



FINNISH AGRICULTURE IN 1991

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MAATALOUDEN TALOUDELLINEN TUTKIMUSLAITOS
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Abstract. Finnish agriculture in 1991

The crop of 1991 was good, albeit smaller than in the previous year. The area under cultivation, however, was 12% smaller than in 1990 as a result of efficient fallowing. Every farmer had to leave fallow 15% of the arable land area, or they had to pay FIM 1,000/hectare as export cost charges.

However, the reduction in the area under cultivation was not adequate, because the crop of feed grain exceeded the domestic need by about 25%. The crop of bread grain was a little smaller than the annual consumption, but there is still a lot of both rye and wheat in stock.

Livestock production decreased by 6% last year. The amount of milk delivered to dairies fell as much as 10%. The consumption of dairy products is on the decrease, but last year the consumption of butter increased by about 9%, which was a remarkable deviation from the previous few years. The consumption of cheese continued to grow.

Pork production decreased by about 4%, whereas beef production stayed at about the same level as earlier. Poultry meat production has been growing quite steadily, and this trend

continued last year. Consumers favor broiler more and more. The consumption of other meats remained quite steady.

The share of agriculture in the export costs of overproduction increased considerably in 1991. After the changes in the Farm Income Act, the share of agriculture rose to FIM 1.7 bill., which is 22% of agricultural income. Consequently, agricultural income decreased by 13% last year. In addition to the rise in export costs, this was caused by the reduction in the quantities produced.

Measures to restrict production will dominate in agricultural policy in 1992 as well. Mandatory fallowing will continue next summer, and various kinds of marketing charges will be collected from farmers. The tax on fertilizers will also be raised for environmental reasons.

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

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Preface

In 1991 agriculture suffered from economic recession, like the whole national economy. As a result of the difficulties in the public economy, the Farm Income Act was revised so that a larger share of the export costs is to be covered by agriculture. As the grain crops had been good for many years in a row, the stocks were full. In order to get the new crop into the market it was necessary to export record quantities of grain, which resulted in a heavy increase in the marketing charges collected from farmers. Farmers protested very strongly against the measures taken by the government.

The discussions on the European integration also made the moods gloomy in agriculture. The possible integration of Finland in the EC would weaken the preconditions of agriculture very strongly. Agriculture launched a campaign against the integration.

This publication presents a brief overview of the development of agriculture in 1991. It includes preliminary data on production, prices and income. In the beginning of the year many statistics are still only preliminary, especially the development of incomes involves a lot of estimation. I hope, however, that the survey

presented here provides a sufficiently accurate view of Finnish agriculture in 1991.

Chapter III on Finnish agricultural policy is very condensed, and it is not possible to include all details. Some parts of the publication have been kept as before because no major changes have occurred in certain issues. Statistical data has naturally been brought up to date.

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

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Lauri Kettunen

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I

OVERVIEW OF AGRICULTURE IN FINLAND

1. Agriculture and the national economy

1.1. Gross domestic product and investments

In Finland the share of agriculture proper of the gross domestic product is only 3%. An abundance of purchased inputs, e.g. fertilizers, machinery, fuel, services, etc., is used in agriculture, and the share of farmer's income is only about a third of the value of agricultural production. The total food chain, which, apart from farmers, includes the manufacturing of production inputs, food industry, and trade, is much larger. Food accounts for about one fifth of consumer expenditure, which also illustrates

the share of food chain in the whole national economy.

The share of agriculture in the GDP has continuously been on the decrease because agricultural production has not grown as much as production in other sectors. This is caused by the fact that consumption of food stuffs has increased slowly, and production for export is not profitable.

The share of agriculture of the employed labor force is about 7 % (Appendix 2), i.e. almost three times its share of the GDP. This reflects the low income level in agriculture, but it should be noted that only about half of farmers' total income comes from agriculture, and the majority of farmers work partly in other sectors. The statistics may not give a correct picture of the work contribution of agriculture and its significance as an employer. There is no

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

Year	Gross domestic product			Investments		
	total FIM bill.	agriculture FIM bill.	%	total FIM bill.	agriculture FIM bill.	%
1981	195.29	7.65	3.9	54.69	3.51	6.4
1982	218.82	9.39	4.3	60.99	4.29	7.0
1983	246.33	11.40	4.6	70.05	4.68	6.7
1984	275.24	12.44	4.5	73.43	4.61	6.3
1985	298.67	12.43	4.2	80.05	4.80	6.0
1986	315.90	13.05	4.1	83.51	4.59	5.5
1987	344.93	10.93	3.2	93.27	4.25	4.6
1988	384.46	11.01	2.9	111.05	4.54	4.1
1989	432.61	13.38	3.1	137.41	5.20	3.8
1990 ^{e)}	457.55	14.67	3.2	138.08	4.98	3.6

^{e)} estimate

Source: Statistical Yearbook of Finland (from various years) and Economic Survey 1991).

more labor force available in agriculture for the needs of the other sectors.

Agricultural investments are about 4% of the investments of the whole national economy, which is proportionally more than its share of the GDP would imply. This is probably a result of the strong structural change in agriculture, and, in general, of the fact that agriculture is a very capital intensive industry. It is also notable that in the 1980s investments have been proportionally higher than in the 1970s. The turning point has probably been reached, however. The number of farms as well as production are on the decrease, and, as a result, fewer investments are needed. In 1991 the purchases of tractors and combine harvesters decreased by 30-40%.

1.2. Economic growth

In 1991 Finnish economy fell into a deep depression. The gross domestic product dropped 6%. The decline started already in 1990, when the growth was only 0.4%. The prospects for the future are still bad, although, according to forecasts, the GDP should not continue to decrease in 1992.

There are several reasons for the depression. The national economy overheated during the rapid growth in the 1980s. During that period Finnish economy grew faster than that of any other industrialized country, except Japan. There was a shortage of labor force, and, as a result, wages rose more than the agreements would have required. In 1990 the wage drift was still about 4%, which doubled the raises, even if a moderate increase in the income level had been set as the target. The foreign competitiveness of industry decreased considerably and the growth of exports remained small. The balance of economy shook in the ecstasy of speculation in the stock market. The liberalization of the money market led to the indebtedness of both companies and private consumers. Finland's foreign debt increased at an alarming rate.

The bill was finally due in 1991, and certain other factors increased the economic recession. Exports to the Soviet Union collapsed almost completely, and no new export markets were to

be found to replace this. This alone caused an about 2% decrease in the GDP. The weak economic situation in the industrialized countries has also slowed down the development of exports. The GDP started to decrease in Sweden and the Great Britain, two important countries for Finnish exports. Economic growth has also stopped in the USA.

The depression shows in the most dramatic way as a rapid increase in unemployment. At the beginning of 1990 there was still talk about a shortage of labor force, and the unemployment rate was 3.5%. The turning point had already been reached, however, and unemployment grew during the whole 1991. At the end of the year there were 340,000 unemployed and the unemployment rate was 13%. Nobody had forecast or even thought that unemployment would ever reach such figures in Finland.

The imbalance of the national economy started to get alarming in many years towards the end of the 1980s. The deficit in the balance of current accounts, in particular, grew rapidly. The national economy ran into debt much too fast. In 1988 the deficit in the balance of current accounts was FIM 11.3 bill., in 1989 it was 24.9 bill., and in 1990 26.9 bill. This could not go on very long, because managing the debt would have become overwhelming. Slower economic growth is often considered the only possibility to manage the balance of current accounts. The

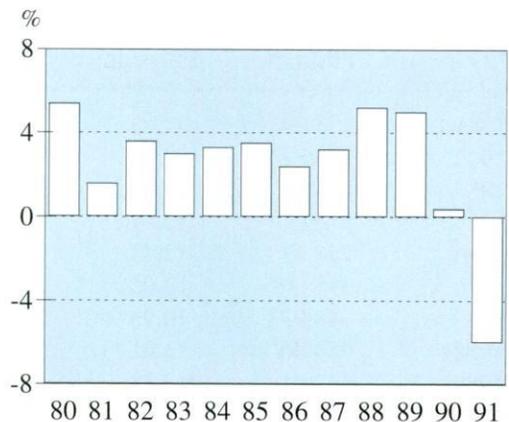


Figure 1. Growth of market price GDP in 1985 prices (%/year).

reduction in the economy that occurred served this purpose, but hardly anyone wished the reduction to reach the extent it actually did. The balance of trade showed a surplus of FIM 3 bill., and the deficit in the balance of current accounts dropped to FIM 24 bill. in 1991.

The imbalance in the national economy has affected the state economy very strongly. Expenditure increases rapidly as a result of earlier commitments and the additional expenses caused by the depression, e.g. unemployment benefits. Tax income, instead, has decreased. The growth in income tax slowed down remarkably due to unemployment. In 1989 the state's incomes still exceeded clearly the expenditure and the state was paying its debts. In 1991 the state had to loan FIM 30 bill. to cover the budget deficit. The situation is not very bad, though, because the total amount of the state's debt is not yet very high.

The high interest rate has slowed down economic growth. Already in 1990 investments decreased by about 5%, and in 1991 as much as 13%. However, the total degree of investments is still internationally high, about 22-23% of the GDP, when the average of the OECD countries is 20-21%.

A total settlement on income and economic policy for the next two years was made in January 1990, and this included quite moderate wage increases. A growth in the disposable real income by 4.5% in 1990-1991 was set as the target. According to this agreement, nominal wages rose 1.5-3.0% in March 1991, depending on the sector. In addition to the actual wage increases, the settlement included lightening income taxation. Real wages increased by about 2.5% during the year. However, the disposable income of the national economy decreased, in real terms, by about 7% as a result of unemployment.

A general labor market settlement was made again at the end of 1991, and according to this, nominal wages will not be raised at all. In addition, wage earners will have to pay an employment tax of 2%.

Inflation slowed down as a result of the recession. In October it was only 3.2% annually. The aim was to bring inflation down in order

to improve the competitiveness of export industry. The average inflation in 1991 was 4%, when in 1990 it was 6.1%.

The new government appointed in the spring wanted to maintain the external value of markka and tied the exchange value of markka to ecu. This caused a lot of criticism, and certain parties of the economic life would have preferred to devalue markka before it was tied to ecu. Pressures to devalue continued despite the fact that the government assured the value of markka would be kept steady. In November the currency reserve decreased alarmingly, and the belief in the steady value of markka did not return. Markka was left floating on November 14th, and on the next day it was devaluated by 14%. Even after this, the interest rates remained high.

Forestry is the backbone of Finnish economy, and it is also important for agriculture. Due to the cost crisis in wood processing industry the stumpage prices started to decrease, and wood processing industry was not prepared to pay earlier prices for wood, because the world market prices of pulp, in particular, had fallen considerably. There has usually been an agreement between the Central Union of Agricultural Producers and wood processing industry on the stumpage prices, but such an agreement could not be reached in spring 1991, and the Central Union declared a wood sales boycott. Wood processing industry paid a 10-20% lower price than earlier. Felling stopped almost completely in private forests. Price recommendations were abolished in November and the boycott was revoked. The annual level of felling was over 20 % smaller than in 1991.

2. The Finnish farm

The agricultural census conducted in 1990 changed the view of agriculture and farms in Finland to some extent. The total arable land area is about 100,000 hectares larger than the earlier statistics indicate. The number of farms, instead, does not differ very much from the earlier data. However, the most important new piece of information is that there are only

Table 2. The distribution of farms according to their size and the average farm size (over 1 ha).

	1959		1980		1990		1990 ¹⁾	
	1000 ha	%	1000 ha	%	1000 ha	%	1000 ha	%
1-4.9	147.6	44.6	69.4	30.9	69.0	34.6	18.8	14.5
5-9.9	101.8	30.7	69.2	30.8	42.8	21.5	28.2	21.9
10-19.9	62.2	18.8	56.8	25.3	47.7	23.9	42.7	33.2
20-49.9	18.0	5.4	26.4	11.7	35.1	17.6	34.6	26.8
50-	1.6	0.5	2.9	1.3	4.8	2.4	4.8	3.7
Total	331.2		224.7		199.4		129.1	
Acreage								
1000 ha	2 614.4		2 462.7		2 544.0		2 073.6	
Average								
size ha	7.89		10.96		12.76		16.5	

¹⁾ active farms

Source: Official statistics of 1959 and 1990 and Farm register of 1980 .

129,100 producing farms and their average arable land area is 16.5 hectares (Table 2). Earlier figures concerning the average size were based on all farms. A lot of small farms have remained out of production, however, even if they are regarded as farms in the statistics.

Finnish agriculture is based on family farms. State and municipal institutions own a few larger farms, but their significance in the whole Finnish agriculture is very small. Many small farms discontinue their production, but in other respects structural development has been slow. The number of large farms has not increased very much, and the present agricultural policy does not favor large farms, either. In order to maintain the rural population level, an attempt has been made to keep as many farms as possible in production, even if this means that the structure of production has remained quite unprofitable. This viewpoint is now becoming questionable, as the need to lower the costs and increase competitiveness requires an increase in the size of enterprises in agriculture as well.

Amalgamation of farms is rare. One reason has been the high price of land, although the price has recently been on the decrease.

In practice, it is possible to increase the farm size through renting field. This has increased

continuously, and in 1990 altogether 332,000 hectares, i.e. 15% of the total arable land area, was rented. The area rented was, on the average, 7.9 hectares.

Finnish farms are highly mechanized. There is usually a tractor and other machines belonging to the production line on the farm. According to an estimate, there are about 240,000 tractors and about 40,000 combine harvesters. Calculated per hectare, the level of mechanization is quite high. Almost all dairy farms have a milking machine.

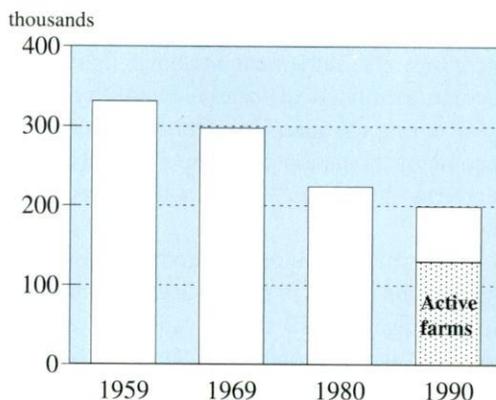


Figure 2. Development of the number of farms 1959-1990.

Forest is an integral part of the Finnish farm: an average farm has 13 ha arable land and 37 ha forest. However, the regional distribution varies. In general, the area of arable land is larger and, correspondingly, forest area is smaller in the south than in the north (Table 3).

About 99% of farms are privately owned. However, a large number of farms belong to pensioners or heirs, only about half of the farms being owned by active farmers. It is likely that this includes a number of farmers who get their living mainly from other sources than agriculture. Consequently, there are about 199,400 farms in Finland, but only about half of them are real producing farms. Full-time farmers own only 41.5% of farms, and in 1990 the share of part-time farmers was 18.4%.

According to the agricultural census, in 1990 about 18.6% of private farms were owned by pensioners. At that time, farmers or pensioners owned 79.0% of farms, heirs and family companies 20.1%, societies 0.3% and the state and municipalities 0.5%. The share of farms owned by heirs has increased slightly. This is significant for agricultural policy because these farms have the lowest productivity, and their existence slows down structural development.

Finnish agricultural production is mainly based on livestock. Only 15% of arable land area is used for crop production for human consumption. Milk production accounts for about 35% of the total return of agriculture (calculated from Appendix 5), and the share of cattle production rises to about half of the total agricultural production when beef production is taken into account. Consequently, the area of hay, silage and pasture is about a third of the total arable land.

Production structure has changed in the course of time so that the share of milk has decreased, whereas that of meat has increased.

The specialization of agriculture accelerated especially in the 1960s and 1970s. Earlier almost all farms produced milk, but in October 1991 there were only 38,000 milk suppliers (Appendix 2). About half of the farms are engaged solely in crop production.

3. Side-line industries

In addition to agriculture and forestry, farmers practice many other industries, e.g. horticulture, fishing, fur farming, farm holidays, etc. An overview of these industries in 1990 is presented in the following. No statistics from 1991 are available, and, on the whole, the statistics on these industries are incomplete.

This publication is mainly concerned with agriculture proper, which in Finland includes only outdoor garden production, and greenhouse production is excluded. In 1988 the value of *greenhouse production* was about FIM 1.27 billion, the share of vegetables (mainly cucumber, tomatoes and lettuce) being about FIM 585 million and that of flowers about FIM 689 million. About 3,359 entrepreneurs were engaged in greenhouse production, and the greenhouse area was altogether 475 ha. Thus the average greenhouse area was about 1,442 m². There are no estimates on how many people this whole field employs, but it should be about 10,000 people.

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

Table 3. Regional distribution of arable and forest land in 1980 and 1989 (ha/farm).

Province	Arable land and gardens land		Forest	
	1980	1989	1980	1989
Uusimaa	18.2	20.1	28.2	30.1
Häme	14.1	15.6	31.0	33.5
Vaasa	11.3	13.3	26.4	27.0
Kuopio	9.4	11.4	37.2	38.9
Oulu	9.2	10.7	45.8	48.3
Lappi	6.1	6.7	78.8	83.8
Whole	11.0	12.8	35.5	37.5

Source: Farm register of 1980 and 1989.

In 1989 there were about 5,300 *professional fishermen* in Finland (1,600 full-time and 3,700 part-time). Almost 60% practice their trade at sea. The number of fishermen has been decreasing rapidly. Most fishermen are part-time farmers.

In 1988 the value of the catch of fish was estimated at FIM 205.6 million. In addition, aquaculture produced fish (mainly rainbow trout) for about FIM 382 million in 1989 and FIM 357 mill. in 1990. Occasionally rainbow trout is also an important export article. In 1990 the export share of its production, which amounted to 18.3 million kg, was about 10%. The value of planting production, which is important for improving the stock of fish, was FIM 100 million in 1990. The increased control of water systems has probably also improved the catch of fish.

An especially important side-line for agriculture is *fur farming*, which is also practiced on its own. In 1988 there were about 5,151 fur farms, of which about 60-70% were part of a farm. The value of fur production was about FIM 1.0 billion, and, including all its indirect effects, fur industry employs annually about 25,000 people. Fur production is mainly concentrated in Ostrobothnia, where about 3/4 of fur farms are located. The most important fur animals are mink, silver fox, blue fox, fitch and finnraccoon.

However, the past few years have been very difficult for fur farming. The collapse of the world market prices has forced many fur farms to stop their production. In 1991 there were only 2,400 fur farms left, and during the last season the value of the sales amounted to about FIM 605 mill. The prices of fox pelts rose at the end of the year which indicates that the recession is over.

Finland has been the leading fur producer in the world. In 1988 the value of exports was about FIM 1.0 billion, but in 1990 this had dropped to only about 430 mill. In 1989 57% of the world's fox pelt production came from Finland. Mink accounts for about 46% of the value of our fur production, but the share in the world market is less than 10%.

Fur farming is subsidized very little. Fur farms can buy feed (including domestic feed grain) for the world market price. In other respects 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 800 households in Lapland. In addition, in about 1,500 households it is a very important secondary occupation. In the herding year 1990/91 there were about 7,700 reindeer owners. At reindeer round-ups in 1990/91 there were about 428,600 animals, of which 169,000 were slaughtered. Meat production was 3.7 mill. kg, and its value was about FIM 92.5 million.

