



FINNISH AGRICULTURE IN 1988

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Abstract. Finnish agriculture in 1988

Like in 1987, the yield level remained clearly below the normal in 1988. The average yield was 2,343 f.u./ha, which is 18% below the trend value. Especially the yields of grain were poor. The bad crop was caused by the dry and hot early part of the summer and the too rainy harvest season.

The area under cultivation was about 3% smaller than in 1987, as a result of an increase in premium fallowing, as well as of other uncultivated areas.

Animal production decreased considerably last year. The quantity of milk delivered to dairies was 130 million liters smaller than in the previous year. Beef production decreased by 13 million kg, pork production by 8 million kg and egg production by 3 million kg.

The self-sufficiency in milk production is still close to 120%. In the case of meat

we are already close to the self-sufficiency level. Some beef and pork was imported to balance seasonal variation, even if, as a whole, their production exceeds the consumption. Market balance is already quite good.

Such a drastic decrease in production is a result of the bad crops of the last couple of years and the more effective production restriction measures. Milk production was already affected by the contracts to reduce production. Fallowing is another important means of restricting production.

Farm income rose about 10%. However, it is still clearly below the level of 1986.

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

Preface

This publication presents a brief review of agriculture in Finland in 1988. The structure of the publication has been kept as before in order to make comparisons with earlier years easier. Part of the text is the same every year, because I regard it as necessary for the new readers.

It should be noted that the statistical data is based on the situation in mid January, when no final data of many production, consumption and price figures was available, and, for example, the production figures may change from the estimates presented here. In particular, the estimates of income development are only preliminary. Final statistics on farmers' income will not be ready until after a few years.

Part III of the publication contains some basic measures of agricultural policy in 1988. It is very brief, and it does not cover the whole sector, but I hope it

gives the reader some kind of idea of the basic trends of our agricultural policy. Again, some of the data is only preliminary.

I wish to thank Lulu Siltanen, Jaana Ahlstedt, Marja Hokkanen, Jukka Kola, Juhani Leppälä, Jyrki Niemi and Maija Puurunen from the Research Institute and Helena Serén from the National Board of Agriculture for their assistance in preparing this publication. I also thank Jaana Kola for the English translation.

Naturally, the author alone should be held responsible for possible mistakes and defects. Also, the judgments 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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Helsinki, January 18th, 1989
Lauri Kettunen

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I

Finnish agriculture in general

1. Agriculture and the national economy

1.1. Gross domestic product and investments

In all industrialized countries the share of agriculture in the whole national economy is very small. There is an obvious reason for this: many activities that used to be an integral part of agriculture have shifted to other sectors of the economy. Agriculture used to be more or less self-sufficient, but nowadays an abundance of purchased inputs, such as fertilizers, machinery, fuel, services, etc. is used. The share of agriculture has continuously been on the decrease be-

cause 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 it is not profitable to export agricultural products.

In Finland agriculture accounts for about 4% of the gross domestic product (Table 1). In 1987 its share fell to about 3% due to the bad crop. However, the share of agriculture of the total labor force is over 9% (Appendix 2), i.e. twice 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: many farmers work partly outside agriculture.

Agricultural investments are about 5% of the investments of the whole national economy, which is more than its share of

Table 1. Gross domestic product 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.	%
1975	92.95	5.06	5.4	31.62	1.56	4.9
1976	104.69	5.46	5.2	31.84	1.76	5.5
1977	114.32	5.60	4.9	33.78	1.82	5.4
1978	124.87	5.89	4.7	32.77	2.00	6.1
1979	145.01	6.15	4.2	37.00	2.42	6.5
1980	172.51	7.78	4.5	48.64	3.47	7.1
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	304.34	13.38	4.4	83.51	4.59	5.5
1987	315.26	11.00	3.5	92.08	4.19	4.6

Source: Statistical yearbook of Finland (from various years) and Economic Survey 1988.

the domestic product would imply. This is probably a result of the strong structural change in agriculture, as well as of the fact that agriculture is a very capital intensive industry. It should also be noted that the investments have been proportionally higher in the 1980s than in the 1970s. However, the turning point has probably been reached: tractor sales decreased considerably in 1987, which may be an indication of an overall decrease in agricultural investments. Production and the number of farms are both on the decrease, and, consequently, fewer investments are necessary.

1.2. Economic growth

Finnish economy grew very strongly last year. According to preliminary estimates, the growth in GDP was about 4.5% (about 3% in 1987). Domestic consumption has been the main factor behind the growth. The real income has increased, and liberalization of the money market has increased borrowing money for private households, which has been directed to an increase in consumption. Investments grew by about 4%. Export has usually been the principal factor behind the growth of the national economy, but in 1988 export increased by only 2% due to a decrease in the trade with the Soviet Union, as the price of oil fell. The growth of the national economy in Finland is slightly above the average of OECD.

Strong economic growth has accelerated inflation, which was 6% in 1988 (4% in 1987). It seems that the income settlements made in the spring were inflationary. In many sectors the nominal wages rose about 8-10%, which inevitably had an effect on the price level. In principal, income settlements are made for two years, but the raises to be realized in 1989 remained to be negotiated later.

In August 1988, when the acceleration of inflation had become obvious, a decision was made on extensive consolidation measures, which aim at reducing inflation back to about 4% during 1989. At the same time, the aim is to guarantee an increase of the real income by 2.5% in 1989. This will be realized partly through

a tax reform, according to which taxation will be lowered in the beginning of 1989.

Unemployment decreased slightly during the year, being about 5% at the end of 1988. There is a lot of variation between different regions and sectors. Especially around Helsinki there is a shortage of labor force, but with regard to skilled labor, the shortage concerns the whole country. Also, it is hard to find enough employees to the social branch of the public sector. The increase of jobs has mainly occurred around Helsinki, where, for example, a shortage of housing makes it very difficult to get labor from other parts of the country.

Employment is somewhat better in Finland than in industrialized countries on the average. However, unemployment is still regarded as the most serious problem of our economy. There is enough work, but the training of unemployed workers is not in accordance with the vacant jobs. For both enterprises and workers, labor market is not flexible enough. Besides, people who do not belong to the labor market at all are registered as unemployed.

The trade was in balance in 1988. Due to the capital and service balances, however, the balance of current payments shows a deficit of FIM 12 billion. This deficit will soon be the most serious problem of our economic policy. Compared with the gross domestic product, the deficit is not yet alarming, but the situation is getting worse, and will

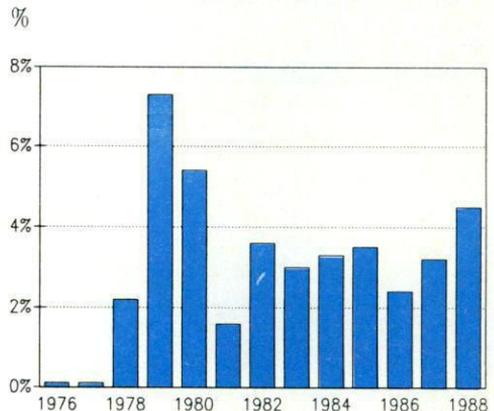


Figure 1. Growth in the volume of the gross domestic product (as 1985 fixed market prices), %/year.

very soon require some measures of the economic policy.

The foreign exchange reserves have remained at a high level as a result of borrowing from abroad and foreign investments. Interest level in Finland has been higher than the international interest level, and, as the Finnish mark has been strong, foreign capital has flown to Finland. The high interest rate has been criticized, but the Bank of Finland has regarded it as necessary for maintaining the value of the Finnish mark.

