Appendix 6, continued.

	Unit	1996 FIM/unit	1997 FIM/unit	1998 FIM/unit
Northern production aid for milk				
C1	FIM/kg	0.16	0.26	0.32
C2	FIM/kg	0.17	0.28	0.35
C2North.	FIM/kg	0.28	0.37	0.44
C3P1	FIM/kg	0.46	0.54	0.61
C3P2	FIM/kg	0.56	0.64	0.71
C3P3-P4	FIM/kg	0.71	0.79	0.86
C4P4	FIM/kg	0.98	1.06	1.13
C4P5	FIM/kg	1.50	1.58	1.65
Northern aid per hectare				
C1-, C2- and C2North. and Archipelago				
Wheat, rye	FIM/ha	0	200	400
Malting barley	FIM/ha	0	70	210
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	70	210
Sugar beet	FIM/ha	500	785	990
Starch potatoes	FIM/ha	400	495	550
Vegetables grown in the open (also C3 and C4)	FIM/ha	0	845	1,110
Apples	FIM/ha	0	205	360
General aid per hectare C2-C4				
C2	FIM/ha	200	200	170
C2North. and Archipelago	FIM/ha	200	200	170
C3	FIM/ha	400	360	340
C4	FIM/ha	800	720	680
Hectarage aid for young farmers C1-C4	FIM/ha	200	180	170
Aid for greenhouse products, C-areas (max.)				
>7 months	FIM/m ²	0	0	24
2-7 months	FIM/m ²	0	0	12
Northern storage aid for horticulture products (max.)				
Storages with heating systems	FIM/m ³	114	108	102
Other storages	FIM/m ³	76	72	68
C. NATIONAL AID FOR CROP PRODUCTION				
A-area incl. Archipelago in A- and B-areas				
Rye	FIM/ha	0	260	900
Wheat	FIM/ha	0	260	420
Malting barley	FIM/ha	0	110	200
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	110	200
Starch potatoes	FIM/ha	0	135	240
Sugar beet	FIM/ha	0	270	475
Vegetables grown in the open	FIM/ha	0	900	1,340
Apples	FIM/ha	0	205	360

Appendix 6, continued.

	Unit	1996 FIM/unit	1997 FIM/unit	1998 FIM/unit
B-areas				
Rye	FIM/ha	0	200	800
Wheat	FIM/ha	0	200	340
Malting barley	FIM/ha	0	70	210
Hectarage support for other crops excl. wheat, rye, malting barley, feed grains and set-aside	FIM/ha	0	70	120
Starch potatoes	FIM/ha	0	135	240
Sugar beet	FIM/ha	0	270	475
Vegetables grown in the open (incl. Archipelago)	FIM/ha	0	450	790
Apples	FIM/ha	0	205	360
Other national aid for arable crops				
A-, B- and C-areas, grass	FIM/ha	0	330	460
C1-area, feed grain	FIM/ha	0	70	210
C2- and C2North., feed grain	FIM/ha	0	70	290
C, rye	FIM/ha	0	0	400

Aid during the transitional 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.

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