In 1990 there were about 48,200 horses in Finland, about 40% of them on farms. *Horse husbandry* is practiced on about 6,000 farms, and on 550 farms it forms the main production line. Horses are mainly used for riding and trotting. On the farms horse husbandry employs 1,300-1,400 people full-time and about 5,000 part-time. The value of the production of horse husbandry was estimated at about FIM 230 million, and the export value of horses at FIM 8.4 million in 1990.

Beekeeping provides additional income to about 5,000 beekeepers. In 1991 1.6 mill. kg of honey was produced, and its value was about FIM 45. mill.

Wild berries (cloudberry, blueberry and lingonberry) are an important source of income for many people, especially in northern Finland. In 1989 this income amounted to about FIM 56.8 million and in 1990 about FIM 52.1 million. In addition, there is the value of the berries used in households. The income from picking mushrooms was estimated at FIM 3.7 million in 1989 and FIM 6.8 million in 1990.

It has been hoped that *farm holidays* would become a new side-line industry for farmers. About 5,000 entrepreneurs are offering farm or summer cottage holidays, and about half of them are farmers.

II

PRODUCTION, PRICES AND FARM INCOME

4. Crop production

4.1. Weather conditions

The beginning of the growing season of 1991 was normal. Snow melted early in the spring, but temperatures remained low and sowing was started at the usual time or a little later. Temperatures were quite low during the whole early part of the summer, and in Northern Finland, in particular, sowing and sprouting were delayed due to rainfall. In June-July the growing season was in places almost two weeks behind the normal. The crop outlook was bad at that time.

At the beginning of the growing period the effective temperature sum was clearly below the normal, but, as the summer advanced, the situation became more even so that the effective temperature sum for the whole growing period was close to the normal. There were hardly any regional deviations from the normal. In general, the summer was quite usual as far as the temperatures were concerned. It was warmest at the turn of July and August. August was a few degrees warmer than normal. There was hardly any frost during the growing period.

Precipitation was quite normal during the growing period. However, rainfall was abundant during the early part of the summer, and in Northern Finland, in particular, this slowed down sowing. In places it also rained a lot in July, which hampered the harvesting of hay. Instead, August was quite dry. Harvesting was completed in good conditions and well in schedule.

Despite the low temperatures in the early part of the summer and the abundant rainfall in places, the weather conditions were obviously favorable for agriculture, because the crop was

good in terms of both quality and quantity. In Northern Finland, however, the crop was bad, and some places were even affected by a severe crop failure.

Fall sowing was completed in good conditions. The area under rye remained small, because due to overproduction it is desirable that the production should decrease considerably, and a considerable marketing charge was set for rye. The area under winter wheat was smaller than in the previous year.

4.2. Areas and yields

An overall agricultural census was conducted in 1990. As a result, the statistics have changed somewhat. The total arable land area has increased from the area based on sampling. The earlier figure for 1990 was 2,436 mill. ha, and the figure based on the census is 2,544 mill. ha. Consequently, comparison with the statistics from the 1980s is now a little complicated.

As a result of the land clearing, arable land area grew by about 60,000 ha at the end of the 1980s. Since 1989 the total arable land area has started to decrease again. Last year the reduction was 20,500 ha.

In 1991 the cultivated area decreased considerably because of fallowing. Each farmer had to leave fallow 15% of his arable land area. This target was actually exceeded. Especially in the northern parts of the country fallowing was favored because bad weather conditions delayed or even impeded sowing. In retrospect, the abundant fallowing was a wise decision for the private households in Northern Finland, as the crop there remained quite poor.

Fallowing, which results in a decrease in the production potential, is now the most central

means of reducing agricultural production. Premium fallowing accounted for 468,000 ha and other fallow for 25,800, i.e. altogether 19.4% of the total arable land area. Other uncultivated area, which may no longer be good agricultural land at all, was 221,900 ha, which means that altogether 28% of the total arable land area remained out of production. However, the cultivated area is still too large for domestic consumption. The export ceiling for grain was exceeded a lot, and farmers had to pay high export cost charges.

Some changes have occurred in the cultivated areas of different crops. The amount of bread

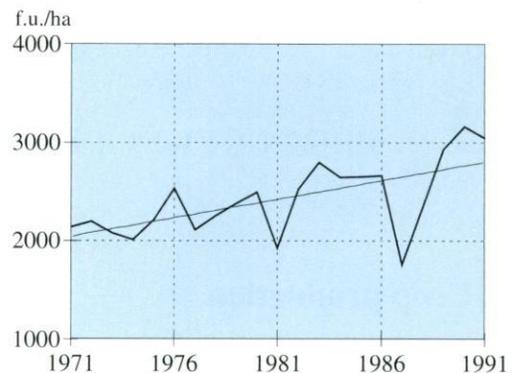


Figure 3. Total yield without straw in 1971-1991.

Table 4. Harvested areas and yields of main crops in 1990 and 1991.

	1990 ¹⁾			1991		
	Area 1000 ha	Yield 100 kg/ha	Total mill.kg	Area 1000 ha	Yield 100 kg/ha	Total mill.kg
Winter wheat	35.6	38.6	137	40.6	36.7	149
Spring wheat	144.3	33.9	490	77.7	36.4	282
Rye	81.1	30.1	244	10.4	27.1	28
Barley	485.5	35.4	1720	540.9	32.9	1779
Oats	453.4	36.7	1662	343.0	33.7	1155
Potatoes	41.0	215.0	881	36.2	185.7	672
Sugar beets	31.6	356.0	1125	31.7	329.0	1043
Hay	278.7	43.3	1207	224.3	42.9	961
Green fodder	31.6	182.2	576	27.5	176.4	485
Silage	223.8	193.0	4318	238.7	194.5	4642
Oil seeds	65.3	17.9	117	61.0	15.6	95
Other crops	47.8			50.2		
Total	1919	3319²⁾	6284³⁾	1682.2	3180²⁾	5280³⁾
Pasture	131.6			125.8		
Premium fallowing	175.0			468.0		
Other fallow	7.8			25.8		
Other arable land	310.1			221.9		
Arable land, total	2544.2			2523.7		

¹⁾ Based on the 1990 census

²⁾ f.u. without straw. Feed unit norms changed at the beginning of 1990 for the part of grains. The average raise was about 2%.

³⁾ mill. f.u. without straw

grain, especially rye, has in the past few years exceeded the domestic need. The producer price of rye has been raised considerably and, as the conditions for sowing in the fall have been good, the cultivation of rye has increased more than what would be necessary. Due to overproduction, the export cost charge was raised to

FIM 0.8 per kilo, which, in practice, made the cultivation of rye unprofitable. In 1991 the area under rye was only 10,300 ha, when the normal need is about 50,000 ha. A high export cost charge was also set for wheat, which caused a considerable reduction in the cultivation of wheat.

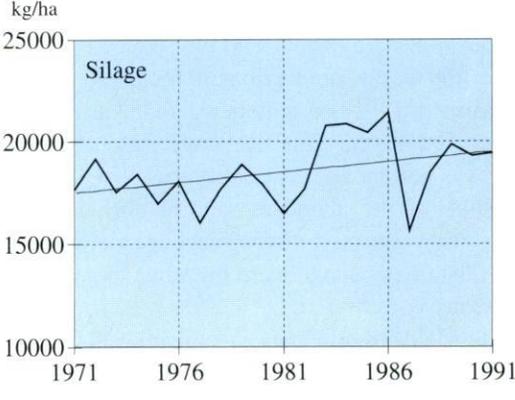
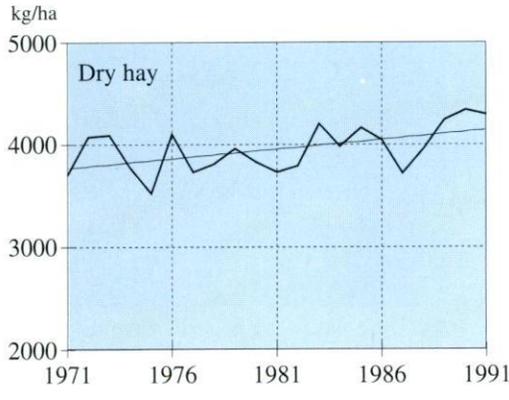
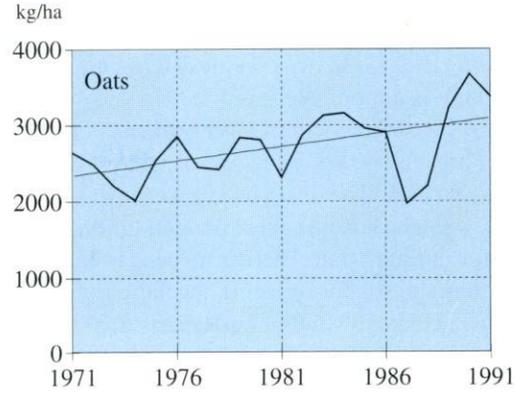
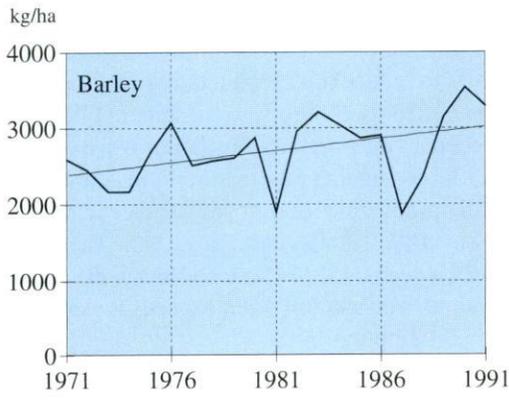
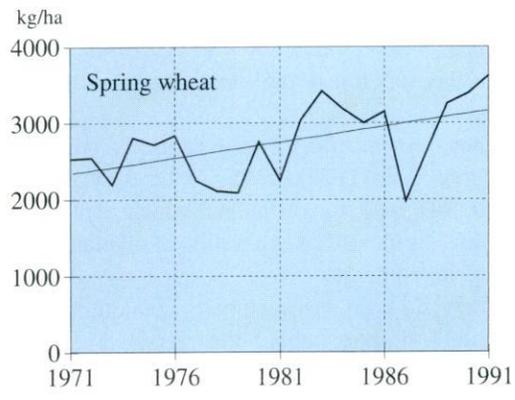
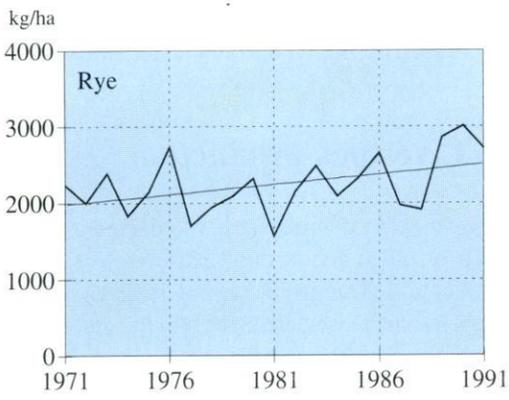


Figure 4. Yields of main crops (kg/ha) in 1971-1991.

The overproduction of oats has been the largest in the past few years and, as a result, production has been directed to cultivation of barley. The area under barley increased last year, whereas the area of oats was 24% smaller than in 1990. The distribution of the cultivation of feed grains has now come closer to the earlier levels.

The area under hay continues to decrease as the production of milk and beef decreases. Part of this is still transferred to the cultivation of silage.

The area under oil plants decreased from the previous year. The state has reduced the production support for oil plants, which explains the development. The cultivation of oil plants is based on contracts.

The yield level was again very good, remaining only slightly behind the record level of 1990.

The yield of rye was 28 mill. kg, i.e. only about a third of the domestic need for rye, which is about 100 mill. kg a year. Because of the record yields in the two previous yields, however, there is a lot of rye in stock.

The hectare yield of spring wheat was record high, 3,640 kg. The yield of winter wheat was also high. The total yield of wheat was 431 mill. kg, which is just about enough for the domestic consumption. There is no need to export bread grain, except for some special purposes.

The hectare yield of barley was 3,290 kg/ha, which exceeds the long-term trend. Similarly, the hectare yield of oats was higher than normal. The yield of feed grains was altogether close to 3,000 mill. kg, which exceeds the domestic need by about 800 mill. kg.

As far as the production of roughage was concerned, 1991 was a more usual, but as such a quite good year. The hectare yield of dry hay was normal and the quality was also good, in spite of the abundant rainfall during the harvesting season. Both the hectare yield and the quantity of silage were the same as in the previous year.

The yields of oil plants and sugar beets were normal. The amount of potatoes was considerably smaller than in the previous year, but it is

enough to meet the domestic consumption.

The total yield was 5,280 mill. feed units, i.e. clearly smaller than in 1990, which can be explained through the considerable decrease in the cultivated area. The yield per hectare was 3,180 feed units, which is the second highest yield ever. One explanation for the high yield could be the fact that the less productive land is usually left fallow, and fertilizers were used more than earlier on the area under cultivation.

5. Livestock production

Livestock production started to decrease again as a result of the strong measures to restrict production. The production of milk, pork and eggs has decreased clearly. Only the amount of beef entering the market was higher than in 1990, which was mainly caused by the reduction of dairy cows.

A permanent and clear decrease in milk production started at the end of 1990, when contracts to reduce milk production were made for about 210 mill. liters. In summer 1991 the amount of milk delivered to dairies was as much as 13-14% smaller than in the previous summer. Milk production during the whole year was about 10% smaller than in 1990. The self-sufficiency is still 114%, according to the liquid amount. The amount of fat exceeds the domestic consumption by 20%.

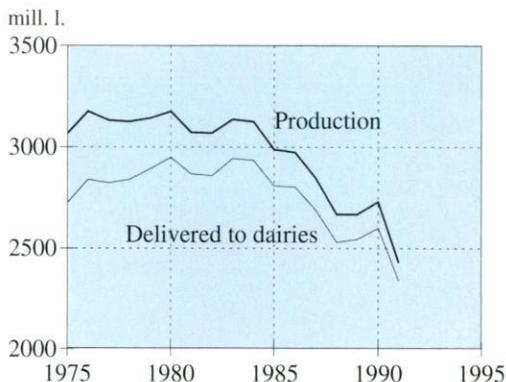


Figure 5. Milk production and the amount of milk delivered to dairies in 1975-1991.

Table 5. Livestock production in 1985-1991.¹⁾

		1985	1986	1987	1988	1989	1990	1991 ^{e)}
Milk	mill. l.	2988	2976	2847	2690	2650	2700	2430
Dairy milk	"	2808	2803	2692	2530	2547	2600	2340
Beef	mill. kg	126	125	123	110	106	118	121
Pork	"	172	174	176	168	171	186	179
Eggs	"	88	84	81	78	75	76	68
Poultry meat	"	21	22	27	28	30	32	34
Other meat	"	2	2	2	2	2	2	2

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

^{e)} estimate

In 1989 and 1990 the production grew. The amount of cows was on the decrease, but their average yield has increased rapidly, probably as a result of the good feed crops. This was the case especially in 1990. The number of farmers delivering milk to dairies continued to decrease last year (see Appendix 2).

In 1992 the aim is to reduce the production of dairy milk further by about 100 mill. liters. Bonus contracts can be made again in the spring of 1992. Priority is given to small herds, and it is hoped that their owners would decide to restrict production permanently. About 70% of the contracts made in 1990 concerned giving up production. At least so far it has been impossible for those who have remained to expand production and, consequently, the result should be a permanent decrease in milk production, which is the state's objective.

The dairy industry considers the decrease in production too rapid. It is necessary to transport milk to Southern Finland from far away, and the processing possibilities of provincial dairies have been narrowed due to the decrease in raw material. On the whole, however, there is still overproduction. Self-sufficiency in liquid milk is becoming the minimum factor, whereas there is proportionally more butter fat.

Beef production increased slightly last year. Production amounted to 121 mill. kg, and the growth was 3 mill. kg. The number of slaughter animals as such is about the same as in 1990, but the slaughter weights grew again. The elimina-

tion of cows was also more common as 47,000 cows were abolished from milk production through the bonus contracts.

Production exceeded consumption by about 13 mill. kg. The market is not as well in balance as earlier. As a result of the rapid decrease in the number of dairy cows, the number of slaughter animals should decrease considerably in the next few years and beef production can be expected to drop drastically, even below the self-sufficiency level. In 1992 the production is expected to decrease by about 10 mill. kg. Consumption has increased slightly, which has balanced the market.

In 1991 pork production was 179 mill. kg, i.e. 4% smaller than in 1990. In the latter part of 1990 a marketing charge became effective,

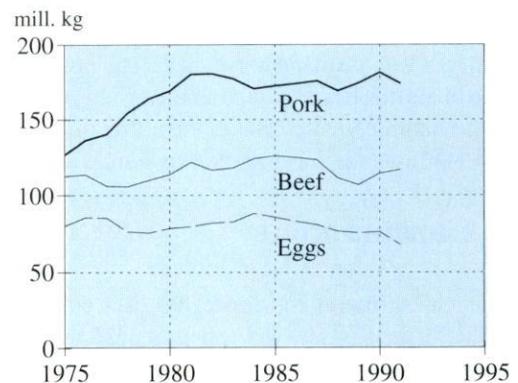


Figure 6. Production of beef, pork and eggs in 1975-1991.

collected on slaughter animals over 76 kg. The objective was to reduce overproduction and improve the quality of pork. As a result, the slaughter weights dropped to 75 kg towards the end of the year.

The market balance of pork improved last year. About 13 mill. kg were imported, which means that the full export ceiling was exceeded by only 5 mill. kg. The excess was very small. The production is forecast to decrease about 4 mill. kg in 1992.

Egg production decreased about 8 mill. kg, i.e. 11%, from the previous year. This was caused by the contracts to reduce production and the mandatory stoppages in production. Overproduction dropped to 12 mill. kg, and the share of agriculture in export costs remained already quite small. The production is forecast to decrease further by around 2 mill. kg. Even then the overproduction will still amount to a little over 10 mill. kg, because consumption is very steady.

The growth in poultry meat production continued last year. Consequently, broiler is taking over some of the market share of other meats, which is likely to be the reason for the fact that e.g. pork consumption has been quite steady. The poultry meat market has in general been well in balance. The production is based on contracts, through which it can be regulated according to demand. Last year, however, the production grew more than was consumed, and the stocks were filled. The situation was under control, and the prices did not collapse. The production is expected to continue to grow.

The statistics on other meats consist of mutton, reindeer meat and horse meat. The production of mutton has remained small despite all efforts to stimulate it. Each fall the influx of venison confuses the meat market to some extent.

6. Consumption

The real income of consumers has risen considerably in the past few years. In the consumption of agricultural products, however, income and price elasticities are small, which means that economic factors do not cause any major changes in the consumption of foodstuffs. The econom-

ic depression could have been expected to have some effect on e.g. meat consumption, but this was not the case. Other factors, especially health considerations related to nutrition, seem to have a greater impact than income or prices. Public discussion on cholesterol continues, but last year it did not become any major topic. Instead, the debate concerned mainly the price of food.