Forestry, which is very important for Finnish farmers, continued to grow very strongly. Pulp and paper industry were working with their full capacity, and the prices of exports have been on the increase. Commercial felling increased by 4.5%. Wood processing industry and forest owners have annually negotiated the stumpage prices for roundwood. In the spring of 1988, the prices were raised by about 10%.

2. The Finnish farm

Finnish agriculture is based on family farms. The average size of farms is still very small (about 12 ha), although there

has been some growth during the last few years (Table 2). The average size of farms grows because many small farms quit production. The number of large farms has not increased very much, and the present agricultural policy does not favor large farms, either: a license is required for starting a larger animal farm, and the upper limit for the size of the farm has been set quite low.

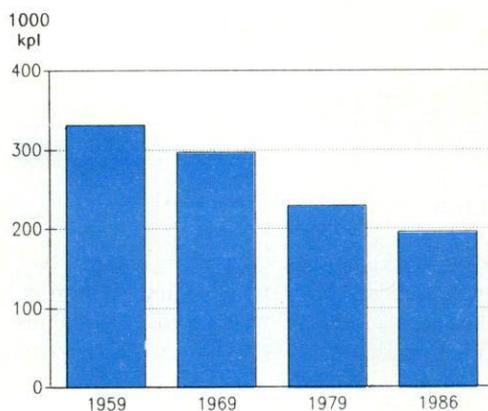


Figure 2. Number of farms in 1959-1986.

In practise, it is possible to increase the farm size through renting field. In 1988 about 260,000 ha arable land was rented. Because the price of land is high and farms are not likely to be sold, renting field seems to be the only way to increase the farm size in the future.

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

	1959		1969		1980		1986	
	1000	%	1000	%	1000	%	1000	%
1-4.9	147.6	44.6	108.8	36.6	69.4	30.9	56.1	28.7
5-9.9	101.8	30.7	98.0	33.0	69.2	30.8	53.2	27.2
10-19.9	62.2	18.8	68.0	22.9	56.8	25.3	52.2	26.7
20-49.9	18.0	5.4	20.6	6.9	26.4	11.7	30.4	15.5
50-	1.6	0.5	1.9	0.6	2.9	1.3	3.6	1.8
Total	331.2		297.3		224.7		195.4	
Arable land								
1000 ha	2 614.4		2 669.1		2 462.7		2 420.7	
Average size (ha)	7.89		8.98		10.96		12.38	

Source: Official statistics from 1959 and 1969 and farm registers of 1980 and 1986.

Forest is an integral part of the Finnish farm; on the average, farms have 12 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).

Table 3. Regional distribution of arable and forest land in 1986 (ha/farm).

Province	Arable land and gardens	Forest land
Uusimaa	20.3	29.5
Häme	15.7	32.2
Vaasa	12.7	26.7
Kuopio	10.9	38.3
Oulu	10.4	47.7
Lappi	7.0	82.7
Whole country	12.4	36.9

Source: Farm register of 1986.

About 99% of farms are privately owned, but a large number of them belong to pensioners or heirs, only about half of the farms being owned by active farmers. Also, this group probably includes a number of farmers who get their living mainly from other sources than agriculture. There are about 180,000 farms in Finland, but only about half of them are real producing farms.

According to the farm register, in 1986 about 20% of private farms were owned by pensioners. At that time, farmers or pensioners owned 80.1% of farms, heirs and family companies 19.2%, societies 0.3% and the state and municipalities 0.4%.

Finnish agricultural production is mainly based on livestock. Only 15% of arable land is used for plant production for human consumption. Milk production accounts for about 38% of the total return of agriculture (calculated from Appendix 5), and the share of cattle production rises to 54%, when beef production is taken into account. The area of hay, silage and pasture is about a third of the total arable land.

Over the years, the structure of production has changed: the share of milk has decreased, whereas that of meat has increased.

The specialization of agriculture accelerated especially in the 1960s and 1970s. Earlier almost all farms produced milk, but in June 1988 there were only 52,700 milk suppliers. About half of the farms are engaged solely in plant production.

3. Side-line industries

In addition to agriculture and forestry, farmers practice many other industries, e.g. horticulture, fishing and aquaculture, fur farming, farm holidays, etc. An overview of these industries in 1987 is presented in the following. No statistics from 1988 are available, and, on the whole, the statistics on these industries are incomplete.

This publication is mainly concerned with actual agriculture, which in Finland includes only outdoor garden production, and *greenhouse production* is excluded. In 1987 the value of greenhouse production was about FIM 1.14 billion, the share of vegetables (mainly cucumber, tomatoes and lettuce) being about FIM 540 million and that of flowers about FIM 600 million. About 3,100 entrepreneurs or farmers had greenhouses, altogether 432 ha. Thus the average area of greenhouses was about 1,393 m². There are no estimates of how many people this whole field employs, but it should amount to about 10,000 people.

In 1986 there were about 6,900 *professional fishermen* in Finland (2,100 full-time and 4,800 part-time). Almost 70% practice their trade at sea. Most fishermen are part-time farmers.

In 1986 the value of the catch of fish was estimated at FIM 232.8 million. In addition, *aquaculture* produced fish (mainly rainbow trout) for about FIM 246 million. Occasionally rainbow trout is also exported. The export share of its production was estimated at 20% in 1988. Improvement in the stock of fish is to a large extent realized through planting production, the value of which was FIM 86 million. The increased control of water systems has obviously improved the

catch of fish, too. Many farms are located close to a lake, which makes fishing for household use possible.

One very important side-line for agriculture is *fur farming*, which is also practised on its own. In 1987 there were about 5,500 fur farms, of which about 60-70% are part of a farm. The value of fur production was about FIM 1.6 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.

Finland is the leading fur producer in the world. Most of the production is exported. In 1987 the value of exports was about FIM 1.3 billion. Two thirds of the world's fox pelt production comes from Finland. Mink accounts for about half of the value of our fur production, but our share in the world market is only 15%.

Fur farming is not subsidized in any other way but that fur farms can buy feed (including domestic feed grain) for the world market price. It has to adapt itself to the changes in the world market, which may be great. Especially 1988 was a very difficult year due to a radical decrease in the world market prices. Finnish producers have tried to adapt themselves to international competition through breeding, but a reorganization of the field seems necessary.

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 1987/88 there were about 7,600 reindeer owners. At reindeer round-ups in 1987/88 there were about 361,500 animals, of

which 134,000 were slaughtered. Meat production was 3.4 mill. kg, and its value was about FIM 99 mill. Most of the reindeer meat has been consumed in Finland. The value of exports was FIM 5.8 million.

There are still about 38,000 horses in Finland, of which 17,000 are on the farms. The number of horses has increased during the recent years, although horses are very rarely used in farm work. *Horse husbandry* is practiced on about 6,000 farms, and as a main production line it is practiced on 550 farms. Riding and trotting are the most important forms. The on-farm horse husbandry employs 1,300-1,400 people full-time and about 5,000 part-time. The production value of horse husbandry was estimated to be about FIM 230 million in 1987, and the export value of horses FIM 3 million.

Beekeeping provides additional income to about 5,500 beekeepers. In 1987 altogether 1.2 mill. kg honey was produced, and its value was about FIM 32 mill. The cold and rainy summer in 1987 decreased the production of honey, too.

Wild berries (cloudberry, blueberry and lingonberry) are an important source of income for many people, especially in Northern Finland. In 1987 this income amounted to about FIM 42 million. In addition, there is the value of the berries used in households. The income from picking *mushrooms* was estimated at FIM 6.5 million in 1987.

Farm holidays have become a new side-line industry for farmers. This activity has expanded year by year, and the return of all holiday and traveling services was estimated at FIM 60 million in 1985. Compilation of statistics is difficult because this field is very heterogeneous.

II

Production, prices and farm income

4. Plant production

4.1. Weather conditions

Last summer the weather seemed at first to be favorable to agriculture. Spring was a little earlier than usual, and it was also relatively dry, so that sowing could be done quickly, about a week earlier than normal. Early part of the summer was very warm, and in July the growing period was estimated to be 2-3 weeks ahead of normal. In general, however, early part of the summer was too dry, although there was a lot of regional variation: in some places precipitation was well above normal. At the end of July the weather changed; after that precipitation was very high, and the temperature remained below normal.

The effective temperature sum of the growing period was 1,300-1,550 degrees in Southern and Central Finland and 900-1,200 degrees in Northern Finland, i.e. 20-30% above normal. In many places last summer was the warmest in this century. There was hardly any frost during the whole growing period.

The total precipitation of the growing period was about normal, but it was badly divided: in early summer precipitation was too low, and in the latter part of the summer there was too much rain. However, regional variation was great. Haymaking could be done in very good conditions, and the quality was good. Due to too much rain, the harvesting of grain was difficult, but it could be completed without major problems. Harvesting was started earlier than usual and completed in due time.

The yield remained below normal. The main cause for this was probably the dry early summer, which slowed down the development of plants, and stopped the

growth of pastures almost completely. There were a lot of plant lice, and, for example, the yield of oats remained small due to a virosis spread by plant lice. In places, however, it was too high precipitation in the sowing season and the long drought after that which caused the drop in the yield level. In some cases sowing had to be repeated, but after that sprouting was slowed down by the drought.

The yields of fruits and berries remained small. The main causes were probably the cold winter in 1987, and the drought in the summer of 1988.

4.2. Areas and yields

In 1988 total arable land grew by about 30,000 ha from the previous year, probably due to the heavy increase in land clearing since 1986. Because of the restrictions on land clearing that came into force in 1987 hardly any new field will be cleared, and, consequently, the total arable land should start to decline again. For example, the fact that uncultivated area was 71,800 ha larger than in the previous year also points to this direction (see Table 4.) For some time uncultivated area is regarded as field in the statistics, until it becomes covered with forest. Premium fallowing increased considerably, as well. Consequently, the area under cultivation (including pasture and unharvested area) declined by 68,600 ha, i.e. 3.2% compared with the previous year. In 1988 only 2,300 ha field was covered by the soil bank system, which can thus be regarded as expired.

The areas of most grains decreased, except for barley, the area of which increased to 681,700 ha. Because of the difficult conditions in the fall of 1987, the areas of rye and winter wheat remained

small. Thus we have to continue to import bread grain. The situation looks better only in 1989, because in the fall of 1988 about 68,600 ha rye was sowed, which would in normal conditions guarantee self-sufficiency in rye.

The sowing areas of spring wheat and

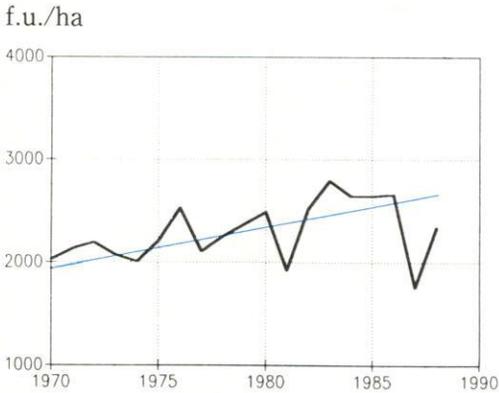


Figure 3. The total yield without straw in feed units per hectare 1970-1988.

oats were smaller than in the previous year, although it would be necessary to increase their cultivation. There is a continuous need for importing wheat, and exporting the surplus of oats would be easier and require less support than exporting the surplus of barley. The decrease in the area may have been caused by the shortage and poor quality of seeds. Oats were replaced by barley, the area of which increased from the previous year, although it had already increased considerably by that time, too.

The area of hay decreased more than 7%, and the area of silage also decreased slightly, probably due to the decrease of cattle husbandry. This development will continue in the next few years.

The yields of grains were clearly below the long-term trends (Figure 4). The hectare yield of spring wheat was 11% smaller than the average of the last five years, which is lowered considerably through the crop failure in 1987. Com-

Table 4. Harvested areas and yields of main crops in 1987 and 1988.

	1987			1988		
	Area 1000 ha	Yield 100 kg/ha	Yield total mill.kg	Area 1000 ha	Yield 100 kg/ha	Yield total mill.kg
Winter wheat	11.5	25.1	28.9	5.4	23.7	12.8
Spring wheat	127.6	19.8	252.2	103.9	26.2	271.8
Rye	37.7	19.7	74.2	25.6	19.1	48.9
Barley	582.9	18.7	1089.2	681.7	23.6	1611.8
Oats	367.5	19.7	723.2	387.8	22.1	857.3
Potatoes	41.7	117.6	490.5	44.8	190.7	854.5
Sugar beets	30.0	154.6	462.0	30.7	307.4	943.7
Hay	359.1	37.2	1337.1	323.7	39.6	1281.1
Silage	209.7	156.6	3283.8	209.1	184.3	3854.0
Oil seeds	81.0	11.1	89.7	85.9	14.1	121.1
Other crops	40.8			45.6		
Total	1887.1	1758 ¹	3547 ²	1944.2	2343 ¹	4524 ²
Unharvested	127.5			11.5		
Pasture	142.2			138.6		
Fallow	118.1			153.9		
Soil bank	11.6			2.3		
Other field	118.7			190.5		
Total hectarage	2411.3			2441.0		

¹ f.u./ha without straw ² mill.f.u. without straw

pared to the long-term trend, the yield level was 20% lower. The hectare yield of barley was about 15% smaller than the average of the last five years, and about 20% smaller than the trend value. Oats were affected most by the drought and plant lice, and the yield remained almost 25% below normal.

The total yield of feed grain was 2,826 mill. kg, which is about 16% below the average of the last five years, but it is still

enough for the domestic consumption. Both feed and bread grain were average in quality (about 93% of the total crop was fit for trade).

The yields of hay and silage can be regarded as satisfactory, even if the yield level remained slightly below the long-term trend. In addition, the quality of hay was good.