Measured as energy, consumption can no longer grow, but it is rather on the decrease. In 1990 we consumed about 2,800 kcal/day/capita (11.7 MJ), while in 1970 the corresponding figure was about 3,000 kcal. In the course of time consumption has shifted from grain products to livestock products, especially meat. However, today consumer counselling favors more an increase in the consumption of crop products, and in the past few years the consumption of fruits and vegetables has increased considerably. Some increase is still expected to occur in meat consumption, however, but, correspondingly, the total consumption of dairy products is on the decrease. The consumption of grains and potatoes should stay about at the present level, but some decrease is also possible.

The consumption structure of dairy products has undergone a considerable change during the past couple of years. Butter-vegetable oil mixes with a fat content of 40 or 60% have estab-

Table 6. Consumption of dairy products and margarine in 1983-1991 (per capita).

	Liquid milk litres	Butter kg	Cheese kg	Marga- rine kg	Butter mixes ¹⁾ kg
1983	243.8	11.0	8.1	7.1	1.1
1984	240.5	10.3	9.3	6.8	1.4
1985	235.8	10.9	9.6	7.1	1.7
1986	228.4	8.8	10.3	7.2	1.7
1987	223.3	8.2	11.5	7.1	2.2
1988	221.8	7.0	11.7	7.3	2.1
1989	224.7	6.5	12.5	8.0	2.1
1990	222.9	5.5	12.7	7.6	2.2
1991 ^{e)}	218.4	6.0	13.6	7.9	2.3

^{e)} estimate ¹⁾ butter-vegetable oil mixes
Source: MTTL, Food Balance Sheets, PSM

lished their position in the Finnish diet. The increase in their consumption occurred at the expense of butter.

Last year butter consumption increased as much as 9%, which was probably caused by the fact that the price fell by about FIM 6/kg. This was related to the changes in the prices of the components of milk. In this connection, the price of protein was raised and the price of butter fat was lowered, which resulted in an increase in the prices of products with high protein content and a decrease in the prices of products with a lot of fat.

The increase in butter consumption indicated that price is still an important factor affecting consumption. In general, discussion related to health has been considered the most important factor, which may be true in a situation where the prices do not change drastically.

The total butter consumption was 7.5 kg/capita, i.e. 13% more than in 1990. The consumption of butter proper was 6 kg/capita. The consumption of margarine increased slightly last year. Changes in the sales at the turn of the year may bias a little the statistics.

The consumption of liquid milk products decreased a little in 1991. The increase in cheese consumption has formed an exception among dairy products, and it has kept the total milk consumption almost constant. Last year cheese consumption amounted to 13.6 kg/capita, which means that it increased by about 7% from the previous year. The share of curd in cheese consumption is less than 1 kg.

In addition to cheese and chicken, *pork* is the only agricultural product the consumption of which has been expected to continue to increase for a few more years. However, the consumption has stayed at the same level for a long time, which indicates that the peak may already have been reached. In 1990 the consumption grew by about 4%, but last year it stayed at the earlier level again. According to health experts, the present level of meat consumption is quite sufficient, and chicken and fish could replace some of the red meat.

In 1991 *beef consumption* was about the same as earlier. It has been forecast to fall because domestic supply is likely to decrease as a result

Table 7. Consumption of meat and eggs in 1980-1991, kg/capita ¹⁾.

	Beef	Pork	Poultry	Eggs
1980	23.2	29.5	3.2	11.7
1981	22.4	29.3	3.5	10.7
1982	22.0	29.6	3.4	10.6
1983	21.1	30.9	3.8	10.6
1984	21.7	31.0	4.0	10.9
1985	21.3	32.0	4.2	11.1
1986	21.1	32.7	4.5	11.7
1987	20.9	32.6	5.2	11.8
1988	20.8	32.7	5.6	11.6
1989	20.4	31.6	6.2	11.1
1990	21.6	32.9	6.5	11.1
1991 ^{e)}	21.6	33.0	7.2	11.2

^{e)} estimate

¹⁾ From 1990 the consumption figures for meat are about 3% higher than earlier as the hot weight reduction has been left out.

of the decrease in the number of dairy cows. Shortage of supply will raise the price level, which is already regarded as too high. Consumption has been quite steady, however, although some decrease has occurred in the past few years.

Poultry meat consumption increased by 7% last year. The rapid growth in the previous year slowed down to some extent, but the increase is still expected to continue.

Egg consumption stayed at the earlier level last year. It has not been possible to maintain the consumption level reached in 1986. The discussion on cholesterol may be one reason for the decrease. On the other hand, consumption seems to have reached the level at which it was earlier forecast to stay for a longer period of time.

7. Foreign trade

Because self-sufficiency has been set as the objective for Finnish agriculture and the country is closed to foreign competition, the main function of exports and imports is to balance the variations in demand and supply. Consequent-

Table 8. Exports and imports of agricultural products in 1980-1991 (FIM mill.).

	Export	Imports total	Coffee	Fruits	Beverages and tobacco
1980	1669.9	4598.1	1097.1	638.0	255.6
1981	2639.4	4462.2	825.4	688.9	335.1
1982	2151.9	5308.9	990.5	710.6	286.0
1983	2673.4	4888.2	1065.7	752.2	332.7
1984	2994.1	5226.5	1360.5	775.1	342.3
1985	2876.2	5388.9	1125.5	814.0	358.9
1986	2256.3	5713.2	1376.9	855.2	405.0
1987	2074.7	5798.1	990.9	978.7	401.7
1988	1815.8	5705.2	787.6	915.4	372.6
1989	2098.5	6111.3	825.5	942.1	494.3
1990	2508.7	5613.9	562.5	963.3	537.8
1991 ¹⁾	1941.9	4787.1	490.4	810.5	423.7

¹⁾ January-November.

Source: Official statistics of Finland IA. Foreign trade.

ly, the task of foreign trade is to export the overproduction in order to keep the domestic prices at the set level. There is very little import of basic foodstuffs. Only grain must be imported in larger quantities when the domestic crop remains small as a result of weather conditions. This was the case e.g. in 1987 and 1988.

Fruits and vegetables are imported according to demand because there is little domestic production. Coffee is one of the most important free import article. The import of certain tropical products is also relatively free. The monetary value of imports is higher than that of exports (see Table 8), although overproduction is considered the greatest problem in agriculture.

The decrease in production is reflected in the decrease in the amount of exports. In the case of dairy products, the exports of butter and milk powder, in particular, decreased considerably. Cheese exports stayed almost the same, but a considerable decrease is expected in 1992. According to an agreement made with the EC, about 2 mill. kg cheese a year is imported to Finland. It is still necessary to export large quantities of butter.

The export of pork varies according to production. Production decreased in 1991, and,

consequently, exports decreased by about the same amount, about 8 mill. kg. This development will continue in the future. The export of beef increased slightly last year, but this was only temporary, and the exports are expected to remain very small in 1992.

Egg exports dropped to about half from the previous year. This was caused by the decrease in production as a result of various contracts. A slight decrease in exports is expected again in 1992.

Grain exports increased considerably in the past two years due to the good crops. Altogether 1,116 mill. kg was exported in 1991, which increased considerably compared with the previous year. Exporting grain has been very unprofitable, because the world market prices have been record low. The exports quantities were very large in 1991 because the crop of 1990 was stored, hoping that it could be used in Finland. When the crop was large again in 1991, despite fallowing, export was inevitable, because it would not have been possible to market the new crop and it is not always possible for farmers to store grain on the farms.

The amount of grain used in industry for the world market price was 218.5 mill. kg.

The EFTA and the EC have already negotiat-

Table 9. Exports of some agricultural products in 1980-1991 (mill. kg.).

	Butter	Cheese	Milk powder	Pork	Beef	Eggs	Grains
1980	9.8	40.3	30.1	25.9	1.1	22.3	-
1981	14.7	36.8	28.0	39.8	16.1	27.5	-
1982	8.8	33.3	22.6	36.1	8.5	30.1	-
1983	26.6	31.5	39.1	25.5	17.7	30.2	-
1984	20.0	36.3	37.6	20.8	19.2	35.4	811.3
1985	18.6	35.9	36.3	17.8	22.3	33.1	561.0
1986	14.9	33.8	31.3	10.3	22.0	25.1	664.3
1987	21.4	34.4	31.7	17.3	22.0	21.7	294.9
1988	19.2	32.5	18.4	9.2	10.5	18.6	25.0
1989	20.3	26.3	8.1	14.0	5.5	20.0	520.0
1990	25.0	31.0	22.8	25.8	8.5	21.1	698.5
1991 ^{e)}	17.8	27.0	16.4	13.0	13.0	12.0	1116.0

^{e)} estimate

Source: Statistics of the Ministry of Trade and Industry.

ed a new contract, which concerns agricultural products only partly. Imports of processed foods increases a little. At least for the time being, basic production seems to remain quite well protected. The most serious pressures to Finnish agriculture are coming from the GATT negotiations, in which the great exporting countries are demanding free foreign trade to agricultural products as well. It would be extremely difficult for Finnish agriculture to adapt itself to full competition, because the cost level in Finland is too high compared with that of many actual agricultural countries.

8. Price settlements

Producer prices of agricultural products are decided twice a year in the farm income negotiations. The negotiations are based on the Farm Income Act, which defines the general directions for the setting of prices. According to the act, the negotiations are held between the state and the producer organizations.

There are two phases in the negotiations. In the *first phase*, the agricultural price council prepares a total calculation of the return and

expenditure of agriculture, based on the average amounts of the past three calendar years. Current prices as well as those of the last settlement are used in this connection. According to the act, the farmers receive a full compensation for the rise in costs through a rise in the target prices and in the price policy support to the extent that the increase in the total return corresponds to the rise in costs.

The total calculation of the price council includes (with some exceptions) the same products and production inputs as the total calculation of the Agricultural Economics Research Institute (see Appendix 5). However, the quantities used are the average quantities of the last three calendar years, and the prices are those of January and July (with some exceptions). Consequently, the return and cost figures of the calculation do not represent the real figures of any year.

Target prices are set for milk, pork, beef, mutton, eggs, rye, wheat, feed barley and feed oats (see Appendix 7). Producer prices of other products may fluctuate freely, but the changes of prices are taken into account in the total calculation. Also, the prices of, for example, sugar beets, potatoes and oil plants are agreed on in the income negotiations.

Target prices should be realized completely. In the spring settlement a calculation is made which shows deviations from the target prices. According to the present act, shortfalls and excesses of over one percentage point are credited or subtracted in connection with the spring settlement. The following year this correction is returned to the prices. In the earlier acts the excesses and shortfalls were taken into account in full and, consequently, in the long run farmers received exactly the prices that were agreed on. However, the system still guarantees a price development that is close to the objective. Retroactive payments are also included in the price settlement, and thus it is not possible to deviate from the target price level in this way, either.

In the *second phase* the raise of farm income is negotiated. Farm income is a compensation for farmers' labor input and own capital (interest on loans is taken into account in the cost calculation). In the earlier acts the raise of agricultural income was tied to the development of the general income level or to the income development of rural wage earners. This is no longer the case, but the negotiators can freely decide upon the raise of farm income. In practice, the general labor market settlements are still followed, agriculture being considered a kind of low wage sector, and the raise of income has been determined in the same way as in the other sectors of the national economy. An attempt has been made to raise the income on the basis of a calculated hourly wage, and the overall increase in farm income is then determined for the whole agriculture, based on the total labor input in agriculture. Because the settlement is always an outcome of negotiations it cannot be described by any particular formula.

8.1. Spring price settlement

The rise of costs since the fall price settlement of the previous year (i.e. the cost level in July) is calculated in the spring price settlement. In many recent years, however, no correction has been made because inflation has been slow. This was also the case in the fall of 1990, and, consequently, the cost calculation was made

from the level of January 1990 to that of January 1991.

Table 10 presents the main points of the spring price settlement. In the first place, it shows the increase in the return on the non-target price products (potatoes, sugar beets, oil plants, poultry meat and malt barley). In addition, there are the changes in retroactive payments, rent income and support. Altogether these indicated that the total return had decreased by FIM 91.3 mill., i.e. 0.4%. This was mainly caused by the changes in the compensation for crop damages. Part of the 1987 compensations for crop damages remained to be covered by agriculture, and in 1990 FIM 210 mill. were collected from agriculture for this purpose. The 1991 compensation for crop damages is FIM 95 mill. The return on other products was lowered by the decrease in the prices of potatoes and sugar beets. Retroactive payments have, in general, increased year by year, but in 1990 there was a slight decrease.

In 1991 the costs had increased FIM 828.4 mill, i.e. 4.8%. Consequently, inflation was slightly lower in agriculture than in the whole national economy, where it was 6%. The price of energy, in particular, rose a lot. The calculation indicates that the prices of fertilizers rose by 9.1 %, but the increase in the tax on fertilizers accounts for nearly half of this, which was not taken into account in the final price settlement. Other notable cost items are purchased feed, the prices of which increased by only 2.3%, as well as machinery and implement costs, in which case the rise was 5.6%. Overhead costs are also a notable item of costs, but they did not cause any major increase because the wholesale price index, which follows the development of the prices involved, increased by only 1.8%.

The follow-up of the prices of production inputs has proven a difficult task due to various reductions. The compilation of price statistics for feed and fertilizers has already been changed, and the prices used are probably quite close to the prices the farmers pay. Some corrections may still be necessary in the prices of purchased feed.

Table 10. Return and cost calculation of the 1991 spring price settlement, FIM mill.

	Price level in spring 1990	Price level in spring 1991	Change %
Return			
- Target price products	17 719.7	17 719.7	
- Other products	2 682.8	2 664.9	-0.7
- Rent income	670.2	722.6	7.8
- Retroactive payments	327.8	317.0	-3.3
- Support, total	3 162.5	3 162.5	
- Compensation for crop damages	210.0	95.0	-54.8
Total	24 773.0	24 681.7	-0.4
- Excess over target prices in 1989, repayment	5.1		
Total return	24 778.1	24 681.7	
Costs			
- Fertilizers	1 485.4	1 620.7	9.1
- Purchased feed	3 545.0	3 628.3	2.3
- Wages	538.6	573.1	6.4
- Machinery and implements	3 977.4	4 199.5	5.6
- Buildings	1 080.3	1 116.7	3.4
- Interest on debt	1 957.7	2 034.3	3.9
- Overhead costs	1 412.1	1 437.8	1.8
- Rent	591.0	626.4	6.0
- Other	2 680.2	2 859.4	6.7
Total	17 267.8	18 096.2	4.8
Farm income	7 510.3	6 585.5	
Change from the basic level	~	-924.8	

One problem of the decreasing agricultural production is that part of the production capacity remained unused. This concerns the capital goods, in particular. Some revisions were made in the calculation of depreciations in 1990, but the statistics are not necessarily fully satisfactory yet.

The cost calculation shows the excess over target prices as a factor that raises the starting level. According to the earlier act, the target prices had to be realized exactly. If this was not the case, the deviation was taken into account as a correction in the price settlement next year. In the new act the excess is taken into account only for the part that is more than one percentage

point. As in 1989, according to the calculation, the target prices were exceeded by 1.03%, the target price level was lowered by FIM 5.1 mill. (i.e. 0.03%) for 1990. In the price settlement of spring 1991 this amount was returned to the target price level.

Agriculture benefits from the new act, if the target prices continue to be exceeded. One percentage point equals FIM 169.1 mill., i.e. a little over 2% of farm income in 1990. However, in 1990 prices remained less than one percentage point below the target, which means that, for this part, no correction was made in the cost calculation

The total of the return and cost calculation

indicated that the need for raise in the target price level amounted to FIM 924.8 mill. The share of the tax on phosphate fertilizers in this was FIM 60.2 mill., which was not taken into account in the final income settlement.

The farm income negotiations concerned the settlement for the second year of the so-called Kallio agreement. The general agreement on income and wages caused the raise in farm income to remain quite small. Instead, the compensation for costs could be realized in the normal way.

Farm income negotiations were completed at the end of February, as is prescribed by the law in the case of normal settlements. The general election in March also increased the pressure to complete the negotiations. There was no reason to delay the settlement, even if the negotiations progressed with great difficulty. It would have been politically problematic to continue them until immediately before the election.

In accordance with the Kallio agreement, farm income was raised by FIM 150 mill. Fluctuations in the prices of fuel have been great, and as early as February the prices had dropped well below the level of January used in

the calculation. Consequently, it was agreed in the negotiations that the increase in the prices of fuel would be corrected downwards by FIM 65 mill. When the tax on phosphorus is taken into account, the total of the farm income settlement was FIM 949.6 mill.:

	FIM mill.
Return and cost calculation	924.8
- tax on phosphorus	-60.2
- price of fuel	-65.0
Raise of income	150.0
	<hr/>
Raise, total	949.6

The raise was divided so that FIM 152.2 mill. were directed to the target prices, 481.7 mill. to price policy support, and altogether 108.7 mill. to social benefits. It was agreed in 1990 that agriculture participates in the balancing of production by FIM 146 mill. This amount was taken into account in the settlement as a factor reducing the income, but it will go back to farmers through the budget. In addition, FIM 61.0 mill., by which amount the hectareage

Table 11. Target prices in 1988-1991¹⁾.

		1.4.88	1.3.89	1.3.90	1.3.91
Rye	FIM/kg	3.00	3.10	3.10	3.10
Wheat	"	2.43	2.51	2.51	2.51
Feed barley	"	1.75	1.78	1.80	1.82
Feed oats	"	1.66	1.76	1.75	1.72
Milk	FIM/l	2.445	2.69 ²⁾	2.77	2.82
Beef	FIM/kg	26.10	27.80	28.22	28.42
Pork	"	17.00	17.95	18.06	18.06
Eggs	"	9.10	9.20	9.20 ³⁾	9.20
Mutton	"	25.90	27.45	27.88	27.88

¹⁾ Grain prices came into effect July 1st. The hot weight reduction of meat was abolished from March 1st, 1990, and the prices were lowered by 3%. See also Appendix 5.

²⁾ The target price of milk was raised by FIM 0.15/l from Jan. 1st, 1990, and the same amount was subtracted from retroactive payments. Consequently, the target price was FIM 2.595/l from the beginning of the year.

³⁾ Since March 1st, 1990 the target price has been set for eggs of the class IA. In connection with this, the additional price for eggs was raised by FIM 0.39/kg from March 1st, 1990, and further by FIM 0.20/kg from October 1st, 1990.

subsidy of FIM 510 mill. agreed on in 1990 had to be exceeded because of the too high compensation per hectare (or the too low total reserve), was deducted from the need for raise. Agriculture has already received this amount. Consequently, the amount to be divided would appear to be FIM 633.9 mill., but agriculture will receive the full FIM 949.6 mill., albeit in various ways. The total division of the farm income settlement was as follows:

Target prices	152.2
Price policy support	481.7
Excess over the hectareage subsidy	61.0
Share of agriculture in balancing production	146.0
Social benefits	
- old	48.7
- new	60.0
	<hr/>
Total	949.6

A so-called hectareage subsidy was introduced in 1990. Price support, which increases production, should not be increased because of the GATT commitments, but direct support should be used instead. For this purpose, in the 1990 raise of farm income, FIM 510 mill. was to be paid as direct support, based on the area. In 1991 the hectareage subsidy rose to FIM 850 mill. On the basis of this, farmers will receive direct support FIM 450/ha. Farms with less than 3 ha do not get this support. Young producers, however, receive FIM 600/ha. Support is paid for about 85% of the total arable land area.