Potatoes and sugar beets succeeded last summer. The total yield of potatoes

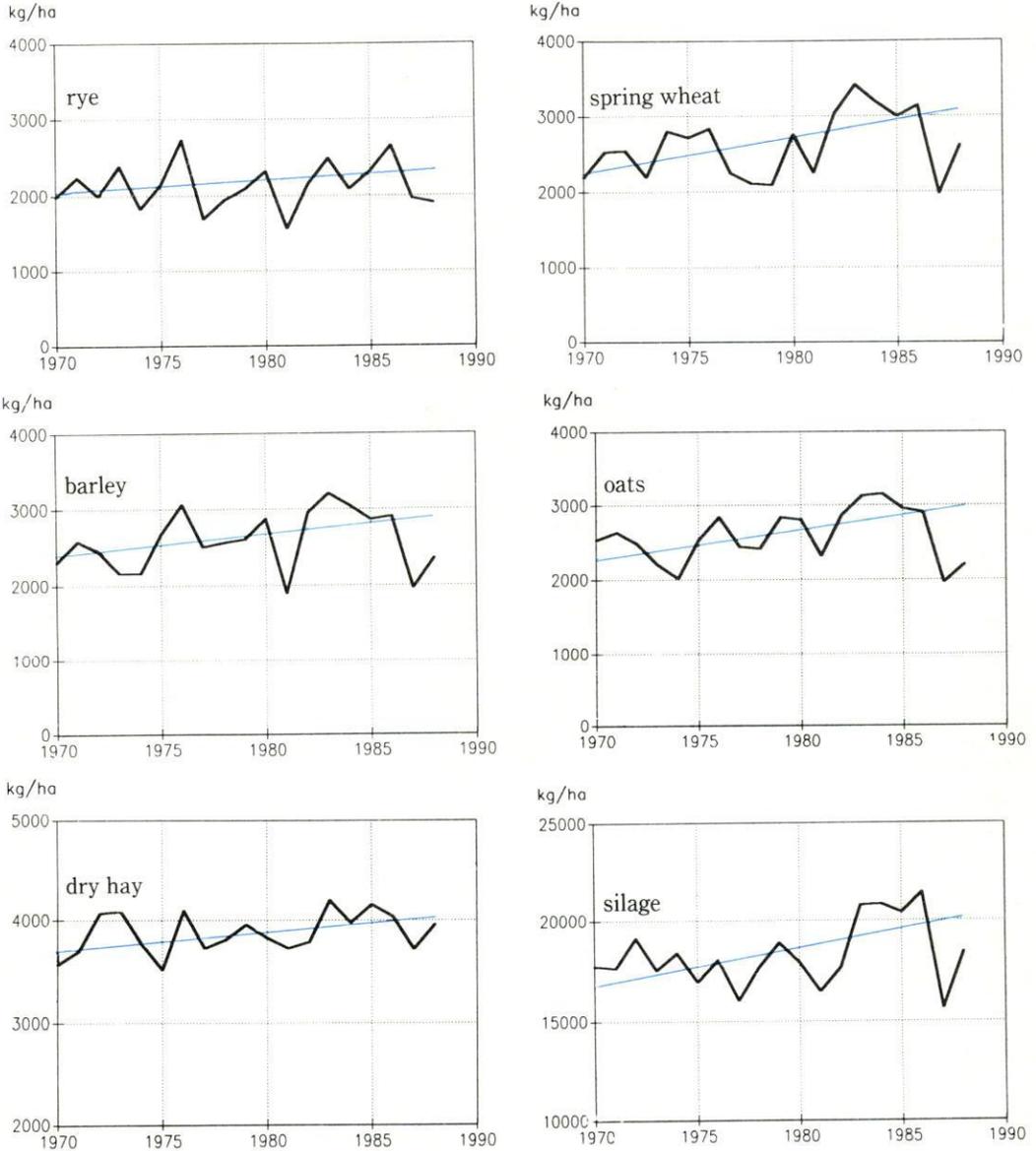


Figure 4. Yields of main crops (kg/ha) 1970-1988.

exceeds domestic consumption, but the quality is rather poor. The yield of sugar beets was record-breaking, exceeding the production target by almost 100 mill. kg. Farmers are guaranteed the basic price up to 850 mill. kg, and for the excess they get the world market price.

On the whole, the yield was clearly below normal. Measured as feed units, it was 4,524 mill. feed units, or 2,343 f.u./ha. The drought of the early part of the summer (or too high precipitation in places) and the too rainy and cold latter part decreased the yield more than was expected. Thus, after the crop failure in 1987, the crop of 1988 was rather poor. In some places 1988 was even worse than the previous year.

4.3. Compensation for crop damages

Consequently, there were crop damages to be estimated in 1988, too. The compensation is prescribed by a law passed in 1975. The crop failure is estimated on each farm separately. If the average yield level of the farm is 20% below the average of the last five years in the area, the farm is entitled to compensation. Thus, 20% remains to be covered by the farmers themselves. In the state budget, FIM 30 mill. is reserved for compensating crop damages. This amount is included in farm income, and the actual compensations change farm income by a corresponding amount. Thus the compensation is realized as an income transfer within agriculture, although, in case of very big crop damages, part of the compensation has come directly from the state budget, without being refunded. This was the case, for example, in 1987, when the crop failure was very severe.

In 1988, altogether 16,000 farms reported crop damages, the damaged area was 180,000 ha, and their value was estimated at FIM 494 mill. When the part to be covered by farmers themselves was deducted, altogether 13,000 farms were entitled to compensations, which amounted to FIM 225 mill.

5. Animal production

The drastic decrease of animal production continued last year. There are several reasons for this development: the crop failure in 1987 and drought and high temperatures in the summer of 1988 reduced production, and the measures to restrict production have been made more effective. It is also possible that economic growth has contributed to giving up agriculture. As a result of all these factors, the decrease in animal production was quicker than expected.

mill. l.



Figure 5. Milk production and the quantity of milk delivered to dairies in 1960-1988.

Milk production decreased by about 6% last year. In the beginning of the year, milk production was still affected by the crop failure of the previous summer. In the summer the yields decreased due to the weak growth of pastures. High temperatures were assumed to be one cause of the decrease, too, because cows did not eat as much as usual. The willingness to give up production seemed to be increasing, as well. More producers applied the milk bonus than the funds reserved for this system allowed.

The quantity of milk delivered to dairies decreased to 2,530 mill. liters, which was 130 mill. liters below the production ceiling. Consequently, the overproduction of milk has decreased considerably.

Table 5. Animal production in 1981-1988.

		1981	1982	1983	1984	1985	1986	1987	1988 ^e
Milk	mill.l	3073	3068	3136	3124	2988	2976	2847	2690
Dairy milk	,	2868	2858	2943	2935	2808	2803	2692	2530
Beef	mill.kg	122	117	118	124	126	125	123	110
Pork	,	180	181	177	171	172	174	176	168
Eggs	,	80	82	84	89	88	84	81	78
Poultry meat	,	17	17	18	20	21	22	27	28
Other meats	,	2	2	2	2	2	2	2	2

^e estimate

In 1989, the production is forecast to decrease by about 3%. Dairy industry regards the decrease in production as too fast; it is necessary to bring milk from far away to Southern Finland, and the possibilities for processing milk in provincial dairies are narrowed due to the decrease in raw material. On the whole, there is still too much overproduction, the self-sufficiency level being about 120%. There is a lot of discussion on the problems of milk supply, but they are mostly caused by the desire to maintain processing capacity in the milk producing areas.

Beef production (including veal) decreased 13 mill. kg, i.e. about 10% last year, which was much more than was expected. Production is tied to the number of dairy cows because there is very little actual beef cattle. Production has already been expected to decrease earlier, but the growth of slaughter weights has kept up a rather high production level. Beef production exceeds slightly the domestic consumption, but during the year some import was also necessary. The demand is mainly directed to the more valuable parts of the carcass, which means that import becomes necessary when the self-sufficiency comes close to 100%. The decrease in production can be expected to continue, and an increase in the import of beef in the future is very likely.

Pork production decreased 8 mill. kg, i.e. about 5%. This was rather surprising, because it should have been possible to increase production slightly. A lot of the earlier production restriction contracts were cancelled, and licenses to establish

new production units were granted. One reason for the decrease is the shortage of young pigs, and it seems that most of the new licenses went to the actual meat production. A good number of producers give up production each year, and part of them are owners of farrowing piggeries. In pork production, specialization has been taken very far, and pigs are produced in separate farrowing units. Hardly any new farrowing units were established, and the old ones did not increase production, because they would have needed a license for that. This resulted in a shortage of young pigs and a decrease in production.

One cause of the decrease in pork production may also have been the bad crops in 1987 and 1988. The production is mainly based on purchased feed, but some feed is also grown on the farm. The decrease in the amount of feed caused a decrease in production.

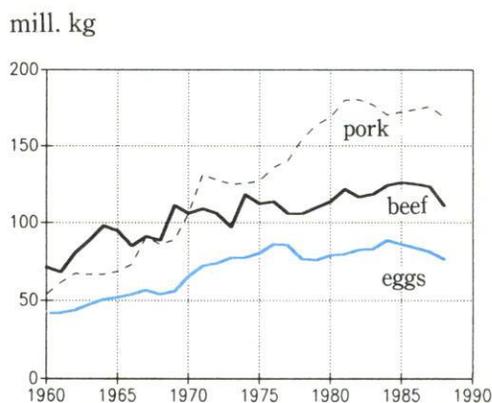


Figure 6. Production of beef, pork and eggs in 1960-1988.