The raises in the target prices remained very small. The price of milk was raised FIM 0.05/l, the price of beef 0.2/kg, and the price of feed barley 0.02/kg, but the price of feed oats was lowered 0.03/kg. Through the raise in the hectareage subsidy there will be a FIM 0.05-0.06 increase in the price of a kilo of grain, and corresponding increases in livestock products, depending on the area under cultivation.

As figures 7, 8 and 9 and Appendix 7 show, the development of target prices has been moderate, and it has remained slightly below the overall rate of inflation



Figure 7. Target price of milk in 1972-91.



Figure 8. Target price of wheat in 1972-91.

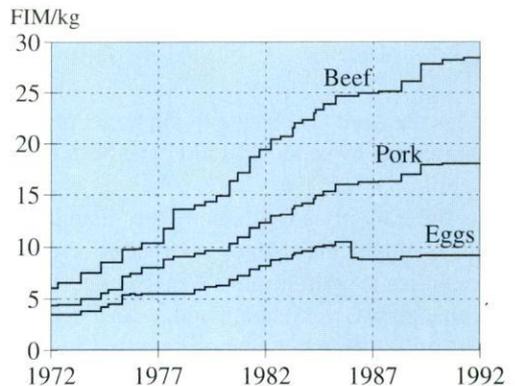


Figure 9. Target prices of beef, pork and eggs in 1972-91.

8.2. Fall price settlement

In the fall price settlement, the change of costs due to the changes in the prices of production inputs is determined, and target prices are corrected correspondingly. The fall settlement is much more limited than the spring settlement. Incomes are not negotiated at all, and the change in capital costs is taken into account only once a year, in the spring settlement.

From January 1991 to July 1991 costs declined by FIM 8.6 mill. The prices of purchased feed were slightly lower than at the beginning of the year because the reductions were also taken into account for the part of broiler feed mixes and calf feed mixes, which was not possible earlier due to the lack of statistics. The machinery and implement cost decreased FIM 35.8 mill. as the trade reduced its list prices by about 15%. The prices of fertilizers rose by FIM 60.3 mill. Changes in the prices of other production inputs were small. Inflation has continued to slow down.

For the part of return, only the change in retroactive payments is taken into account, and this is done in connection with the fall settlement. Retroactive payments have decreased by FIM 15.0 mill. Consequently, the calculation of the return and cost compensation in the fall was as follows:

Decrease in costs	FIM	8.6 mill.
Decrease in return	FIM	15.0 mill.

Need for raise	FIM	6.4 mill.
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Thus the need for change in the target prices and price policy support would have been FIM 6.4 mill.

In the fall price settlement the change is realized only if the change in target prices and price policy support is more than 2%. This time the change was very small, and, consequently, target prices were not changed at all. Thus the change in the prices of production inputs during 1991 will be taken into account in full in connection with the 1992 price settlement.

Due to the difficult market situation, the

target prices for rye and wheat were lowered by FIM 0.20/kg. It will be decided in connection with the settlement of spring 1992, how this change will finally be taken into account. Price relations can be altered in the middle of the pricing year by a mutual agreement.

8.3. Producer prices

Target prices (see Appendix 7) do not give a fully accurate picture of the return farmers get for their products, including all subsidies. For example, in 1990 the additional price of milk was, on the average, FIM 0.25 /l, and other price support was FIM 0.10 /l. Thus the average producer price of milk was FIM 3.17/l. Table 12 presents the development of the producer prices of the most important products in 1980-1991. Export cost charges and milk quota payments have been subtracted from these prices.

8.4. Retail prices

A few examples of the retail prices of food stuffs are given in Table 13. It is hard to compare the

Table 12. Producer prices of the most important agricultural products in 1980-1991, including all subsidies (export cost charges and milk quota payments have been subtracted).

Year	Milk p/l	Beef FIM/kg	Pork FIM/kg	Eggs FIM/kg
1980	184.2	17.69	10.13	7.35
1981	203.1	19.59	11.42	8.48
1982	229.6	22.22	12.68	9.31
1983	248.2	24.01	13.68	9.99
1984	261.7	25.84	14.98	10.29
1985	273.9	27.62	16.17	10.72
1986	276.4	28.28	16.49	10.68
1987	283.3	28.77	16.52	10.71
1988	292.6	30.62	17.28	11.06
1989	312.6	32.86	18.02	11.76
1990	316.8	32.11	17.66	11.81
1991 ^{e)}	320.0	29.40	17.10	11.80

^{e)} estimate

Table 13. Retail prices in September in 1989-91.

Product	1989	1990	1991
	FIM/kg	FIM/kg	FIM/kg
Milk (FIM/l)	3.74	4.04	4.11
Butter	40.60	39.48	33.12
Emmenthal-cheese	43.81	47.91	49.27
Beef (ground)	48.21	49.98	49.44
Pork (flank)	32.58	34.39	35.78
Eggs	16.79	16.87	17.18
Wheat flour	6.23	6.26	6.22
Sugar (lump)	9.16	9.95	10.23
Potatoes	3.17	2.77	3.12

Source: Bulletin of Statistics

producer and retail prices because the products that reach the consumers are seldom exactly the same as were produced on the farms. Fat is subtracted from milk to make consumer milk, meat is only part of the whole carcass, bread grain has gone through mills, etc. In some cases, however, the comparison is easier, for example, potatoes and eggs do not change in the market chain.

9. Income trends in agriculture

9.1. Income disparities

The study on farmers' income level and its comparison to other sectors of economy has been continued in the Agricultural Economics Research Institute. Figures are available only for 1988 due to the delay in taxation statistics. According to this study, based upon tax statistics, farm families received about 45% of their income from agriculture in 1988 (Table 14). This calculation included 126,700 farms. There was 15.8 ha arable land and 37.7 ha forest on these farms on the average. As far as agricultural income is concerned, tax statistics are completed with other statistics.

In the aforementioned study the classification of farms is made in many different ways. One main classification method is based on distribution of taxable net incomes. A farmer is

considered a full-time farmer, if his income from agriculture and forestry is at least 75% of all income. About 39,550 farms belonged to this category in 1988 and they had the average on 21.4 ha arable land. The farm income was FIM 52,430 per person on those farms whereas an industrial worker received at the same time FIM 83,860 as wages.

9.2. Farm income in 1991

According to a preliminary estimate, farmers' incomes decreased by 13%, which was to be expected. The volume of production decreased about 6%. Milk production was 10% smaller than in the previous year, and meat production decreased as well. The amount of grain brought to the market was about 8% smaller than in 1990.

The use of production inputs decreased almost correspondingly. The reduction in the purchases of fertilizers by about 27% was particularly notable. About 10% less feed was bought than in 1990, and the use of other production inputs also decreased considerably. The increase in fallowing and the decrease in livestock production must be reflected as a decrease in costs.

In 1991 the producer prices decreased by about 3% a year. Target prices were raised slightly in the spring, but they were not reached; the producer prices of meat and grain remained

Table 14. Distribution of income of farm families according to source of income (1988 tax statistics).

	Income FIM/farm	%
Agriculture	51 754	45.1
Forestry	10 794	9.4
Wages	31 624	27.5
Other	6 490	5.6
Pensions	14 232	12.4
Total	114 894	100.0

clearly below the targets. The higher marketing charges also caused a decrease in the producer prices.

The increase in the prices of production inputs was about 4%, which corresponds to the inflation in the whole national economy. The prices of fertilizers and feed rose considerably as a result of taxation. The list prices of tractors decreased by 15%, which shows in the total calculation. In reality, the decrease was probably not quite so big, because farmers have always got considerable reductions, which cannot have been taken into account in the income calculations.

The development of incomes was affected by the marketing charges, in particular. About FIM 1.3 bill. was collected from agriculture, but, on the other hand, the state paid FIM 1.7 bill. as compensations for fallowing and giving up production (Table 18). Without the costs resulting from overproduction, the income development in agriculture would have been satisfactory. The good crops in the past three years have formed the basis for this positive development.

9.3. Taxation

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

The depreciations of machinery and implements can be the maximum of 25% of the expenditure balance, and the depreciations of production buildings can be 10% of the expenditure balance. In 1988 the depreciations of machinery and implements were 79%, and those of buildings 15% of all depreciations.

The value of own products used on the farm is not counted as taxable income. An attempt is made to separate the private household completely from production. Especially the use of energy is problematic in this respect: oil and

Table 15. Trends in farm incomes in 1980-91, FIM mill. and as an index.

	Gross return	Total costs	Farm income	Index
1980	13 176.1	9 803.4	3 372.7	108.1
1981	14 760.4	11 345.7	3 414.7	109.4
1982	17 594.1	13 222.1	4 372.0	140.1
1983	19 911.5	13 897.3	6 014.2	192.7
1984	21 011.1	14 637.5	6 373.6	204.2
1985	21 919.8	15 186.8	6 733.0	215.7
1985 ¹⁾	22 516.4	15 504.0	7 012.4	100.0
1986	23 262.3	15 981.5	7 280.8	103.8
1987	22 473.5	16 711.6	5 761.9	82.2
1988	24 013.8	16 825.3	7 188.5	102.5
1989	25 790.0	18 173.8	7 616.2	108.6
1990	27 357.1	18 428.6	8 928.5	127.3
1991 ^{e)}	25 727.6	17 931.3	7 796.3	111.2

^{e)} estimate

¹⁾ New procedure for cost calculation

Source: Agr. Econ. Res. Inst.

electricity are bought for both household use and production. Tax authorities have special instructions in order to be able to take this into account. Also, the division of the interest on loans between production and the household is problematic.

Finnish taxpayers pay both state and municipal taxes. In the municipal tax, the percentage is the same for everybody (15-20%) independent of income, 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 1988 the average taxable income of farmer and spouse in the whole country was FIM 101,300, and the tax on this was about 27%.

There is a separate, progressive tax on property, which amounts to the maximum of 2% of the value of the property. In agriculture, the

property used in production (except for animals and stores) is liable to taxation, unlike in other enterprises. In practise, only large farms pay property tax because the value of a farm used in taxation is clearly below the real value.

In Finland we pay a sales tax of 22% of the tax free price on almost all goods. Consequently, the production inputs of agriculture also include a sales tax, which is not returned to agriculture. Thus production costs are higher than they would be without a sales tax.

Instead, when the sales tax on the retail price of agricultural products is calculated, primary production is excluded. This means that sales tax is carried only on the value added in the processing, delivery and trade of products. According to some estimates, the sales tax on food stuffs is about 15% of the tax free retail prices.

III AGRICULTURAL POLICY

10. Outlines of Finnish agricultural policy

The main factors affecting the shape of Finnish agricultural policy have been the aspiration to guarantee food supply in all conditions, to develop farmers' income level and to keep rural areas inhabited. On the background there is a long development process from food shortages of the post-war period to present overproduction. Agriculture has been protected against foreign competition in order to make it possible to regulate the price level so that the income objective can be achieved.

The situation has changed, and keeps on changing. Production exceeded domestic consumption already in the 1950s, and since then restricting and reducing overproduction have been the topic of continuous political debate. For a long time pressures were internal, based on the state economy. Strongest criticism was directed to the subventions required for the export of overproduction. In the past few years pressures on the independence of agricultural policy have come from abroad, especially from GATT. An attempt is being made to liberalize the foreign trade of agricultural products, and this requirement also meets response in Finland: the high price level is strongly criticized by consumers.

Agricultural policy has taken its present shape in the course of time, but it has been influenced a lot by the report of the "Agriculture 2000" commission completed in summer 1987, which gives the outlines of a long-term program for agricultural policy. The report concerns mainly price and income policy as well as production

policy, but it also takes a stand on issues concerning the other sectors of agricultural policy. The outlines of Finnish agricultural policy will be presented in brief in the following. However, long term policy is again being discussed in a special committee. It was expected to present its proposals for reform by the middle of 1991, but its work has been delayed due to various factors.

10.1. The objectives of agricultural policy

The objectives of our agricultural policy are realized in the legislation and as administrative measures. According to the "Agriculture 2000" commission, the central sectors of agricultural policy are:

- production policy
- structural policy
- income policy
- employment in the countryside and maintaining the rural population level

The production objective is usually presented as a self-sufficiency objective: production must be directed so that, in the long run, it corresponds to domestic consumption. In practice, this requirement means reducing production, because consumption does not increase very much, and at the moment the self-sufficiency in main commodities is above 100%. Due to seasonal variation some overproduction is allowed, especially in milk production. In its proposal for the GATT negotiations the government set as a target a 60% decrease in export support by

1996, and it was also suggested that this support could be lowered even more. Thus it might be possible to abolish overproduction completely by the year 2000, which, in fact, is implied in the report of the "Agriculture 2000" commission.

The self-sufficiency objective is based on the aim of securing food supply in all conditions. As a result, a high production level in peacetime has been regarded as necessary. Maintaining agricultural production is also considered important for employment, regional policy and inhabitation of the countryside. All these views have become subject to criticism. However, the self-sufficiency objective finds unanimous support in all political parties.

Structural policy has to support the self-sufficiency objective. In the future, too, Finnish agriculture will be based on family farms. An attempt is made to develop the preconditions for production by securing an increase in productivity, which is realized, for example, through rational use of production inputs. It would be possible to reduce production costs by increasing the farm size, but this is restricted to reduce agricultural production and to maintain the rural population level.

The limits must be set so that the increase of the farm size above them does not essentially change the unit costs of the products. The objective of a rather small farm size is partly based on the idea that farmers get additional income from forestry and side-line industries.

The objective of income policy is, according to the "Agriculture 2000" commission, to guarantee the agricultural population a just income level in relation to other population groups. Disparities due to the location of farms and the farm size are equalized through the means of price policy. An attempt is made to bring the social security of farmers on an equal level with other population groups.

The development of the income level is secured through price policy, the Price Act being the most important means. It guarantees a compensation for the increase in costs as a result of the rise of the prices of production inputs, as well as an increase in farm income so that farmers' incomes develop about in the same

way as incomes in the other sectors of the national economy.

Rural population, which was emphasized by the "Agriculture 2000" commission, concerns the relationship between agriculture and the society as a whole. Decrease in the rural population causes problems, especially in the sparsely populated areas. Maintaining the vitality of the countryside is regarded as desirable, and, consequently, the side-line industries of agriculture and other industrial activities in the countryside are supported in order to achieve the general objectives of social development policy, as well as of regional policy.

The commission suggested that the money saved as the export costs of overproduction decrease should be spent on developing agriculture and other industries and services in the countryside, and, through this, on maintaining the rural population level.

10.2. Other objectives

In addition, agricultural policy has objectives that were not especially emphasized by the "Agriculture 2000" commission, but which have been put forward in the discussions on agricultural policy or in its realization. These include, among other things, reasonable consumer prices, pure food stuffs, and, in general, environmental considerations.

Food prices are internationally very high in Finland, and agricultural policy has been held responsible for this. In practice, the consumer price target has not attracted very much attention, but producer prices have been determined solely on the basis of the level set as the target for farmers' income. The truth is, however, that producer prices are high due to natural conditions and the high cost level in Finland in general, and they cannot be lowered without affecting farmers' income level.

In the public discussion it has become clear that the criticism is not directed only to farmers, but that processing industry and trade can just as well be blamed for the high food prices in Finland. However, the possibilities of the

processing and trade to lower the price of food are also limited.

More and more attention is paid to the quality of agricultural products. The residues are followed continuously. Agricultural production that uses chemical inputs involves real or imaginary problems. Some consumers favor ecologically produced commodities, even if they are more expensive than those produced by using fertilizers and pesticides. However, Finnish agricultural policy has not clearly taken a stand on these questions, although ecological farming is supported.

In the future the factors related to the quality of products may be very important. They might also contribute to finding solutions to overproduction and environmental problems. Extensive agriculture using less fertilizers and other chemicals could produce the pure commodities required by consumers. However, this is possible only if consumers are prepared to pay a higher price for food stuffs, because extensive production usually leads to an increase in costs.

Environmental policy of agriculture is gradually shaping. It is dealt with more in detail in Chapter 11.1.

10.3. Agricultural policy in practice

Agricultural policy is, in the first place, search for and application of various means in order to achieve the objectives. The measures are prepared by committees, commissions, teams and the authorities, as well as in the negotiations between the producers and the state. Ultimately, they are based on the law, acts, as well as official decisions of the government and other authorities.

The four most important acts on which the running of agricultural policy is based are the Farm Income Act, the Act on Directing and Balancing Agricultural Production, the Act on Directing Livestock Production (i.e. the regulation of the establishment of large production units) and the Act on Rural Industries (earlier the Farm Act). These are complemented by the dual price systems for milk and egg production.

The Farm Income Act is a means of running

income policy. According to this act, the producers negotiate twice a year with the state about the prices (see Chapter 8). So far producers have got a full compensation for the rise of costs due to the rise in the prices of production inputs, and, in addition, the raise of farm income has been agreed on separately. A new Farm Income Act came into effect at the beginning of 1990.

The quite complex support policy, which aims at equalizing income disparities between different parts of the country and between farms of different sizes, forms an essential part of income policy. Additional prices and income support are graded regionally in order to maintain agricultural production in the northernmost parts of the country, too (see Chapter 13.2). The freeze of the support required by the GATT agreements made it necessary to start using direct income support in 1990.

The Farm Income Act determines the general objectives for production policy. The Act on Directing and Balancing Agricultural Production and the regulation of the establishment of production units provide the means for controlling production, which is central in Finnish agricultural policy. Mainly, regulating means restricting production, but production is also supported to some extent (see Chapter 12).

The Farm Act aimed at developing the structure of agriculture. It determined the general framework for granting loans and subsidies to agriculture, and, consequently, made it possible to influence the structural development. This act was reformed in 1990. It is now called the Act on Rural Industries, and the purpose is to grant loans, apart from farms, to other enterprises, too (see Chapter 14). The dual price systems of milk and egg production as well as the regulation of the establishment of production units (see Chapter 12.6) also regulate the structure of agriculture a great deal.

The means of agricultural policy are manifold, and many of them contribute to reaching more than one objective. Like the objectives, the means sometimes contradict each other, too. For example, the development of farmers' incomes is taken care of through the price

policy, but too high prices lead to overproduction. Low interest loans may lead to an increase in the prices of agricultural enterprises, and thus invalidate the state support, which aims at improving the structure of agriculture. However, the conflicts between the objectives and means are hard to avoid in administered agricultural policy. It is often suggested that this should be replaced by market oriented agricultural policy, the disadvantages of which would be taken care of, for example, through direct income support to farmers.

10.4. Farm Income Act

The Farm Income Act that is being applied at the moment was passed in 1989. It is a five-year act concerning the pricing years 1990/91 - 1994/95. Pricing year starts at the beginning of March, except in the case of grain, for which it starts at the beginning of July. The new act was applied for the first time in the settlement of spring 1990.

In principle, the new act is similar to the earlier one, which came into effect in 1982. First, the increase in the prices of production inputs is compensated in full to farmers, and after that the raise of farm income is negotiated in the same way as according to the previous act (see Chapter 8).

Another central point in the Farm Income Act are the production and export ceilings, which determine the share of the state of the costs due to the support on agricultural exports. According to the previous act, the state supported the exports in full up to the ceilings.

According to the present act, a partial responsibility of agriculture for exports (10%) begins with the first exported kilo. In the next stage the responsibility is 50% and, finally, 100%. However, the state still accounts fully for part of the costs for milk product exports, and after that comes producers' 10% export responsibility. All production and export responsibility ceilings will be lowered during the five-year period. These ceilings were altered for the years 1991 and 1992 (see Table 16).

An attempt is made to keep agricultural pro-

duction at or below the level determined by production and export ceilings. In the state budget an annual transfer appropriation, which, according to the act, is FIM 550 mill. in 1990-91 and 500 mill. in 1992-94, is allocated for regulating and balancing production. If the appropriation is exceeded, 50% of the excess will be included in agricultural income.

Recently, about FIM 300-500 mill. has annually been spent on regulatory measures (see below Chapter 12). In the past few years this amount has risen considerably as a result of following. Agriculture has partly financed following: marketing fees that have exceeded the requirement have not been returned in full to agriculture. This procedure has been agreed on separately in connection with income negotiations.

10.5. Changes in the Farm Income Act

Despite the fact that the act has been in force only for a short time, the demand has been raised that it should be revised. The demands are based on the difficulties of the state economy, international pressures to lower the support of agriculture, and the general criticism concerning the high price level. In February 1991 the government appointed a committee to revise the Farm Income Act. The committee left its report in August. It included various different views, and it was difficult for the government to revise the act as a whole. Consequently, revisions were made only concerning the years 1991 and 1992. It is likely that the act will also be changed for the part of the other years.

According to the Farm Income Act, the responsibility of agriculture for exports can be the maximum of 13% of farm income. This ceiling was abolished for the part of 1991. The growth in grain exports exceeded all estimates, and the grain market seemed to be completely blocked. Grain exports had to be increased in order to get the new crop into the market. In 1990 the responsibility of agriculture for exports did not reach the maximum level, even if this should have been the case due to the overproduction of

grain. Part of the exports were transferred to 1991, probably hoping that the situation would be better. The crop of summer 1991 was again good, and the need to export increased remarkably. Consequently, there is some justification for the change in the act.

In 1991 the need for grain exports was about 1.4 mill. tons, which exceeded the export ceiling by about 0.7 mill. tons. Because of the difficulties in the state economy, agriculture carries the responsibility for the exports exceeding the ceiling, despite the fact that farmers' income level will be lowered considerably.

The proposal for the 1991 state budget was prepared for an export support of FIM 2,880 mill., the share of agriculture being FIM 650 mill. According to a recent estimate, the need for export support is FIM 4,100 mill., and the responsibility of agriculture is FIM 1,700 mill. This is about 23% of the calculatory farm income. It was necessary to raise the export cost charges for grain.

For the part of the production ceiling for milk the act was changed so that in 1991 agricultural producers carried the responsibility for the exports of 7 mill. kg butter. In addition, the collection of export cost charges was revised so that the support was lowered by FIM 80 mill., and this amount of export cost charges is not carried from agriculture.

The act was also changed for the part of the export ceilings for 1992. The share of the state was dropped from 90% to 80%, and the quantities were also changed (see Table 16). This indicates that the state hopes to reduce export support more rapidly than the earlier objective. In general, getting rid of export support by the year 2000 has been set as the objective, but it seems that the government aims at abolishing it in about 5 years.

In addition, the act for 1992 was changed so that the responsibility of agriculture for export cost charges may rise to 20%. The funds available for regulating and balancing agricultural production are prescribed in the Farm Income Act. An amendment was included in the act, according to which in 1992 FIM 200 mill. from the Development Fund of Agriculture and Forestry will be used for this purpose.

11. Special topics

11.1. Environmental concerns of agriculture

More and more attention is paid to the environmental problems caused by agriculture. It has been noted that the increase in phosphoric load and eutrophication of lakes and rivers are serious problems, and, in addition to industry and settlement, agriculture is considered a major emission source. Nitrogenous fertilizers also have an effect on eutrophication. Nutrients from intensive fertilization have in some places led to oxygen shortages in bays.

The increase in the load of agriculture on waterways has probably been influenced by specialization and continuous cultivation of grain, which has in places led to harmful condensation of the soil and deterioration of its structure. This has resulted in an increase in leakage.

In Finland, too, contamination of groundwater has become a problem in some places, especially in the case of private wells in the countryside. The silage effluent and the microbes in manure (e.g. salmonella) may also contaminate waterways or wells.

A considerable amount of ammonia is evaporated from livestock buildings and manure pits as well as in connection with manure spreading. Ammonia gas returns to the ground as acid rain and affects the soil. It has been noted that the ammonia gas from traffic increases the ozone content of the air, which, according to studies made in Sweden, causes a reduction in the yield of spring wheat. Research on this matter has been started in Finland, too.

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

plants and a decrease in the populations of certain species of birds.

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

Attempts have been made to solve environmental problems through various means. Phosphoric fertilization is being reduced through voluntary measures by lowering the phosphorus content of fertilizers and by changing the fertilization recommendations for the part of phosphorus, but also through taxation. A tax on phosphorus came into effect in 1990, which at the beginning of the year was FIM 0.50 and in the middle of the year FIM 1.00/kg of phosphorus. From June 16th, 1991 the tax has been FIM 1.50/kg.

The taxes on fertilizers and phosphorus were combined at the beginning of 1992. The tax is determined on the basis of the nitrogen and phosphorus content of the fertilizers. The amount is FIM 2.90/kg of nitrogen and 1.70/kg of phosphorus. The aim is to collect FIM 650 mill. from agriculture through this tax in 1992. The whole amount is used to finance the export cost share of agriculture. Earlier the tax on phosphorus was a purely environmental tax.

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

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

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

Administration and activities related to the environment is conducted in many quarters. In part, this activity has been directed and coordinated by a work group appointed by the Ministry of Agriculture and Forestry in 1989, which has presented several proposals concerning the environment to the Ministry.

11.2. Current policy issues in 1991

Revisions in the Farm Income Act and the raises of the marketing charges caused strong reactions among farmers.

Grain producers, in particular, protested against the new marketing charges. Farmers took their tractors to the roads and in October they organized a big demonstration in Helsinki.

The changes in the Farm Income Act mean that the reduction of production will progress faster than was planned. In the most recent proposals the starting point is that overproduction would be abolished in 5-6 years. Agriculture has opposed the measures to restrict production, regarding them as too fast. The government has justified its actions through the difficulties of the state economy. International pressures have also affected certain decisions.

Reducing production lowers export subventions. The money saved could be spent on developing the countryside, as was proposed e.g. by the Agriculture 2000 Commission, but in the present economic situation this is not likely to happen.

Consequently, agricultural policy in Finland is being changed. Production policy, in partic-

ular, is tightened up. It is hoped that overproduction could be abolished faster than was planned earlier. However, the basis for the price policy is still the same as before, but in the future raising the prices will be more difficult than it still is at present.

Discussion on the price of food continued the whole year through. Criticism was directed, in addition to agriculture, to the other parts of the food chain, i.e. food industry and especially retail. The information presented to the public has gradually become more many-sided, and the reasons for the disparities in prices have been reflected on more accurately. Other comparisons have been taken into account, in addition to the absolute differences in prices.

The moods are still low in agriculture. Mandatory fallowing was a very strong measure, which lowered the income of almost all farmers. The steep increases in the marketing charges and the tax on fertilizers dropped the incomes of grain producers, in particular. Livestock production was also reduced to a considerable extent, but the reductions were based on agreements, and thus they were easier to understand. In general, the prospects for the future are getting gloomier, even if the possible full integration will not be realized at least in the next 10 years.

11.3. European integration

International agreements affect Finnish agriculture more and more. Negotiations on the EEA were completed at the end of 1991, but the final signing was left to 1992. In the GATT negotiations, the secretary general Dunkel made a mediation proposal, and the responses are to be given in 1992. The integration of Finland in the EC is at the discussion stage, but it caused a lot of anxiety among farmers.

The outcome of the EEA negotiations does not affect agriculture very much. The trade of processed foods and the number of freely imported products will increase to some extent, but on the whole these concessions do not have any major impact on the amount of imports. On the basis of the agreement, cheese trade will

increase a little. The agreement includes a clause, according to which the integration of agriculture is negotiated separately every two years.

Discussion on the possible integration of Finland in the European Community (EC) accelerated towards the end of 1991, and preliminary reports on its effects were presented at the end of the year. The effects of integration on Finnish agriculture would very likely be fatal. The price level in the EC is less than half of the price level in Finland, which means that Finnish farms would have great economic difficulties in coping with the new situation.

According to the reports, only large efficient grain farms could continue their production. The yield level in Finland is only about half of that in Central Europe, and, consequently, costs in Finland are much too high.

The possibilities of livestock production could be a little better because the prices of feed grain and feed would drop to about half of the present level. There is also a small border protection in milk production due to the long distances. Consequently, the production of at least consumer milk could be continued because it would be possible to pay a higher producer price for it. Instead, milk used in processing might be imported for the EC price to prevent domestic products from exceeding the prices of imports. There may be a restricted market left for domestic products, however, even if their retail prices were higher than those of imported products.

The production of pork and eggs could also be profitable on large rationalized farms. On the whole, the preconditions for agriculture in Finland would be considerably weakened and many farms would be forced to quit production. Consequently, agriculture has clearly taken a stand against joining the EC.

The revival of the GATT negotiations worried agriculture. Lowering the support and border protection would cause difficulties for agriculture, even if direct income support would compensate part of the loss of income. However, the GATT settlement gives some indications of how agriculture would adjust to the integrating Europe.

Table 16. Quantities of milk production (mill. liters) and exports of meat, eggs and grain (mill. kg) up to which the state accounts for 100%, 90% or 50% of export costs in 1990-1994 according to the original 1989 act. In addition, new quantities are presented for 1992.

	%	1990	1991	1992	1993	1994	1992 ²⁾
Dairy milk ¹⁾	100	2300	2280	2260	2240	2220	2150
	90	2400	2375	2350	2325	2300	
	50	2550	2525	2500	2475	2450	2300
Beef	90	5	4	4	4	3	
	80						2
	50	8	7	6	6	5	5
Pork	90	7	6	6	5	5	
	80						4
	50	12	11	10	9	9	6
Eggs	90	8	7	6	5	4	
	80						2
	50	12	11	10	9	8	4
Grain	90	515	490	465	440	415	
	80						350
	50	715	690	665	640	615	550

¹⁾ In any case, agricultural producers are responsible for the export costs of 3 mill. kg butter (in 1991 7 million kg and in 1992 10 million kg).

²⁾ New production and export ceilings concerning the year 1992.

12. Production policy

Production policy means determining the production objectives and directing production so that the objectives will be achieved. Production objectives can be regarded as formed on the basis of the production and export ceilings determined in the Farm Income Acts (see Table 16). The Agriculture 2000 Commission recommended that, in the long run, production should correspond to consumption, although some overproduction will be allowed due to seasonal variation. This 100% self-sufficiency can be regarded as the production objective of the government.

The export responsibility of the state decreases by degrees. Thus in 1991 the state accounted

for 90% of the export costs of beef up to 4 mill. kg, and for 50% of the costs of the next 3 mill. kg. For the part of exports exceeding 7 mill. kg, agriculture got only the world market price. Export ceilings will be lowered according to Table 16 by the year 1994. In 1992 the state will account for 80% of the exports up to 2 mill. kg and for 50% up to 5 mill. kg.

In 1992 the state carries full responsibility for the export costs of dairy products if the amount of milk delivered to dairies does not exceed 2,150 mill. liters. For the excess the state accounts for 50% of the export costs up to 2,300 mill. liters, and after that agriculture gets only the world market price for exports. However, agriculture is responsible for the exports of 10 mill. kg butter in any case.

It is to be expected that the production and export ceilings will be lowered for the years 1993 and 1994.

Similar procedures are being applied to pork, eggs and grain. Non-food grain used in industry, which is supplied for the world market price, is included in exports.

Consequently, agriculture has to account for export costs even for small quantities. In the case of the marginal amounts, the 10% or 20% share of export costs does not necessarily cause economic loss. When the share rises to 50% the penalty is so heavy that it is not profitable for agriculture to exceed the limit in question.

According to the earlier act, export cost charges could amount to the maximum of 13% of the agricultural income of each year, and the state was responsible for the rest. However, the act has been changed so that no maximum was set for 1991, and in 1992 export cost charges may amount to 20% of agricultural income.

The amount of import levies of dairy products, meat and grain is deducted from the export cost responsibility of agriculture. At times it may be necessary to import, for example, meat due to seasonal variation or because the demand for certain parts of the carcass is higher than the domestic production is able to meet. Correspondingly, part of the production must be exported. It is also necessary to import grain for some special needs of industry.

Earlier especially the production ceilings for milk, beef and eggs used to be exceeded. The export responsibility of agriculture increased continuously as both the ceilings and world market prices went down. The situation improved considerably in 1988 and 1989, when there remained no export costs for overproduction to be covered by agriculture. Especially grain exports remained clearly below the export ceilings in both years.

According to the new Farm Income Act, the export ceilings were lowered and the system became complicated. Table 17 presents the amounts that exceeded the full export responsibility of agriculture in 1990 and 1991. As the grain crops were good in both 1989 and 1990, the export responsibility of agriculture grew very strongly in 1990 and especially in 1991.

Measures to restrict production have been the most central means of production policy. Production could be directed through price settlements, but as the agricultural income settlement has usually led to increases in prices, the real prices have remained stable, and it has not been possible to reduce production through pricing. Instead, as the prices have not changed, pressures to produce more have increased constantly.

On the other hand, it has been difficult to change the price relations due to internal factors in agriculture. All production lines want at least equal raises in prices. Consequently, it has been

Table 17. Excesses and shortfalls of production and export ceilings and the share of agriculture of the export costs in 1986-91.

	1986	1987	1988	1989	1990	1991 ¹⁾
Dairy milk mill.l	93.0	-6.0	-130.0	-85.0	48.0	-60.0
Pork	-3.7	4.3	-2.8	3.0	13.8	5.0
Beef	10.3	10.0	0.5	-4.0	1.1	12.0
Eggs	13.1	10.7	8.6	10.0	9.4	2.0
Bread grain	-	-	-100.0	-100.0	-	-
Feed grains	169.9	-230.0	-510.0	-68.0	-	697.0
Export cost, FIM mill.	602	274	0	0	791	1715

¹⁾ Estimate of the excess over the production and export ceilings (the full export responsibility of agriculture)

necessary to direct the development of production mainly through restrictive measures.

Both mandatory and voluntary means are being applied to restrict production. The most important mandatory measures are the dual price systems for milk and eggs, the regulation of the establishment of agricultural enterprises, restricting land clearing, and fallowing.

In 1983 an act was passed for the voluntary systems (the Act on Regulating and Balancing Agricultural Production), according to which the government can annually decide on measures to restrict production. In 1990 this act was continued until the end of 1994. On the basis of the act, the government makes decisions on various measures to restrict production, and it gives the government a better chance to direct production in a more flexible way, i.e. according to the current situation, than earlier. Usually, it has been possible for farmers to receive compensation for only one measure. Now this requirement has been abolished, which makes it possible, for example, to start beef production, which is supported from the state funds, after making a contract to reduce milk production.

In practice, the following restrictive measures were applied in 1991:

Contracts to decrease

- agricultural production and
- milk production

as well as

- fallowing contracts
- support of afforestation

In 1991 the most important measures to restrict production were fallowing as well as contracts to reduce milk production. Some contracts concerning all agricultural production were also made. These contracts concerned the transition from agriculture to forestry or other rural industries.

In addition, various other measures also have an effect on production. The licenses required for the establishment of production units are one of the most important means of regulating production. In addition to covering the marketing responsibility, the export cost charges col-

lected for financing the export of surpluses, as well as the tax on fertilizers and feed have a restricting effect on production. The land clearing charge, which has stopped land clearing almost completely, also aims at restricting production.

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

Production is also supported to some extent, for example, the production of beef and mutton is supported through an additional price, and beef production through suckler cow premiums. There are also other forms of production support (see Chapter 12.8.)

Consequently, there is a good number of regulatory measures, and they dominate the realization of agricultural policy. These measures are dealt with briefly in the following.

12.1. Balancing production

In order to reduce agricultural production it has been possible to draw up contracts that are directed to the whole production of the farm, to livestock production or to only one product, e.g. milk.

Contracts to reduce agricultural production, which have been made since 1977, concern the whole production of the farm. In 1991 about 350 new contracts were made. These contracts were made with farmers under 60 years of age who had the chance to shift to forestry or small-scale industrial activity. The contracts are in force for ten years, and the compensation for giving up production is determined on the basis of the income of the farm. Earlier it was possible to make these contracts with older farmers, too.

The establishment of forestry farms has been

supported and promoted in order to balance production. For the first five years a farm that turns to forestry or rural industrial activity receives a compensation according to the income, and for the whole period a basic compensation of FIM 12,500 a year. When the contract was made the timber output of the farm had to amount to the minimum of 100 solid cubic meters a year. The afforestation of arable land was supported by doubling the afforestation compensation. However, starting the new production is voluntary. About 1,800 hectares of the 4,600 hectares of the arable land of the farms will be afforested.

Afforestation is a means through which arable land can be removed from production permanently, and an attempt has been made to encourage it. In 1991 farmers received FIM 7,000-10,600/hectare for afforestation. Contracts were made to afforest 18,300 hectares. This will be realized in the next few years. In 1991 about 10,000 hectares were afforested according to the contracts made earlier.

The contracts mentioned above concern the whole production of farms. The most important contracts concerning individual products last year were the contracts to reduce milk and egg production.

Contracts to reduce milk production were made in the end of 1990 and in the beginning of 1991. There were two alternative ways of giving up milk production: farmers could stop producing either for five years or completely, i.e. give up their milk quota. In the five-year contracts the compensation was FIM 0.90/l, and in the case of giving up production completely it was FIM 1.20/l, except for farmers over 65 years of age who could get only FIM 0.75/l. If the amount of milk exceeded 120,000 liters, the compensation was FIM 0.50 for the excess. The compensation could amount to the maximum of FIM 80,000/farm a year, and in both cases it is paid for three years. Altogether 5,470 contracts were made, and their effect on production is about 210 mill. liters. The average compensation was FIM 0.91/l. The contracts covered about 42,000 cows about 9,000 of which were left as suckler cows.

In 1992 it is again possible to make similar contracts to reduce milk production. The objective is to reduce production permanently by about 100 million litres.