Pork production is forecast to increase slightly in 1989.

Instead, the decrease of *egg production* by 3 mill. kg was as expected. The dual price system (see below chapter 11.5.), which came into force in the beginning of 1986, has led to the hoped-for results. It has not been possible to raise production, and each year a number of producers retire or stop producing for other natural causes, which reduces production capacity. In 1989 production is expected to decrease by only 1 mill. kg.

Poultry meat production increased last year by about 1 mill. kg, which is clearly less than in 1987, when the increase was 4,5 mill. kg, and part of the production was probably left in the stores. In general, the increase in poultry meat production has been quite steady, and the market has been in balance. Production is based on contracts, through which it can be regulated according to demand. The fact that the increase in the overall meat consumption has mainly occurred in the consumption of poultry meat has made it possible to increase production, albeit only a slight increase can be allowed at the moment.

The statistics on *other meats* consist of mutton, as well as reindeer and horse meat. Production of mutton has remained small in spite of all efforts to stimulate it. The influx of venison confuses the meat market to some extent each fall.

6. Consumption

In the last few years the real income of consumers has risen considerably. However, the income elasticity of the demand of agricultural products is small, which means that economic factors do not cause any great changes in consumption. Other factors, especially the discussion on the effects of food on the health, may have a greater influence than income or prices. Last year, too, there was a lot of talk about cholesterol, concerning mainly the use of milk, but to some extent also the use of meat and eggs.

Measured as energy, consumption cannot grow any more, rather, it is on the decrease. In 1987 we consumed about 2,800 kcal/day/capita, whereas in 1970

this figure was 3,000 kcal. In course of time, consumption has shifted from grain products to animal products, especially meat. However, today consumer guidance favors an increase in the consumption of plant products, and the consumption of fruits and vegetables has recently been on the increase. Some increase is expected to occur in meat consumption, too, but the total consumption of milk and dairy products is on the decrease. The consumption of grain and potatoes will probably stay at the present level, but some decrease is also possible.

The consumption of *dairy products* has undergone a structural change, which is in accordance with the earlier development. Butter-vegetable oil mixes, the fat content of which is 40 or 60%, have established their position in the Finnish diet, but their consumption is still surprisingly small, only about 2 kg/capita. However, they have replaced butter to some extent: last year the consumption of butter decreased by about 5%. Including all spreads, the consumption of butter was altogether 9.5 kg/capita. The consumption of margarine has remained as before.

In 1988, the consumption of liquid milk products remained at the level of 1987. The increase in the consumption of cheese is an exception in the consumption

Table 6. Consumption of dairy products and margarine in 1975-1988 (per capita).

	Liquid milk liters	Butter kg	Cheese kg	Margarine kg
1975	282.4	12.9	6.4	8.5
1976	278.6	12.7	7.1	8.3
1977	273.4	12.2	6.6	8.0
1978	270.0	11.9	6.8	8.3
1979	266.9	12.5	6.9	7.9
1980	263.3	11.8	7.1	7.8
1981	255.3	12.4	7.9	7.5
1982	253.1	12.3	8.8	7.7
1983	243.8	11.9	8.8	7.1
1984	240.5	11.4	9.4	6.8
1985	235.8	12.2	9.8	7.1
1986	228.4	10.3	10.5	7.2
1987	223.3	10.0	11.4	7.1
1988 ^e	223.9	9.5	12.3	7.2

Table 7. Consumption of meat and eggs in 1975-1988 (kg/capita).

	Beef	Pork	Poultry	Eggs
1975	24.2	26.7	2.4	10.9
1976	23.7	25.9	2.4	11.0
1977	22.7	27.3	2.7	10.9
1978	22.1	27.8	2.5	11.6
1979	23.4	28.9	2.9	11.6
1980	23.2	29.5	3.2	11.7
1981	22.4	29.3	3.5	10.7
1982	22.0	29.6	3.4	10.6
1983	21.1	30.9	3.8	10.6
1984	21.7	31.0	4.0	10.9
1985	21.3	32.0	4.2	11.1
1986	21.1	32.8	4.5	11.7
1987	20.9	32.6	5.4	11.9
1988 ^e	20.8	32.6	5.6	11.5

of dairy products, and, as a result, the total milk consumption has remained almost stable. Last year, the consumption of cheese was 12.3 kg/capita; i.e. it had increased about 8%. The share of curd in the consumption of cheese was less than 1 kg.

Pork, in addition to cheese and chicken, is the only agricultural product, the consumption of which has been expected to increase further during the next few years, although the peak may also have been reached already. In fact, pork consumption has remained quite stable for a couple of years. According to health experts, the present meat consumption is quite sufficient, and chicken and fish could replace some of the red meat.

Beef consumption decreased a little last year. This was expected because it has been forecast to fall due to the fact that the domestic supply will probably decrease, as the number of dairy cows decreases. The shortage of supply will raise the price level, which is already regarded as too high. Due to the shortage, 2.5 million kg beef had to be imported last summer. However, during the whole year, 10 million kg beef in processed beef products was exported. The consumption is forecast to decrease slightly in 1989.

The consumption of *poultry meat* increased by about 4% last year, which was considerably less than in the

previous year. However, the growth is still expected to continue.

Egg consumption started to grow in 1986, and this trend continued in 1987. Last year, however, the consumption decreased slightly. The discussion on cholesterol may be one reason for this, but it may also have been caused by the fact that eggs were not advertised and marketed as strongly as in 1986, when the consumption started to increase. Another factor behind the increase in 1986 was the introduction of the dual price system, which resulted in a decrease in the price level.

7. Foreign trade

The foreign trade of agricultural products is almost completely regulated, the quantities being determined by the current overproduction. Only highly processed food stuffs can be imported freely. Finland has an agreement with the EEC on an import quota of 1.5 million kg cheese, which has also been followed.

Even if overproduction is the most difficult problem of our agricultural policy, the value of agricultural imports is higher than that of exports (Table 8). There is no need to import basic food stuffs. Imports consist of a variety of products, coffee, fruits and tobacco being the most significant. Some protein feed is also imported because high quality protein cannot be produced in Finland. Part of the imported feed goes to fur animals.

Food industry imports agricultural products to be used as raw material in the export industry. For example, tobacco and confectionary are exported from Finland.

The decrease in production has clearly had an effect on exports: the quantities of all agricultural products, especially in the export of meat, have decreased. The export of dairy products fell by about 20%, but the quantities are still rather large. The export of meat dropped to about half of what it used to be (see Table 9), but, on the other hand, 2.5 million kg beef, as well as 0.5 million kg pork to secure the ham supply for christmas, was imported. At the moment, the meat

market is almost in balance. The overproduction of eggs still exceeds the target, although the situation has been improving slowly.

Bad crops have mainly affected the export of grain, which stopped completely. In addition, wheat was imported 141.9 million kg and rye 57.7

million kg. There was no need to import feed grain because the shortage due to the bad crops could be covered by using the stocks.

Finnish agriculture is very interested in the GATT negotiations going on at the moment. One of the central topics of these negotiations is the liberalization of

Table 8. Export and import of agricultural products in 1975-1988 (FIM mill.)