No actual *contracts to reduce pork production* have been made since 1983, and the contracts made at that time are no longer in force. The grading of the marketing charges has a restricting effect on production because the charge is FIM 0.20/kg if the slaughter weight is under 76 kg, but for heavier carcasses the charge is FIM 0.60/kg. In 1992 the charge is FIM 0.30 when the carcass weight is under 74 kg and FIM 1.00 when the carcass weight exceeds 74 kg.

Contracts to reduce egg production made since 1976 have been an efficient way of curbing production. The contract can either be made for a certain period of time or it can be permanent, in which case the state buys production quotas. Contracts to reduce egg production were made at the end of 1990, and these came into effect during 1991. The contracts were made for 5 years and the compensation was FIM 150/hen. Their effect on production was about 10 mill. kg.

In 1991 the so called production interval were introduced: the producer receives the additional price (see Chapter 12.6.) only if he has an interval of at least ten weeks between production periods. Hens that are under 20 weeks old can be raised during the interval.

An attempt has also been made to reduce egg production by *restricting hatching*. General instructions have been issued for this purpose. In 1991 hatching was at the same level as in the previous year. During the past few years, expanding hatcheries and setting up new ones has been prohibited.

In practice, the *clearing of new arable* land has been made unprofitable through a land clearing charge of FIM 30,000/ha. Last year it was decided that the land clearing act will remain in force for 4 years, and now it prohibits land clearing instead of imposing a charge on it. The charge rose to FIM 50,000/ha.

Already in August 1986 the authorities started to reform pension systems in order to cut

overproduction. The pension system in case of giving up production was improved so that farmers could commit themselves only to leaving their land uncultivated for six years. Earlier the system required selling or afforestation of arable land. By the end of 1991 this pension system covered about 80,000 hectares arable land.

12.2. Fallowing

Overproduction of grain has increased very strongly in the past few years. This has been caused by the good crops and the reduction in livestock production, which has made arable land available for commercial grain production. Earlier exporting grain was even considered more economical than exporting other products, but the world market prices have dropped very low, which means that exporting grain is completely unprofitable. Consequently, measures are being taken to reduce grain production, involving e.g. the tax on fertilizers and fallowing.

The tax on fertilizers has been carried to cover the share of agriculture in export costs, but it also has objectives related to protecting the environment and reducing production. As restrictive means, however, the taxes on production inputs have proven inefficient, both in theory and in practice.

Further ways of removing arable land from production are fallowing and afforestation. Intensified voluntary fallowing was started in 1989, when 185,000 hectares were left fallow. The same voluntary fallowing was continued in 1990, and 175,000 hectares remained out of production.

In 1991 a mandatory fallowing system, which had been planned for years, came into effect. A farmer had to fallow 15% of the arable land area, for which a so called basic compensation of FIM 1,000-1,300/ha was paid. The compensation was FIM 200/ha lower if the land is poor or there are open ditches. If the area to be left fallow was more than 20% but under 30% of the arable land area, an additional compensation of FIM 500-1,300/ha was paid for the area exceed-

ing the mandatory 15%. Only the basic compensation was paid for fallowing a larger area.

It was also possible for farmers to make contracts concerning grass fallowing, in which case they committed themselves to seeding the area left fallow with grass (or other suitable plants). These contracts were made for 3 years and the compensation is, in addition to those mentioned above, FIM 500/hectare. Grass fallowing was recommended for environmental reasons, because it results in less leakage than conventional fallowing without any plants.

If the farmer did not leave fallow any land he had to pay FIM 1,000/ha as export cost charges for the whole arable land area. Farms with less than three hectares or on which the grass area was at least 90% of the arable land area were free from mandatory fallowing. Consequently, in practice fallowing was mandatory.

The success of fallowing exceeded the target of 350,000 hectares, and the area left fallow rose to 470,000 hectares. Over 20 per cent of arable land was fallowed, whereas the share was 8 per cent 1989 and 1990 and two per cent before that.

Fallowing is mandatory in 1992 in the same way as in the previous year, except that no compensations are paid. However, there is a compensation for grass fallowing that corresponds to the costs of starting to cultivate grass.

The fallowing obligation is graded according to off-farm income in 1992. If the farmer's wa-

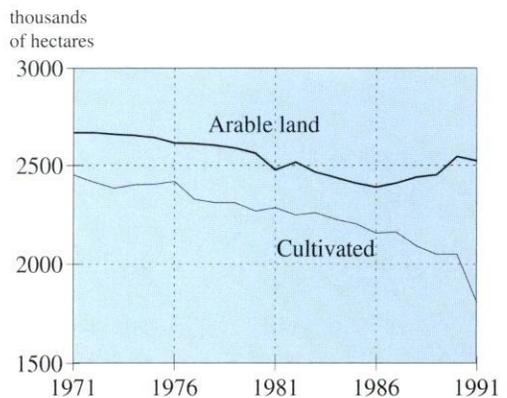


Figure 10. Arable land and the area under cultivation in 1971-1991.

ge and pension income is less than FIM 100,000, he has to leave fallow 15% of the arable land area. If the income is FIM 100,000-250,000, the obligation is 20%, and if the income exceeds 250,000, the obligation rises to 30%.

Grass farms are free from fallowing if the grass area is at least 80%. In 1991 the limit was 90%. Farms with less than 3 hectares are also free from fallowing.

As agriculture carries the full responsibility for grain production that exceeds the export ceiling, it is more economical not to produce above the ceiling because the world market prices do not cover even the variable costs. The objective is that the area left fallow would be 500,000 hectares.

In addition to fallowing, the farmer may participate in other systems to reduce production.

12.3. The cost and effects of production restriction measures

The appropriations to be used for measures to restrict production are prescribed in the Farm Income Acts. According to the new Farm Income Act which became effective in 1990 the appropriations for export subsidies are annually FIM 550 mill. in 1990 and 1991 and FIM 500 in 1992-92. The appropriations had, however, to be raised to FIM 1,270 mill. in 1991. According to the Act agriculture had to pay half of the increase.

Table 18 presents an estimate of the effects of all measures to restrict production in 1991. If the quantities covered by the contracts had been exported, the export costs would have amount-

Table 18. Summary of the extent of production control measures in 1991.

	Contracts in force	Area	Cows	Pigs	Hens	Compensation FIM/mill.
Contracts to reduce						
agr. production	2.0	20.0	10.0	4.0	5	118
milk production	8.4		60.6			336
egg production	1.3				1270	61
Fallowing contracts	123.1	473.0				729
Beef production						
contracts	3.0		22.0			21
Pea production	2.6	10.5				23
Ecological production	0.9	14.4				29
Afforestation		10.0				77
Total	141.4	528.0	92.6	4.0	1275	1397
Commitments to leave uncultivated	10.0	80.0				282
Total	151.4	608.0	92.6	4.0	1275	1679
Corresponding production mill.kg	grain	milk	pork	eggs	total	
	2020	519	3	19		
Export cost savings FIM/mill.	2868	949	48	153	4017	

ed to about FIM 4.5 bill. (including the sales tax), mainly to be paid by the state. However, it seems that the effects have been overestimated to some extent, because part of the reductions would also have occurred without any compensations.

12.4. Export cost charges

The responsibility of agriculture for export costs increased considerably in 1991. Export cost charges were collected as follows:

- Tax on fertilizers was FIM 0.20/kg Jan. 1st - June 15th, 0.35/kg June 16th - Aug. 15th and 0.60/kg Aug. 15th - Dec. 31st 1991. The tax on phosphorus was FIM 1.50/kg of phosphorus, but this is not included in export cost charges, but it is purely an environmental tax. In 1992 the taxes on fertilizers are FIM 1.70/kg of phosphorus and 2.90/kg of nitrogen.

- The export cost charges for the 1991 grain crop were FIM 0.10/kg for barley and oats and 0.20/kg for rye and wheat Jan. 1st - June 30th and FIM 0.30 for feed grain, 0.50 for wheat and 0.80 for rye from July 1st. These charges will also apply in 1992.

- Export cost charge for pork of FIM 0.20/kg was collected if the slaughter weight was under 76 kg and FIM 0.60/kg if the slaughter weight was over 76 kg. From the beginning of 1992 the charge is FIM 0.20/kg if the slaughter weight is under 74 kg and 1.00/kg if the slaughter weight is over 76 kg.

- Tax on protein feed was FIM 1.60/kg on fat and raw protein, excluding the protein in grain. The tax on each feed mix is determined on the basis of its fat and protein content. From the beginning of 1992 the tax is FIM 1.90/kg for both raw protein and fat.

- In order to cover the export costs of the overproduction of milk a "fat charge" has been collected. In 1991 this was FIM 0.08 for one tenth of fat for the part that exceeded the fat content of 3.7% in milk. This amount is the same as the price paid for fat, which means that if the fat content is over 3.7%, nothing is paid for the fat.

- Large-scale poultry farms and pig producers

Table 19. Export cost charges in 1988-91 FIM mill.

	1988	1989	1990	1991 ^{e)}
Milk	-	-	62	113
Quota charge	25	20	135	
Pork	2	0	11	42
Tax on fertilizers	46	58	135	450
Tax on feed mixes	12	0		
Tax on protein	50	0	196	216
Additional marketing charge	15	15	10	10
Grain	-	-	122	
Total	150	93	671	1325
Transfer from the previous year	86	152	82	-49
Share of agriculture	63	194	791	1717
The others			3	21
Reduction of support				80
Transfer to the next year	173	51	-41	-392

^{e)} estimate

Source: Ministry of Agriculture and Forestry.

have to pay a marketing charge if the income that the charge is based on exceeds FIM 1.5 mill. for pig production and 0.65 mill. for poultry production (since 1989). If the producer has income from both pig and chicken production and the income from the production line that provides smaller income is at least 50,000, the marketing charge is determined on the basis of the total income from both production lines. The size of the enterprise that exceeds the income limits is about 570 pig places and 3,800 hens or chickens.

As Table 19 shows, the calculated export cost charges deviate from the final share of agriculture. The balance sheet cannot be calculated until at the end of the year. However, the excesses and shortfalls are taken into account in the calculation in the following year. Consequently, the final calculation indicated that in 1990 FIM 41 mill. too little had been collected from agriculture. From 1992 as much as FIM

392 will remain to be covered next year.

It is estimated that in 1992 about FIM 1,473 mill. will be collected from agriculture for covering the export costs as well as for measures to balance production. The share of the export cost charges proper has been estimated at FIM 1,150 mill.

12.5. Dual price system for milk

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

If the amount of milk delivered to dairies exceeds the quota, a quota charge (FIM 2.05/liter in 1991) is collected for the excess. The principal is that producers get only the world market price for the amount that exceeds their quota. The excesses have amounted to only about 10 mill. liters a year. However, in 1990 the quotas were exceeded by 60 mill. liters, since the quota charge was temporarily lowered for smaller exceedings.

At the beginning of 1988 a quota system for dairies came into force. Dairies have to pay a quota charge of FIM 0.50/l for the amount of milk that exceeds the amounts of 1986. The purpose of this is to prevent the dairies from taking advantage of the free quotas and, in general, from increasing milk production for economic reasons.

The quota system has met the objective set for it, it has prevented the increase in production. The problem of the system is that it impedes structural development because it is not possible to increase the farm size. Rise in the yield level has even forced producers to reduce the number of dairy cows, which has left some of the buildings and machinery useless.

The system has also been made more flexible

by making it possible to distribute 90% of the quantities of those who stop producing to those who continue milk production. Priority has been given to young producers as well as those who had increased their average yields. No additional quotas were granted in 1991, because production started to increase in 1990.

Farmers who made a contract on ecological production could apply for a license to start producing milk. The maximum quantity was the same as the free quota, i.e. 40,000 liters.

Milk production is completely regulated by the state. It is supervised through a threefold quota system: the highest is the ceiling concerning the whole production, dairies have their own quotas, and the most effective restrictive means are the quotas for individual farms.

12.6. Dual price system for eggs

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

In this system the regulation of production is based on an additional price, which in 1991 was FIM 4.24/kg in the provinces of Oulu and Lapland and 3.84 in other parts of the country when the production was the maximum of 10,000 kg and FIM 3.39/kg in the whole country if production was less than 80,000 kg.

Producers get the target price plus the additional price for the quota. If the quota is below 10,000 kg, the producer gets the full additional price for the whole quota.

In 1991 the quantity that entitled to the additional price was lowered: it was paid for the maximum of 80% of the production quota, and for the part exceeding 50,000 kg for only 70% of the quota. It is paid only up to 80,000 kg.

As a result of the grading of the price production has decreased continuously, but this has been partly caused by the contracts to decrease production as well. As a result, the exports have dropped to a quite tolerable level.

12.7. Regulation of the establishment of production units

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

The licenses have gradually become an effective means of preventing the increase of production. New livestock production units cannot be established or old ones extended without a license from the authorities. The Act on Directing Livestock Production was revised at the beginning of 1991 and it will remain in force until the end of 1994. For the most part, the new act does not differ very much from the earlier one.

A license from the agricultural districts is required for the establishment of production units with over 30 beef animals, 25 pigs, 100 hens for egg production, or 1,000 chickens (or other poultry) for poultry meat production.

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

Licenses are not granted to enterprises with over 120 beef animals, 400 pigs, 4,000 hens or 30,000 chickens. It is possible for farms to get a license for only one form of livestock enterprise.

In addition, getting the license is subject to the condition that the farm should be able to supply 2/3 of the feed needed in the production. If the size of the enterprise is over 60 beef animals, 200 pigs or 1,000 hens, a 3/4 self-sufficiency in feed is required. In the case of chicken production, the required self-sufficiency is 1/5.

In 1991, however, licences could be granted for the establishment or expansion of a farm of 60 cows or 15,000 chickens at the maximum.

So far granting the license has been restricted

only to transfers of farms to descendants and, for special reasons, to some other cases when the owner of the enterprise changes.

12.8. Production support

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

Production support is realized through an additional price, which is paid if the slaughter weight exceeds certain limits. Additional price for slaughter animals of over 190 kg (heifers over 140 kg) was paid according to the footnote in Appendix 7.

Beef production is also supported through the so called suckler cow premiums (FIM 1,700/cow in 1991). New contracts were made with about 1,000 farmers concerning 7,800 suckler cows. There were about 22,000 cows in the system last year.

Additional production premium is also paid for mutton. There is no actual production support for grain, but the production of rye and feed grain is supported by regional subsidies in some parts of Finland. The production premium for rye was FIM 0.30/kg and that of feed grain FIM 220/ha.

Since 1990 ecological cultivation has been supported by FIM 2,800 per hectare. Farmers can shift to ecological cultivation during a three-year period, during which they are entitled to support. Farmers engaged in ecological farming prior to 1990 are also entitled to this support. Farmers commit themselves to practicing ecological cultivation for three years after the last year they get the premium, which was FIM 2,800 per hectare. New contracts were made with 450 farmers concerning 6,000 hectares. Ecological production was practiced on 2,000 hectares and 15,000 hectares were under transformation.

13. Agricultural support

13.1. Support in general

As a rule, agricultural support refers to the support that is paid through the state budget. The purpose of this is to realize the most important task of the price system of agriculture, i.e. maintaining producer prices at the agreed level. This support is used for export subventions, reducing income disparities, production support and the realization of the price level of special crops like sugar beets and oil plants. Part of the support is in the form of so-called direct support, the use of which is recommended by international organizations, instead of price support.

The share of the state in export support is determined on the basis of the Farm Income Act. The other support (so-called price policy support) has been agreed on each year in connection with the farm income negotiations.

Table 20. Agricultural support FIM mill.

	1988	1989	1990
Agricultural production	5085	4886	5253
- price policy support	2021	2990	3375
- structural support	939	989	1130
- other	2125	908	749
Food stuffs	805	735	738
- price support	726	661	680
- other	79	74	58
Marketing	2855	3338	4720
- export support	1566	2403	3481
- sales tax	469	492	753
- export of processed products	788	393	486
Other	31	50	0
Total, gross	8744	8959	10711
Total, net ¹⁾	7534	7784	8997

¹⁾ Net expenditure has been calculated by deducting the state's tax and charge incomes from the gross expenditure.

Source: Economic Survey 1991

This support has increased constantly, the last time, in particular, when direct support was introduced (Table 20).

Part of the support is not included in the price system, for example, investment support and support for the financing of structural development are granted through the Development Fund (see Chapter 14). Agricultural counselling and processing are also supported through budget funds.

In the case of sugar and oil plants the difference between the domestic and foreign price level is equalized through special import levies and excise taxes. As a result, the budget also includes support on food stuffs, which amounted to FIM 738 mill. in 1990. Most of this is returned to the state as import levies and excise taxes paid by the consumers.

To realize the target price level the state has to pay export subsidies and compensations for the differences in prices to prevent the export of surpluses from lowering the producer prices. Export subsidies decreased considerably in 1988 but since then they have increased very strongly. For computational reasons, the refund of the sales tax of export products is also regarded as export support.

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

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

As calculated by OECD, the support becomes very big because it is based on the world market prices, which are quite low. The support is very much susceptible to disturbances in the market,

especially oversupply. Some of the world market prices determined through this procedure (e.g. the price of consumer milk) have obviously been far too low.

13.2. Price policy support

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

The most important forms of price policy support are regional subsidies, support paid according to the farm size, as well as the additional price of milk, meat and eggs. In the last farm income settlement altogether FIM 3.6 bill. was reserved for price policy support.

The support that is based on the farm size (the so called *hectarage subsidy*) is tied to the area of the farm and to the number of livestock, i.e. to so called production units (one hectare and one dairy cow equal one production unit, one pig equals 0.2 production units, etc.). Subsidies are highest on farms with 7-8 hectares. The payment per production unit is confirmed annually, and it is scaled according to the joint income of the farmer and spouse and according to the region.

In order to determine the hectarage subsidies the country has been divided into five areas, two in Southern Finland and three in Northern Finland, and, in addition, the subsidies are scaled according to incomes. The basic price per production unit was FIM 880. The amount available for this purpose decreased because it is also used directly to cover the export responsibility of agriculture. Consequently, the basic price per production unit also decreased from the previous year. Producers that are under 39 years of age receive the subsidy raised by 40% if their income is below FIM 77,500 (Table 21). Hectarage subsidy must be applied from the agricultural board of farmers' home county. The majority of farms receive hectarage subsidies, and in 1991 there were 79,000 applicants.

Regional subsidy is paid to milk and meat producers as production support per production unit. For this purpose the country has been divided into 10 (9 for meat) regions, and the production subsidy for milk and meat has been determined for each of them separately. Regional subsidy is very important to farmers in Northern Finland because, for example, the regional subsidy for milk is FIM 0.13-0.25/l, for pork FIM 0.40-0.55/kg and for beef at the maximum FIM 11.30/kg in the province of Oulu. This subsidy has proved very effective as a means of equalizing income disparities within agriculture. According to estimates, the subsidies account for about 75% of agricultural income in Northern Finland.

Based on the number of animals, a subsidy,

Table 21. Hectarage subsidies FIM per production unit in 1991.