	Export		Import		
		Total	Coffee and tea	Fruits	Beverages and tobacco
1975	719.8	2472.3	368.5	341.4	184.9
1976	921.4	2332.4	692.3	366.0	155.7
1977	1303.3	2899.9	1012.9	404.1	166.0
1978	1127.3	3107.2	904.4	447.1	226.9
1979	1284.2	3679.9	932.7	533.9	226.7
1980	1669.9	4598.1	1097.1	638.0	255.6
1981	2639.4	4462.2	825.4	688.9	335.1
1982	2151.9	5308.9	990.5	710.6	286.0
1983	2673.4	4888.2	1065.7	752.2	332.7
1984	2994.1	5226.5	1360.5	775.1	342.3
1985	2876.2	5388.9	1125.5	814.0	358.9
1986	2256.3	5713.2	1376.9	855.2	405.0
1987	2074.7	5798.1	990.9	978.7	401.7
1987 ^b	1639.8	4467.7	785.6	739.3	317.2
1988 ^b	1428.6	4602.7	609.9	712.7	305.5

^b January-October

Source: Official statistics of Finland IA. Foreign trade.

Table 9. Export of some agricultural products in 1975-1988 (mill. kg.)

	Butter	Cheese	Milk-powder	Pork	Beef	Eggs	Grains
1975	11.9	19.9	20.1	2.1	1.6	28.1	
1976	21.2	28.6	22.0	12.1	2.4	34.4	367.5
1977	15.6	32.8	29.1	11.1	0.5	33.8	693.1
1978	14.9	36.1	27.4	22.2	0.8	22.2	148.4
1979	17.4	40.3	28.1	27.2	0.3	21.0	39.8
1980	9.8	40.3	30.1	25.9	0.9	25.8	-
1981	14.7	36.8	28.0	40.6	16.0	27.5	-
1982	8.8	33.3	22.6	34.4	8.5	30.1	-
1983	26.6	32.3	37.5	26.6	16.7	32.2	-
1984	20.0	37.0	41.2	20.8	19.2	35.4	811.3
1985	18.6	37.0	40.1	17.8	21.5	32.9	561.0
1986	14.9	34.5	33.9	10.2	21.3	25.1	664.3
1987	20.8	36.0	32.0	17.1	22.3	21.6	294.9
1988 ^e	15	33	27	7	10	18	139

^e estimate

Source: The Ministry of Trade and Industry

the trade of agricultural products. If foreign trade becomes much more liberal, or if, for example, subsidizing export is prohibited, Finnish agriculture has to face a completely new situation. The fear of liberalization has already caused certain precautions to be taken: over-production has been reduced both due to domestic factors and to the possible new restrictions on foreign trade.

However, the pressures of foreign trade are already visible. The import of processed food stuffs is free, albeit it is liable to high import charges. The import of these products, especially the import of fish, but also of grain products, is growing fast.

8. Farm income 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 returns and expenditure of agriculture, based on the average amounts of the last three calendar years. The prices used here are the current prices, as well as those of the last settlement. 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.

The target prices should be realized completely. In the spring settlement a calculation is made showing deviations from the target prices. Shortfalls are credited and excesses are subtracted in the settlement. The following year this correction is returned to the prices. Consequently, in the long run farmers receive exactly the prices that were agreed on. Retroactive payments are also included in the price settlement, and thus it is not possible for farmers to receive additional income in that way.

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 practise, 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. The overall increase in farm income is then determined for the whole agriculture, based on the total labor input in agriculture. Since the settlement is always an outcome of negotiations it cannot be described by any particular formula.

8.1. Spring price settlement

In the spring price settlement the rise of costs since the fall price settlement (i.e. the level of costs in July) is calculated.

However, this time the costs were calculated from January 1987 till January 1988, because in the fall of 1987 the change in costs was so slight that no corrections were made in the target prices.

Table 10 presents the main points of the spring price settlement. In the first place, it shows the increase in the return of the non-target price products (potatoes, sugar beets, oil plants, poultry meat and malting barley). In addition, there are the changes in retroactive payments, rent income and support. The return of the

non-target price products increased by FIM 367.6 mill., mainly (FIM 248.6 mill.) due to the rise in the price of potatoes.

The most important part of the calculations are the changes of costs as a result of changes in the prices of production inputs. The calculation indicated that the costs had increased by 3.2%. This was mainly caused by an increase in the costs of purchased feed by FIM 168.4 mill. (5.6%), of machinery and implements by FIM 152.7 mill. (3.9%) and in the building costs by FIM 66.6 mill. (4.4%). Relatively, the biggest increase

Table 10. Return and cost calculation of the 1988 spring price settlement.

	Price level in spring 1987 FIM mill.	Price level in spring 1988 FIM mill.	Change %
Gross return			
Target price products	16 267.4	16 267.4	
Other products	2 085.8	2 369.2	13.6
Rent income	600.8	635.6	5.8
Retroactive payments	580.1	629.5	8.5
Price support	2 076.1	2 076.1	
Total	21 610.2	21 977.8	1.7
Excess over target prices in 1986, repayment	49.8		
Total return		21 660.0	21 977.8
Costs			
Fertilizers	1 474.1	1 383.1	-6.2
Industrial feed	3 027.6	3 196.0	5.6
Wages	448.6	480.8	7.2
Machinery and implements	3 773.2	3 920.3	3.9
Buildings	1 513.9	1 580.5	4.4
Interest payments	1 209.4	1 254.4	3.7
Overhead costs	1 163.3	1 191.2	2.4
Rent	545.7	573.2	5.0
Miscellaneous	2 391.0	2 464.1	3.1
Total	15 546.8	16 043.6	3.2
Farm income	6 113.2	5 934.2	-2.9
Change from the basic level		-179.0	
Summary:			
		FIM mill.	
Change from the basic level		179.0	
Excess over target prices in 1987		-81.3	
Total change		97.7	

has occurred in the wage costs (7.2%). On the other hand, the costs of fertilizers had decreased by 6.2%.

The cost calculation includes the excess over target prices twice. According to the Farm Income Act, the target prices must be realized completely. If this is not the case the deviation is taken into account as a correction in the price settlement the following year. Thus, for example, according to the calculation, the target prices were exceeded by FIM 49.8 mill. in 1986, and the target price level of 1987 was lowered by the same amount. In the spring price settlement of 1988 this amount was returned to the target price level. In 1987 the target prices had been exceeded by FIM 81.3 mill., which was subtracted from the target prices for 1988. This amount will be returned to agriculture in 1989.

The total of the return and cost calculation indicated that it was necessary to raise the target price level by FIM 97.7 mill.

In the spring, the negotiations on the raise of farm income proceeded slowly, because settlements could not be reached in the other sectors of economy, either. According to law, the target prices should come into force in the beginning of March, but last year no solution could be

reached in the negotiations until the end of March. According to the settlement, farm income was raised by FIM 665.0 mill. (10.9% of the farm income used as the basis for calculation), and the total need for raise amounted to FIM 762.7 mill. (i.e. 4.2% of the sum of the price policy support and the return of the target price products):

Return and cost calculation	97.7
Increase in farm income	665.0
Need for raise, total	762.7

The raise was divided so that FIM 682.2 mill. was directed to target prices, FIM 47.8 mill. to regional support and hectarage subsidies, and FIM 32.7 mill. to social security. The last-mentioned ensures, for example, that farmers' annual leave can be extended by two days, which means that, from the beginning of the vacation year of 1990/91, farmers are entitled to altogether 20 days of annual leave.

The raise of the target prices was quite even, except that the price of rye was raised clearly more than the other prices (11.1%). The self-sufficiency in rye has constantly remained below 100%, which would make it possible to increase production, and this was also the aim of

Table 11. Target prices 1985-88¹.

		1.3.85	1.4.86	1.3.87	1.4.88	Change %
Rye	mk/kg	2.64	2.70	2.70	3.00	11.1
Wheat	'	2.31	2.33	2.33	2.45	5.2
Feed barley	'	1.70	1.70	1.70	1.75	2.9
Feed oats	'	1.58	1.58	1.58	1.66	5.1
Milk	p/l	2.286 ²	2.320	2.345	2.445	4.3
Beef	mk/kg	24.67	24.97	25.10	26.10	4.0
Pork	'	16.05	16.25	16.30	17.00	4.3
Eggs	'	10.50	8.80 ³	8.80	9.10	3.4
Mutton	'	26.15	25.15	24.65	25.90	5.1

¹ See also Appendix 5.

- In the grading of the additional price of milk, the 30,000 liters limit was raised to 37,000 liters from Sept. 1st, 1988

- The additional price of eggs was raised by 20 p/kg, in the provinces of Oulu and Lapland by 25 p/kg for less than 10,000 kg, from Sept. 1st, 1988.

- The beef production premium: a new weight class of over 260 kg, for which the premium is FIM 4.00/kg. The present lowest weight limit of 160 kg was raised to 180 kg.

² The additional price of milk was reduced by 1.5 p/l from Sept. 1st, 1985, when the target price was raised correspondingly by 1.5 p/l.

³ The target price of eggs was reduced by FIM 1.50/kg from Jan. 1st, 1986 when the dual price system was adopted (see Chapter 11.5).

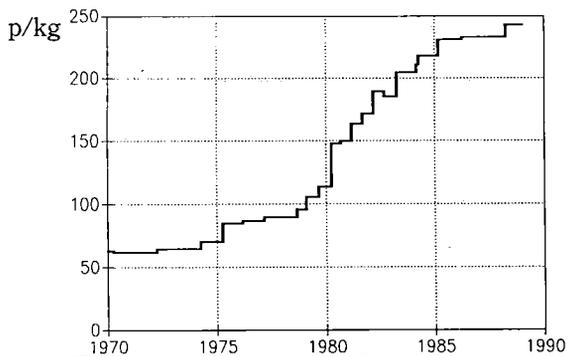


Figure 7. Target price of wheat in 1970-1988.

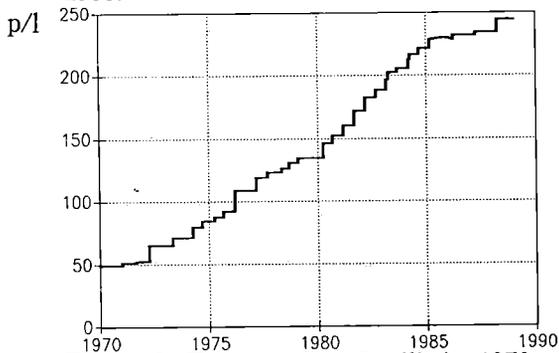


Figure 8. Target price of milk in 1970-1988.

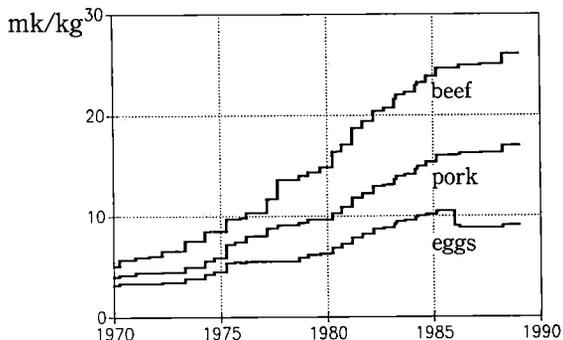


Figure 9. Target prices of beef, pork and eggs in 1970-1988.

the raise. The price of barley was raised less than the other prices.

The price settlement includes a few smaller arrangements. For example, in the grading of the additional price of milk, the lowest limit was raised from 30,000 liters to 37,000 liters. Now the additional price is 23.5 p/l up to 37,000 liters and 12 p/l up to 150,000 liters. The production premiums of beef and mutton, as well as the additional price of eggs were changed slightly (see footnote in Table 11).

Furthermore, it was agreed in the negotiations that in the beginning of 1989 the target price of milk will be raised by 15 p/l, and the same amount will be subtracted from the retroactive payments. The total price that the farmers get will not change, but the monthly account price will be 15 p/l higher. Earlier farmers got this part of the price only in the end of the year, or in the beginning of the next year. 9-10 p/l will still be paid as retroactive payments.

Like Figures 7-9 and Appendix 7 show, the development of target prices has become quite steady in the last few years. Consequently, agriculture does not cause inflation, but, on the contrary, slows it down. The target price of eggs was reduced in the beginning of 1986 when the dual price system was adopted. The difference comes as a price bonus through the state budget.

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.

According to the level used in the spring settlement of 1988, the costs of agriculture were FIM 16.0 bill. The largest parts of this are machinery and implement costs (24.4%), purchased feed (20.0%), building costs (9.9%), as well as fertilizers and lime (9.8%). The changes in these prices are the most important ones for the whole development of costs. Actually, only the maintenance costs of machinery, implements and buildings, which is only about a third of their total costs, are taken into account in the fall settlement.

From January 1988 till July 1988 the rise of costs was only FIM 282.0 mill, i.e. 1.8%. This was mainly a result of the rise of the price of purchased feed, which was FIM 171.6 mill, i.e. 5.4%. At the same time, the wholesale price index had gone up by 2.3%, and, according to the principles used in the calculation, e.g. the

Table 12. Retroactive payments in the fall price settlement of 1988.

	Amount mill.kg	1986 Retroactive payments	1987 p/kg
Milk, mill.l.	2874.1	20.05	23.99
Beef	124.7	22.00	18.70
Pork	174.2	10.20	12.80
Mutton	1.4	22.20	15.50
Eggs	84.2	8.10	10.50
Veal	0.1	16.00	14.50
Poultry meat	23.1	3.40	4.80
Horse meat	0.9	15.20	11.30
Total FIM mill.		629.5	745.4
Change FIM mill.			+115.9

overhead costs rose by the same amount. The prices of fertilizers had risen 1.0% and wages 7.7%. The changes in other costs were only slight.

Statistics on retroactive payments are not ready by the spring price settlement, which means that they can be taken into account only in the fall price settlement. Retroactive payments to milk producers have been rising steadily, in 1987 they were as high as 24 p/kg, which was 4 p/kg more than last year, i.e. more than the rise in the target price, which was 2.5 p/l. This change in the price has to be taken into account in the fall settlement. The total change of all products was FIM 115.9 mill. (Table 12).

Consequently, the final situation of the fall price settlement was:

Rise of costs	FIM 282.0 mill.
Rise of return (subtracted)	FIM 115.9 mill.
Need for raise	FIM 166.1 mill.

Concerning the fall price settlement it is prescribed by law that the change in target prices is realized only if the change in target prices and price policy support is more than 2%. The change would have been only 0.9%, and, consequently, target prices were not changed at all. The return and cost calculation for the negotiations of spring 1989 will be made from January 1988 to January 1989.

Table 13. Producer prices of the most important agricultural products in 1975-1988, 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
1975	115.0	11.15	7.60	5.25
1976	137.1	11.50	7.90	5.53
1977	144.8	14.27	8.75	5.40
1978	155.3	14.66	9.07	5.78
1979	167.8	15.54	9.42	6.42
1980	184.2	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 ^e	291.3	30.54	17.29	10.96

^e estimate

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 1987 the additional price of milk was, on the average, 18 p/l, and other price support was 9 p/l. Thus the average producer price of milk was FIM 2.83/l. No final data from the year 1988 is available. Table 13 presents the development of the producer prices of the most important products in 1975-1988. 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 14. It is hard to compare the 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

Table 14. Retail prices in September in 1987 and 1988.