Income class	Southern Finland	Central Finland	Northern Finland		
			south zone	central zone	north zone
under 98 000	880	968	1056	1144	1320
98 001-108 000	704	774	845	915	1056
108 001-118 000	572	629	686	744	858
118 001-128 000	396	436	475	515	594
120 001-115 000	264	290	317	343	396
below 39 years of age	1232	1355	1478	1602	1848

which includes the compensation for the price reduction of commercial feed, is paid in Northern Finland and in the archipelago. The subsidy is graded regionally and it varies between FIM 140 and 1,725 per animal unit. In the southernmost parts of the supported area the subsidy is doubled for the first seven dairy cows, and in the north it is tripled.

The *additional price of milk* was introduced in 1974 to slow down inflation. At first it was the same for all farmers, but later it has been graded according to the quantities of milk and, consequently, it has become a means of dividing incomes within agriculture. The grading of prices was changed last year.

Farmers over 65 years of age do not get the additional prices. It is generally regarded as desirable that pensioners would give up agriculture. Thus part of the arable land might remain out of production, which reduces overproduction. Farmers over 65 years of age do not get hectare subsidies, either. These two points have increased the willingness to retire, which is also supported by the improvements in the pension systems.

14. Developing the structure of agriculture

Developing the structure of agriculture requires investments (e.g. new buildings and machines), land improvements (subsurface drainage) as well as amalgamation of farms or their lands. These measures are partly financed privately, and partly through state support. The Farm Act that came into effect in 1977 defines the general framework for the development of farms that is supported by the state. This act was revised in 1990, and it came into force at the beginning of 1991 with the title the *Act on Rural Industries*.

The objective of the new act is to create a uniform legislation in order to promote agriculture and rural industries.

The rationalization and decrease of agricultural production cause a decrease in rural population and threaten to leave the countryside uninhab-

ited. Consequently, an attempt has been made to develop rural industries in general. The objective of the new act is to make this activity more uniform and extensive. However, only basic production and entrepreneurial activity closely connected with it are subsidized on the basis of the Act on Rural Industries, and other small-scale entrepreneurial activity in the countryside is still excluded.

The state supports agricultural investments by granting *low interest loans* as well as direct subsidies through the *Development Fund of Agriculture and Forestry*. The support is subject to the precondition that the farm must be profitable. The objective is to improve the farm structure and to increase the average farm size.

The capital of the Development Fund consists of annual transfers into the fund by the state, as well as of interests and repayments of loans and sale price claims created by the land use activity. At the end of 1991 the loan capital of the fund amounted to FIM 6.9 bill. The interest of the loans varies between 4 and 7%, depending on the region.

The amount of money transferred to the Development Fund by the state has decreased considerably in the past few years, and in 1991 no transfers were made. However, no essential decrease has occurred in the possibilities for granting loans. Income from interests and installments of loans were estimated to have amounted to FIM 810 mill. during the year. Together with the untied funds from earlier years, the Development Fund will have altogether FIM 1,100 mill. at its disposal in 1992. However, FIM 200 mill. of this will be transferred to the balancing of agricultural production and 100 mill. to the state stocks.

The Development Fund granted loans especially for transfers of farms to descendants, and about 1,700 of these were financed last year. Not all farms should continue producing. In 1992 the number of supported transfers of farms to the descendants has been restricted to 1,500.

In 1991 about FIM 110 mill. as subsidies and about FIM 100 mill. as loans were granted for the support to the so-called rural industries that are outside agriculture proper. The support has

been granted for entrepreneurial activity practiced by farmers in connection with agriculture. Enterprises that are run by the farm family or that employ outside labor corresponding to the maximum of 2-3 annual jobs are entitled to the financing. The most important fields that have received the support are small-scale labor intensive manufacturing and service enterprises (about a third), garden, greenhouse and other special crop production (about 20%), farm holidays, horse husbandry and other enterprises related to free-time activities (about 20%) as well as fur farming, aquaculture and bee-keeping. In 1991 the support contributed to the establishment of about 800 new enterprises.

The interest rate on loans granted by private financing institutions may also be lowered by means of the state funds, if the loans meet the preconditions prescribed by the act. The interest support is half of the interest of the credit institution. In 1991 FIM 291 mill. were available for interest support, and by means of this it was possible to grant loans for FIM 945 mill. Interest support loans are as significant as the actual loans granted by the state. Nearly all other loans, except those for transfers of farms to descendants, are granted as interest support loans. In 1992 the maximum amount of interest support loans to be granted is FIM 750 mill.

The so-called *start money system* is also part of the investment support. Young farmers under 35 years of age are entitled to state support when they start practicing agriculture on a farm they have acquired. Last year the maximum subsidy was FIM 62,500 to be spent on, for example, purchasing machinery, implements or fertilizers. Altogether FIM 100 mill. of start money was available. In 1992 this will be FIM 70 mill.

15. Social policy

A farmer is at the same time an entrepreneur and an employee. The general laws and acts on the social security of employees do not concern farmers, but a separate legislation has been developed for them. Usually this has been decided on in the farm income negotiations. The responsibility for the costs of the social security

is divided between farmers and the state. The most important acts concern the pensions, compensations in case of sickness or accidents, annual vacation and substitute help.

Farmers' pensions are prescribed by law, and they are comparable with employee pensions in other sectors. Farmers pay insurance payments according to their 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, but the state also contributes to financing the pension costs. Because the number of the insured has decreased and the number of pensioners has increased, the state accounts for about 80% of the pension costs.

The acts on farmers' pensions are supplemented by the pension in the case of a transfer of the farm to a descendant, which mainly aims at lowering the average age of farmers and to get skilled farmers to the field. The transfers of the farms to descendants are promoted through this act, which has been in force since 1974, and which was revised at the beginning of 1991. About 1,500-2,000 contracts a year have been made, and the arable land area of the farms has been a little under 20 ha.

Pension in the case of a transfer of the farm to a descendant can be granted to farmers over 55 of age. The contract can be made when the farmer is 50 years old, but the payments start when he is 55. The pension is subject to the further condition that the production on the farm can be considered profitable. In practice, the amount is determined in the same way as in the case of disability pensions, and the same stipulations are applied as for the other pensions in the case of early retirement. The sale price of the farm also affects the pension. This aims at preventing the rise in sale prices and making them correspond to the productive value of the farm.

The *act on the pension in the case of giving up production*, which came into force in 1974, also aims at improving the structure of agriculture and reducing production, because the pension is

subject to the condition that the farmer quits production. This can be realized in several ways. In the past few years the contracts to stop farming have become most popular (see p. xx), whereas not so many afforestation or sale contracts have been made.

Contracts to give up production can be made by farmers over 55 of age, but the spouse or a widow can get the pension already at the age of 45. This pension may also supplement other pensions, e.g. old age or disability pensions. In the period when the act has been in effect, more than 15,000 farms have made these contracts.

In the case of disability that results from illness farmers are entitled to compensation according to the *act on health insurance*, after the waiting period. Waiting period consists of the day when the disability starts and seven week-days after that. At the beginning of 1991 a new act came into effect, according to which the compensation is also paid for the waiting period.

In 1982 farmers' *accident insurance* act came into effect. The accident insurance is automatically incorporated in the pension insurance. The insured are entitled to compensation for costs, daily allowance and pension in case of accidents or occupational diseases. Insurance payments are collected from those who, according to the act, have to take the insurance. Farmers account for about half of the costs of the additional insurance, and this is taken into account in the farm income calculation as agricultural cost (FIM 45.5 mill. in spring 1991). The state finances the other half of the additional insurance, and the basic insurance is mainly financed by the National Pensions Office. At the beginning of 1991 the act was revised for the part of the annual labor income that the compensation is based on so that the labor income according to the pension act of agricultural entrepreneurs at the time when the accident occurs would be regarded as the annual labor income.

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

Farmers engaged in livestock production are entitled to an annual leave of 22 days. The municipalities have to arrange vacation substitutes for the duration of farmers' vacations. This system is mainly financed by the state, but agriculture also contributes to the costs, because part of them is taken account as farm income in the farm income negotiations.

Farmers can get *substitute help* in the case of sickness, accidents, rehabilitation, military service or childbirth. The substitute help for the duration of maternity leaves was extended to 320 days from the beginning of 1991 in last year's farm income negotiations. Farmers pay for the substitute help, and the amounts are determined according to their income. The payments are taken into account in the farm income calculation as agricultural cost (FIM 29 mill. in spring 1991). The costs of the substitute help system are mainly paid by the state, but agriculture pays part of them in the farm income settlement.

Animal husbandry does not allow weekends off as most other jobs do, which means that these farmers have a seven-day working week. A *days-off scheme* has been developed to relieve farmers engaged in animal husbandry from being continuously tied to their work. A farmer is entitled to a maximum of 12 days off a year, either one day at a time or several consecutive days, the maximum being five days a month. Farmers contribute to the costs of the scheme, and the amounts are determined according to the number of animals. The payments are taken into account in the farm income calculation as agricultural cost (FIM 15.6 mill. in spring 1991). Part of the money from the state is regarded as farm income. Only about 20% of farmers entitled to the days-off have taken advantage of this scheme.

An experiment of 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 40% of the costs of health inspections, and the National Pensions Office and the state account for the rest.

IV SUMMARY

The heavy increase in the export costs of grain was the most problematic issue for agriculture in 1991. The third good crop in a row increased the grain stocks so much that extensive export of grain could no longer be avoided. Due to the difficulties in the state economy, agriculture had to carry the responsibility for the additional exports. The Farm Income Act was revised so that the maximum limit for the responsibility of agriculture for exports was abolished. This resulted in a heavy increase in the export cost charges for grain. The changes in the Farm Income Act for 1991 and 1992 indicate that the government aims at abolishing the overproduction of agriculture more rapidly than had been planned. Protests against government actions continued the whole year through.

The prospects for agriculture have become more and more negative. The GATT negotiations seem to lead to an outcome that would require lowering the producer prices. However, it may be possible to compensate for the income losses through direct support. But the most serious threat for Finnish agriculture is the possible integration into the EC. This would mean that the producer prices would have to be lowered to about half of what they are at present. In this case the economic possibilities for continuing production would be very weak.

Agricultural policy was under scrutiny the whole year through. No final decisions have been reached in the EEA or the possible GATT agreement, or in the plans concerning the integration in the EC, which means that it has not been possible to outline any new policy. It has been possible to comply with the Price Act, but restricting production has been tightened.

The crop of 1991 was good. Hectareage yields remained slightly below the record levels of the previous year, but were above the normal. As a result of mandatory fallowing, the area under cultivation was 10% smaller than in 1990. However, feed grain crop exceeded the domestic need by 800 mill. kg.

Livestock production decreased considerably last year. Compared with 1990, the reduction was 10% in milk production, 4% in pork production, 11% in egg production. Poultry meat production increased (6%). The decrease was in accordance with the objective. A good number of contracts to decrease milk and egg production were made especially at the turn of 1990 and 1991.

Apart from cheese, the consumption of dairy products has been on the decrease. Meat consumption, instead, grew slightly. The balance between production and consumption improved last year, but the measures to restrict production will be continued in 1992. Fallowing (15%) will again be mandatory, and contracts to reduce livestock production will again be made to reduce overproduction.

In order to cover the responsibility of agriculture for exports, altogether about FIM 1,350 mill. were collected as various charges and taxes. The most important ones were the taxes on fertilizers, phosphorus and feed and the marketing charge for grain. In 1992 about the same amount will have to be collected as export cost charges as in 1991.

According to a preliminary estimate, in 1991 the farm income fell by about 13% from the previous year. However, in 1990 the farm income increased by 20%, so that a decrease was

to be expected as a result of the decrease in production and the increase in marketing charges. Producer prices were about the same as before as part of the raises of income were realized as direct support. The producer prices

of meat remained 7% below the target prices, which also partly reduced the farm income. On the other hand, increase in the prices of production inputs was about 4 %.

Sources:

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Economic Survey 1991, the Ministry of Finance
Statistics of the Market Research Institute of Pellervo Society (PSM)
The Report of the "Agricultural 2000" commission, 1987:24
The Compendium of Laws and Statutes

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

	Producer price index of agriculture	Cost price index	Requisites and tools	Machines	Buildings
1975	188.2	205.9	188.4	208.3	230.2
1976	213.6	238.4	255.3	231.2	255.4
1977	229.4	273.6	267.3	258.1	281.4
1978	242.5	285.4	273.8	282.2	294.9
1979	257.2	304.3	282.8	308.7	325.6
1980	288.2	341.7	318.0	341.2	372.1
1981	324.5	394.0	384.9	374.6	400.8
1982	370.0	427.5	423.2	404.0	424.2
1983	394.8	464.2	461.3	445.7	454.3
1984	419.6	501.7	504.0	474.1	479.2
1985	448.4	527.0	531.4	495.9	499.6
1986	456.5	518.6	506.4	517.7	517.1
1987	463.7	522.8	499.5	534.1	535.1
1988	480.7	537.5	496.9	561.9	563.4
1989	500.0	566.5	518.1	590.2	602.5
1990	500.0	607.6	557.4	630.4	647.2
1991 ^{e)}	483.4	635.5	602.6	641.8	657.6

Appendix 2. Some figures of the agricultural structure.

	Number ¹⁾ of farms 1000	Average ¹⁾ size of farms, hectares	Number of milk suppliers 1000	Employed in agriculture ²⁾ 1000 persons	% of total employd
1975	248.7	10.05	128	327	14.1
1976	242.7	10.26	119	306	13.4
1977	237.7	10.43	112	278	12.5
1978	232.8	10.60	104	261	11.9
1979	229.3	10.78	98	251	11.1
1980	224.7	10.96	91	251	10.8
1981	218.9	11.16	85	250	10.6
1982	212.6	11.42	78	255	10.7
1983	208.2	11.63	74	246	10.3
1984	203.9	11.85	70	242	10.0
1985	200.5	12.07	66	228	9.4
1986	195.4	12.38	63	218	9.0
1987	192.2	12.59	58	206	8.5
1988	189.0	12.77	53	197	8.1
1989	48	179	7.2
1990	199.4	12.76	45	170	6.9
1991 ^{e)}			38		

¹⁾ over 1 hectare

²⁾ Source: Finnish Labour Review, Ministry of Labour Planning Secretariat

^{e)} estimate

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

	Dairy cows 1000	Yield per cow litres	Pigs 1000	Hens 1000
1970	889.1	3677	1002.4	4470.9
1971	849.3	3806	1129.3	5249.0
1972	836.5	3889	1045.7	5963.7
1973	823.6	3839	1139.3	5869.0
1974	818.5	3856	1048.9	5803.2
1975	773.2	3997	1036.1	5943.3
1976	763.1	4200	1053.9	6333.2
1977	751.6	4197	1143.3	6245.1
1978	742.0	4260	1244.7	6046.4
1979	730.1	4336	1288.7	6029.4
1980	719.5	4478	1410.2	6040.7
1981	700.8	4450	1467.1	5200.2
1982	689.2	4493	1475.3	5291.5
1983	663.1	4778	1440.7	5440.4
1984	659.5	4799	1381.8 ¹⁾	6025.3
1985	627.7	4812	1295.2 ¹⁾	5922.4
1986	606.8	4935	1322.7 ¹⁾	5532.1
1987	589.0	4905	1341.9 ¹⁾	5341.6
1988	550.6	4990	1305.1 ¹⁾	5237.6
1989	506.6	5246	1290.7 ¹⁾	4923.3
1990	489.9	5547	1394.1 ¹⁾	4844.8
1991	445.6	5450 ^{e)}	1344.3 ¹⁾	4138.0

¹⁾ Including the pigs of dairies

^{e)} estimate

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

	N	P	K
1972-73	69.4	30.8	47.4
1973-74	78.2	33.4	52.0
1974-75	85.8	34.2	53.9
1975-76	79.6	29.5	47.6
1976-77	65.4	25.0	41.1
1977-78	69.1	25.8	43.3
1978-79	76.9	27.8	47.4
1979-80	83.3	28.0	50.2
1980-81	82.4	27.8	49.3
1981-82	78.7	26.8	47.5
1982-83	91.4	29.9	53.8
1983-84	90.7	30.9	55.9
1984-85	88.9	30.8	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	51.6

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

	1985	1986	1987	1988	1989	1990 ^{e)}
Crop production						
- Rye	195.8	202.1	189.0	163.3	448.5	430.8
- Wheat	999.7	1081.6	933.4	659.6	1028.5	1415.0
- Barley	1446.3	1521.0	1196.6	1266.0	1435.8	1552.8
- Oats	606.7	680.8	517.1	571.8	901.6	1377.3
- Potatoes	280.6	358.8	640.4	517.9	457.9	194.2
- Potatoes of processing	209.3	200.1	92.2	223.7	260.9	226.2
- Seed potatoes	8.1	8.9	6.9	10.7	10.8	9.3
- Sugar beets	372.9	457.0	243.4	489.2	555.2	545.8
- Oil plants	326.2	451.2	454.3	461.7	515.5	526.6
- Peas	22.4	23.7	12.3	13.6	16.3	20.6
- Grass seeds	35.8	31.5	17.4	43.5	47.1	62.2
TOTAL	4503.8	5016.6	4303.1	4421.2	5678.2	6360.7
Garden production						
- Root crops	63.6	82.9	70.8	123.5	90.1	102.8
- Vegetables	516.0	538.1	546.4	527.5	599.7	579.3
- Berries	119.2	123.4	117.4	117.6	162.5	186.9
- Fruits	23.5	48.9	15.8	44.1	53.3	43.5
TOTAL	722.3	793.3	750.4	812.7	905.6	912.5
Animal production						
- Milk	8011.9	8048.5	7893.0	7638.3	8170.6	8447.0
- Beef	3480.1	3532.2	3547.3	3411.1	3520.9	3794.7
- Veal	1.6	1.6	1.7	1.7	1.8	0.5
- Pork	2787.5	2870.1	2907.9	2924.5	3141.2	3302.0
- Mutton	42.0	40.0	41.9	36.3	37.1	43.2
- Horse meat	18.9	18.1	19.2	14.6	15.6	17.3
- Poultry	235.0	265.8	334.7	365.4	392.6	438.6
- Eggs	943.2	896.3	865.4	848.3	889.1	902.3
- Export of animals	11.0	12.2	11.2	10.6	6.6	8.0
TOTAL	15531.3	15684.7	15622.3	15250.8	16175.6	16953.7
PRODUCTION TOTAL	20757.4	21494.7	20675.8	20484.6	22759.5	24226.9
Income from rents						
- Means of production	466.0	464.7	457.0	469.4	482.6	501.6
- Buildings and land	120.7	148.1	165.3	166.9	175.2	184.0
TOTAL	586.7	612.8	622.3	636.3	657.8	685.6
Subsidies						
- by farm size	567.8	579.5	531.4	644.6	1340.9	961.5
- by number of cows	119.4	124.2	127.8	145.3	180.5	191.8
- Premium of feed grains	41.9	42.6	41.4	39.6	42.0	45.7
- "Start money"	110.5	90.7	149.3	132.0	116.0	107.0
- Premium for suckler cows					10.0	20.3
- Support for field area						564.1
TOTAL	839.6	837.0	849.9	961.5	1689.4	1890.4
Compensations to reduce production						
- Production guiding (4a§)	65.1	44.8	16.5			
- Milk bonus	157.2	129.6	74.1	142.8	141.2	140.5
- Pork bonus	13.2	12.6	11.7			
- Egg bonus			37.7	0.8	12.8	41.8
- For decreasing animal productions	32.8	32.6	36.1	31.8	22.7	
- Premium of beef	5.1	4.2	5.1	5.3	2.2	

Appendix 5, continued.

	1985	1986	1987	1988	1989	1990 ^{e)}
- Fallowing compensations	26.3	82.1	110.0	209.3	375.5	347.3
- Premium for ecological cultivation						16.5
TOTAL	299.7	305.9	291.2	390.0	554.4	546.1
Compensations for crop damages	33.0	11.9	34.3	1541.4	128.9	8.1
GROSS RETURN TOTAL	22516.4	23262.3	22473.5	24013.8	25790.0	27357.1
Costs						
- Fertilizers	1835.7	1875.2	1604.2	1605.9	1674.0	1681.7
- Lime	147.0	108.1	127.6	119.0	130.4	150.8
- Feed concentrates						
- mixture	2819.5	2966.9	3319.0	3478.0	3945.7	3497.0
- other	214.1	172.9	139.9	122.0	126.2	165.4
- Feed conserving chemicals	155.1	143.5	140.3	145.2	149.3	157.5
- Pesticides	229.4	264.8	282.2	291.9	342.6	308.6
- Purchased seeds	488.4	493.2	590.4	603.0	520.6	386.3
- Fuel and lubricants	739.2	585.1	596.4	492.2	572.9	688.5
- Electricity	324.1	357.3	398.8	369.5	370.9	392.2
- Agricultural firewood and timber	142.7	133.7	126.1	126.9	131.5	133.8
- Delivery of calves and pigs	46.5	47.7	47.2	45.8	47.3	53.6
- Overhead costs	1204.9	1295.9	1343.1	1338.1	1368.1	1412.7
- Hired labor						
- wages	310.9	334.9	386.0	363.2	406.4	418.2
- social expenses	158.5	187.6	207.4	204.3	247.7	273.1
- Machinery and equipment expenses						
- depreciations	2795.0	2921.0	3004.0	3054.0	3190.0	3384.0
- maintenance	744.6	753.1	814.5	807.8	875.3	947.3
- Equipment	135.0	136.7	147.8	144.4	153.2	164.7
- Building expenses						
- depreciations	999.0	1062.0	1136.0	1101.0	1260.0	1355.0
- maintenance	409.5	415.8	433.5	433.7	449.6	470.0
- Interest payment	1021.0	1106.0	1231.8	1338.0	1553.2	1686.0
- Imports of animals	1.8	1.8	2.0	3.1	4.0	2.4
- Rent expenses						
- means of production	327.0	326.8	316.7	298.3	292.5	299.2
- buildings and land	209.9	238.4	256.9	270.0	287.5	301.0
- Farmers' share of costs from						
- accident insurance payment	21.8	25.8	28.4	34.9	45.9	58.9
- outside help	15.2	16.8	20.4	22.5	16.5	25.0
- days-off scheme	8.3	10.3	11.0	12.6	12.4	15.6
COSTS TOTAL	15504.0	15981.5	16711.6	16825.3	18173.8	18428.6
GROSS RETURN TOTAL	22516.4	23262.3	22473.5	24013.8	25790.0	27357.1
COSTS TOTAL	15504.0	15981.5	16711.6	16825.3	18173.8	18428.6
FARM INCOME	7012.4	7280.8	5761.9	7188.5	7616.2	8928.5

^{e)} estimate

Appendix 6. Agricultural total calculation, gross return in 1985 fixed prices, FIM mill.

	1985	1986	1987	1988	1989	1990 ^{e)}
Crop production						
- Rye	195.8	191.2	186.7	147.5	371.3	368.4
- Wheat	999.7	1033.2	963.7	659.3	883.7	1240.0
- Barley	1446.3	1466.8	1160.4	1208.3	1306.6	1449.4
- Oats	606.7	657.7	500.3	535.9	782.4	1235.8
- Potatoes	280.6	326.6	437.2	415.4	507.6	299.8
- Potatoes of processing	209.3	226.9	94.7	213.8	241.2	206.8
- Seed potatoes	8.1	8.6	6.4	9.8	9.7	8.3
- Sugar beets	372.9	446.6	244.8	532.2	559.8	596.2
- Oil plants	326.2	434.6	431.5	431.9	459.8	472.4
- Peas	22.4	23.9	10.4	15.1	15.7	19.1
- Grass seeds	35.8	36.4	12.0	35.0	51.4	74.3
TOTAL	4503.8	4852.4	4048.1	4204.1	5189.2	5970.6
Garden production						
- Root crops	63.6	85.7	46.3	92.2	84.8	78.4
- Vegetables	516.0	514.1	421.7	551.3	582.5	599.4
- Berries	119.2	122.8	97.6	113.0	124.3	137.6
- Fruits	23.5	33.0	11.3	21.9	37.1	30.5
TOTAL	722.3	755.6	576.9	778.4	828.7	845.9
Animal production						
- Milk	8011.9	7977.2	7631.7	7150.9	7161.3	7305.2
- Beef	3480.1	3449.7	3405.5	3076.9	2959.5	3262.5
- Veal	1.6	1.6	1.6	1.6	1.6	0.5
- Pork	2787.5	2814.4	2846.2	2736.6	2818.8	3023.3
- Mutton	42.0	38.3	37.5	29.5	27.3	30.9
- Horse meat	18.9	17.2	17.6	12.9	13.1	14.3
- Poultry meat	235.0	252.8	305.6	318.7	346.9	380.2
- Eggs	943.2	901.3	867.0	823.0	811.2	819.8
- Export of animals	11.0	11.9	10.7	9.8	5.7	6.7
TOTAL	15531.3	15464.5	15123.5	14159.9	14145.3	14843.4
PRODUCTION TOTAL	20757.4	21072.4	19748.6	19142.4	20163.2	21659.9
Income from rents						
- Means of production	466.0	440.6	408.0	403.3	396.0	394.0
- Buildings and land	120.7	152.1	167.5	163.3	163.3	166.1
TOTAL	586.7	592.7	575.5	566.6	559.3	560.1
Subsidies						
- by farm size	567.8	595.0	538.4	630.7	1249.7	867.8
- by number of cows	119.4	127.5	129.5	142.2	168.2	173.1
- Premium of feed grains	41.9	43.7	41.9	38.7	39.1	41.2
- "Start money"	110.5	93.1	151.3	129.2	108.1	96.6
- Premium for suckler cows					9.3	18.3
- Support for field area						509.1
TOTAL	839.6	859.3	861.1	940.8	1574.5	1706.1
Compensations to reduce production						
- Production guiding (4a§)	65.1	46.0	16.7			
- Milk bonus	157.2	133.1	75.1	139.7	131.6	126.8
- Pork bonus	13.2	12.9	11.9			
- Egg bonus			38.2	0.8	11.9	37.7
- For decreasing animal production	32.8	33.5	36.6	31.1	21.2	
- Premium of beef	5.1	4.3	5.2	5.2	2.1	

Appendix 6, continued.

	1985	1986	1987	1988	1989	1990 ^{e)}
- Fallowing compensations	26.3	84.3	111.4	204.8	350.0	313.4
- Premium for ecological cultivation						14.9
TOTAL	299.7	314.1	295.0	381.6	516.7	492.9
Compensations for crop damages	33.0	12.2	34.8	1508.2	120.1	7.3
GROSS RETURN TOTAL	22516.4	22850.8	21514.9	22539.6	22933.8	24426.2
Costs						
- Fertilizers	1835.7	1863.4	1830.4	1978.6	2019.5	1870.8
- Lime	147.0	103.8	122.5	108.1	111.9	126.2
- Feed concentrates						
- mixture	2819.5	2990.3	3213.2	3293.5	3565.3	2985.3
- other	214.1	215.6	172.1	140.5	117.9	165.1
- Feed conserving chemicals	155.1	145.5	146.8	150.0	154.7	157.1
- Pesticides	229.4	261.7	269.3	268.8	314.4	271.6
- Purchased seeds	488.4	493.2	540.4	520.4	428.6	303.4
- Fuel and lubricants	739.2	879.8	958.8	851.6	850.0	850.0
- Electricity	324.1	344.9	369.4	346.7	340.0	335.0
- Agricultural firewood and timber	142.7	136.5	125.9	120.0	115.0	110.0
- Delivery of calves and pigs	46.5	45.7	45.1	43.0	44.0	45.2
- Overhead costs	1204.9	1330.5	1360.8	1309.3	1275.0	1275.0
- Hired labor						
- wages	310.9	309.3	334.4	297.9	295.6	281.9
- social expenses	158.5	173.2	179.6	167.6	180.2	184.1
- Machinery and equipment expenses						
- depreciations	2795.0	2790.0	2746.0	2698.0	2690.0	2696.0
- maintenance	744.6	725.5	773.6	725.9	750.0	750.0
- Equipment	135.0	131.4	137.2	127.4	128.7	129.9
- Building expenses						
- depreciations	999.0	1013.0	1022.0	967.0	1031.0	1038.0
- maintenance	409.5	390.5	390.5	372.0	360.0	355.0
- Interest payment	1021.0	1118.5	1234.9	1355.9	1431.3	1495.3
- Imports of animals	1.8	1.8	1.9	1.7	3.5	2.0
- Rent expenses						
- means of production	327.0	309.9	282.7	256.4	240.0	235.0
- buildings and land	209.9	244.8	260.3	264.2	268.0	271.7
- Farmers' share of costs from						
- accident insurance payment	21.8	26.5	28.8	34.1	42.8	53.2
- outside help	15.2	17.2	20.7	22.0	15.4	22.6
- days-off scheme	8.3	10.6	11.1	12.3	11.6	14.1
COSTS TOTAL	15504.0	16073.1	16578.5	16433.1	16784.3	16023.3
GROSS RETURN TOTAL	22516.4	22850.8	21514.9	22539.6	22933.8	24426.2
COSTS TOTAL	15504.0	16073.1	16578.5	16433.1	16784.3	16023.3
FARM INCOME	7012.4	6777.7	4936.4	6106.5	6149.5	8402.9

^{e)} estimate

Appendix 7. Target prices of agricultural products in 1970-1991.

	Rye ¹⁾ (South. area) p/kg	Wheat ¹⁾ p/kg	Milk ²⁾ p/l	Beef ⁴⁾ (all) FIM/kg	Pork FIM/kg	Eggs ³⁾ FIM/kg	Feed- barley ¹⁾ p/kg	Feed- oats ¹⁾ p/kg	Mutton ⁵⁾ FIM/kg
1.4.1970	63.00	62.00	49.57	5.71	4.20	3.35			
1.1.1971	64.00		51.52	5.93	4.42				
1.9.1971			52.79	6.08					
1.4.1972	66.00	62.00	59.00	6.48	4.42	3.50			
1.4.1972 ⁶⁾	68.85	65.00	65.67	6.54	4.44	3.50	(44.09)	(39.89)	(5.23)
1.5.1973	72.85		71.67	7.54	5.01	3.85	46.09	41.89	7.54
1.4.1974	78.85	70.50	80.00	8.51	5.55	4.25	53.09	48.89	9.04
1.9.1974			84.67		5.88	4.48			
1.4.1975 ⁷⁾	94.85	85.00	87.67	9.76	7.21	5.38	68.09	63.89	11.04
1.9.1975			92.67		7.46	5.52			
1.12.1975				9.85		5.38			
1.3.1976	97.85	87.00	108.70	10.35	8.01	5.52	72.09	65.89	12.04
1.3.1977 ⁸⁾		90.00	119.20	11.75	8.78		76.09	69.89	14.04
1.9.1977			123.20	13.65	9.11				15.94
1.5.1978			126.20						
1.9.1978	104.85	96.00	130.90	14.05	9.36	5.87	78.59	72.39	16.54
1.2.1979 ⁹⁾	114.85	106.00	134.60	14.40	9.66	6.17	83.59	77.39	17.04
1.9.1979	124.85	114.00		14.90		6.30			17.54
1.4.1980	159.00	148.00	146.60	16.40	10.31	6.85	101.00	94.50	19.10
1.9.1980	161.00	150.00	152.60	17.14	10.91	7.25	103.00	96.50	20.00
1.3.1981	177.00	164.00	160.60	18.69	11.86	7.85	123.00	114.50	21.50
1.9.1981	187.00	172.00	171.90	19.44	12.31	8.20	128.00	119.50	22.30
1.3.1982	207.00	190.00	182.90	20.44	13.01	8.75	142.00	133.50	23.40
1.9.1982			188.90	20.73	13.14	8.88			23.80
1.9.1982 ¹⁰⁾	202.70	185.80					138.00	129.50	
1.3.1983			197.20	21.56	13.68	9.23			24.80
1.4.1983	220.70	204.80	202.70	22.01	13.98	9.46	151.00	141.50	25.30
1.9.1983			205.70	22.31	14.18	9.60			
1.3.1984	231.00	211.00	212.70	23.01	14.68	9.90	156.00	146.00	
1.4.1984	245.00	218.00	216.70	23.31	14.98	10.05	161.00	150.00	25.60
1.9.1984			221.60	23.91	15.38	10.20			26.15
1.3.1985	264.00	231.00	228.60	24.67	16.05	10.50	170.00	158.00	
1.9.1985			230.10						
1.1.1986						9.00			
1.4.1986	270.00	233.00	232.00	24.97	16.25	8.80			25.15
1.3.1987			234.50	25.10	16.30				24.65
1.4.1988	300.00	243.00	244.50	26.10	17.00	9.10	175.00	166.00	25.90
1.1.1989			259.50						
1.3.1989	310.00	251.00	269.00	27.80	17.95	9.20	178.00	176.00	27.45
1.3.1990 ¹¹⁾			277.00	28.22	18.06	9.20	180.00	175.00	27.88
1.3.1991			282.00	28.42			182.00	172.00	

For footnotes, see next page

Footnotes for Appendix 7.

- 1) The price of grain beginning from 1.4.1972 is the price of January, before that the price of September. It comes into force from the beginning of the growing period. From the crop year 1983/84 the target prices of grain are on farm level. Before that they are wholesale prices for purchases of the Finnish State Granary.
- 2) The price of milk with 4 % fat p/kg and from 1973 milk with medium fat p/l without production support.
The additional price of milk is paid as follows:
 from 1.9.1988 23.5 p/l up to 37 000 litres, thereafter 12.0 p/l up to 150 000 litres
 from 1.9.1989 30.0 p/l up to 37 000 litres, thereafter 15 p/l up to 150 000 litres
 from 1.9.1989 30.0 p/l up to 50 000 litres, thereafter 15 p/l up to 150 000 litres
 from 1.4.1991 see appendix 8.
 The volume of milk which gives the base for the payment of the step-up additional price is counted on an annual basis starting from 1.9.
- 3) The additional price for eggs paid for beginning from 1.9.1988 is following:
- a) Production quota 0 - 10 000 kg
- | | Oulu and Lapland | The rest of the country |
|----------------|------------------|-------------------------|
| from 1.9.1988 | 2.90 FIM/kg | 2.55 FIM/kg |
| from 1.3.1989 | 3.35 FIM/kg | 2.95 FIM/kg |
| from 1.3.1990 | 3.74 FIM/kg | 3.34 FIM/kg |
| from 1.10.1990 | 3.94 FIM/kg | 3.54 FIM/kg |
| from 1.1.1991 | 4.24 FIM/kg | 3.84 FIM/kg |
- b) Production quota over 10 000 kg until 31.12.1987 and from 1.1.1988 10 001 - 100 000 kg
- | | | |
|----------------|-------------|-------------|
| from 1.9.1988 | 2.05 FIM/kg | 2.05 FIM/kg |
| from 1.3.1989 | 2.50 FIM/kg | 2.50 FIM/kg |
| from 1.3.1990 | 2.89 FIM/kg | 2.89 FIM/kg |
| from 1.10.1990 | 3.09 FIM/kg | 3.09 FIM/kg |
| from 1.1.1991 | 3.39 FIM/kg | 3.39 FIM/kg |
- 4) In addition a production premium for beef is paid:
- | | | |
|-------------------------------|-------------|---------------------|
| from 1.4.1988 | 4.00 FIM/kg | bulls over 260 kg |
| | 3.10 FIM/kg | bulls 210-260 kg |
| | 2.00 FIM/kg | bulls 180-210 kg |
| | 3.10 FIM/kg | heifers over 160 kg |
| | 1.00 FIM/kg | heifers 130-160 kg |
| | 2.00 FIM/kg | bulls 190-219 kg |
| from 1.3.1989 | 3.50 FIM/kg | bulls 220-269 kg |
| | 5.00 FIM/kg | bulls over 270 kg |
| | 1.00 FIM/kg | heifers 140-169 kg |
| | 3.50 FIM/kg | heifers 170-259 kg |
| | 5.00 FIM/kg | heifers over 260 kg |
| from 1.5.1991 see appendix 9. | | |
- 5) In addition a production premium for mutton is paid:
- | | | |
|-------------------------------|-------------|------------|
| from 1.4.1988 | 7.80 FIM/kg | over 16 kg |
| | 6.70 FIM/kg | 13-15 kg |
| from 1.3.1989 | 8.80 FIM/kg | over 16 kg |
| | 6.70 FIM/kg | 13-15 kg |
| from 1.5.1991 see appendix 9. | | |
- 6) New statistical basis for beef and pork.
- 7) Target prices for meat were applied from 1.3.
- 8) Target prices for meat were applied from 1.2. and for eggs from 1.4.
- 9) Target prices for meat were applied from 12.1.
- 10) Grain prices on farm level from 1982.
- 11) Price for beef, pork and mutton adjusted to the abolition of the weight reduction. Price for eggs represents IA-class.

Appendix 8. Production support for milk beginning from April 1st, 1991.¹⁾

District	Milk quantity, litres		
	0 - 50 000 (p/l)	50 001 - 150 000 (p/l)	over 150 000 (p/l)
1	99.0	84.0	69.0
2	73.0	58.0	43.0
3	62.0	47.0	32.0
4	55.0	40.0	25.0
5	46.5	31.5	16.5
6	43.0	28.0	13.0
7	36.5	21.5	6.5
8	34.5	19.5	4.5
9	55.0	40.0	25.0
10	30.0	15.0	0.0

¹⁾ Including additional price and district support.

Appendix 9. Production support for meat beginning from May 1st, 1991.¹⁾

Species	District								
	1 p/kg	2 p/kg	3 p/kg	4 p/kg	5 p/kg	6 p/kg	7 p/kg	8 p/kg	9 p/kg
Bulls and heifers 260 kg and over	1460	1350	1130	840	780	660	550	950	500
Bulls 220 - 259,9 kg and heifers 170 - 259,9 kg	1310	1200	980	690	630	510	400	800	350
Bulls 190 - 219,9 kg	1160	1050	830	540	470	360	250	650	200
Heifer	350	350	350	350	350	350	350	350	350
Sheep 16 kg and over	2140	2000	1790	1580	1280	1280	1280	1740	950
Pigs	85	75	55	40	-	-	-	40	-

¹⁾ Including production premium and district support.

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