Product	1987 FIM/kg	1988 FIM/kg
Milk (FIM/l)	3.40	3.61
Butter	37.98	39.00
Emmenthal-cheese	38.69	40.99
Beef (ground)	43.07	44.23
Pork (flank)	29.23	30.92
Eggs	15.24	16.24
Wheat flour	7.08	6.51
Sugar (lump)	8.32	7.38
Potatoes	4.29	2.78

Source: Bulletin of Statistics.

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 of farmers' income level and its comparison to other sectors of

economy has been continued in the Agricultural Economics Research Institute. Figures are now available for 1986.

According to this study, based upon tax statistics, farm families received about 58% of their income from agriculture in 1986 (Table 15). This calculation included 123,280 farms. There was 15.1 ha arable land and 38.2 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

Table 15. Distribution of income of farm families according to source of income 1986 (tax statistics).

	Income	
	FIM/farm	%
Agriculture	53 778	58.3
Forestry	9 586	10.4
Wages	23 692	25.7
Other	5 144	5.6
Total	92 200	100.0

Table 16. Trends in farm incomes in 1975-88, FIM mill. and as an index.

	Gross return	Total costs	Farm income	Index
1975	8 099.4	4 978.0	3 121.4	100.0
1976	9 727.1	5 763.8	3 508.3	112.4
1977	9 977.2	6 234.7	3 742.5	119.9
1978	10 246.2	7 199.0	3 047.2	97.6
1979	11 147.4	8 166.6	2 980.8	95.5
1980	13 598.1	10 173.7	3 424.4	109.7
1981	15 205.9	11 737.6	3 468.3	111.1
1982	18 119.7	13 675.9	4 443.8	142.4
1983	20 426.2	14 343.1	6 083.1	194.9
1984	21 623.2	15 186.6	6 436.6	206.2
1985	22 496.1	16 121.0	6 375.1	204.2
1985 ¹	22 515.3	15 499.1	7 016.2	100.0
1986	23 266.7	16 052.7	7 214.0	102.8
1987	22 540.9	16 524.7	6 016.2	85.7
1988 ^e	23 778.0	17 189.1	6 588.9	93.9

¹ New procedure for cost calculation. ^e estimate

Source: Agr. Econ. Res. Inst.

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 47,050 farms belonged to this category in 1986 and they had, on the average, 20.4 ha arable land. The farm income was FIM 50,480 per person on those farms, whereas an industrial worker received at the same time FIM 69,600 as wages.

9.2. Income in 1988

It is still difficult to make any reliable statistical estimates about the income trends of farmers in 1988. All information on quantities and prices needed for this purpose is still preliminary. If this information is used to calculate returns and costs, an error may accumulate in the part referring to farm income.

Nevertheless, in the following a preliminary rough estimate of trends in farm income according to the overall calculation of the institute is given. Two figures for 1985 are given in table 16 due to the revision of the total calculation. The input prices of fertilizers and feed were earlier list prices. In fact, farmers have got a sizeable discount of these prices, which have now been taken into account in the calculation.

According to a preliminary estimate, farm income rose about 10% last year. However, it did not reach the level of 1986, because the base level was 15-20% lower than normal due to the crop failure of 1987. The volume of production decreased remarkably last year. The bad crop of 1987 affected still in the beginning of 1988. The quantities of grain entering market were small, and the bad grain crop of 1988 did not improve the situation, either. Many factors contributed to the drastic decrease in animal production. The nominal rise of producer prices by 3.5% could not compensate the drop in the volume of production. The gross return of production rose 5.5%, but this was a result of the crop damage compensations of 1987, which were paid in 1988. Without compensations the return would have fallen 1%.

The increase of costs was 4%. As the

volume grew 1%, the increase was mainly realized through the rise in the prices of production inputs. There was a general, although slight, upward trend in costs, among which the most notable was the increase in purchased feed by 5%.

Farm income has fallen drastically during the last two years. In 1989, farm income could be raised slightly by a good grain crop, but not by animal production, because it will continue to fall. The only factor, which alleviates to some extent the unfavorable income development, is the decrease in the number of producers. Thus, the per capita income may not fall as fast as the total farm income.

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 30% of the expenditure balance (25% from 1989), and the depreciations of production buildings can be 10% of the expenditure balance. In 1986 the depreciations of machinery and implements were 81%, and those of buildings 14% 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 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 1986 the average taxable income of farmer and spouse in the whole country was FIM 89,300, 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 16% of the final 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 8-10% of the retail prices.

III

Agricultural policy

10. Outlines of Finnish agricultural policy

During the last few years there has been a lot of discussion about the foundations of agricultural policy all over the world. The main reason for this has been agricultural overproduction and, as a result, the collapse in the world market prices. In particular, attention has been directed to the GATT negotiations. Some countries want to liberate the world trade of agricultural products completely, which would cause agriculture to become subject to the same economic factors that prevail in the other sectors of the national economy.

Within individual countries, too, pressures to reevaluate the foundations of agricultural policy have increased. In many countries agricultural support is very high, and it causes problems to the national economy. Overproduction has also been criticized from the point of view of the national economy. The price policy has led to a situation in which foreign competition has no effect on the domestic prices. It has been estimated that this has resulted in very high welfare losses.

Increase of the intensity of agriculture also causes problems. An abundance of fertilizers, pesticides and machinery is being used, which results in a decrease of rural population, various kinds of environmental problems, as well as dissatisfaction of consumers as to the quality of food stuffs.

In the summer of 1987 the 'Agriculture 2000' commission published its report, which gives an outline for a long-term program of agricultural policy. The report will form the basis for agricultural policy in the next few years, although the

present discussions about the role and future of agriculture may bring new considerations to the planning and realization of agricultural policy.

10.1. The objectives of agricultural policy

The objectives of our agricultural policy are concretized 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 presented as a self-sufficiency objective: production must be directed so that, in the long run, it corresponds to domestic consumption. In practise, this requirement means reducing production, because consumption does not increase very much, and at the moment the self-sufficiency in the main commodities is above 100%. Due to seasonal variation some overproduction is allowed, especially in milk production.

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 reasons of employment, regional policy and inhabitation of the countryside.

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. However, the growth of farms is restricted to reduce agricultural production and to maintain the rural population level, although making these objectives compatible with each other is very difficult. 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 compared with the other population groups. The differences 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 the other population groups.

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 objectives of social policy, as well as 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, for example, by the 'Agriculture 2000' commission, but which

have been put forward in the discussions about agricultural policy, or in the realization of this policy. These include, among other things, reasonable consumer prices, pure food stuffs, and, in general, environmental considerations.

The prices of food stuffs are internationally very high, and our agricultural policy is held responsible for this. In practise, *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.

However, producer prices account for only about half of the retail price of food stuffs. The share of processing and trade has grown even faster than the producer prices. For example, the price of bread has risen a lot. The price of grain had nothing to do with the rise because it is only one tenth of the price of bread. Only recently some attention has been paid to the share of processing and trade of the prices of food stuffs, but the criticism is still mainly directed to producer prices.

Naturally, it cannot be denied that producer prices do play a part in the high producer prices, especially as the trade uses fixed percentage marginals. The higher the producer price, the higher the absolute marginal. However, adequate rationalization and competition might decrease the marginals of the trade and processing to the benefit of consumers.

So far, the *environmental problems* caused by agriculture have received relatively little attention in Finland. There has been talk about the increase of the phosphoric load, as well as about the eutrophication of lakes and rivers, but the problem has obviously not been regarded as very serious because hardly anything has been done to improve the situation.

So far there has been no discussion about the contamination of the groundwater. However, the use of nitrogenous fertilizers is being restricted indirectly through the tax on fertilizers, which is collected from agriculture to finance following, the main objective being, in fact, restricting production.

Agricultural policy lacks a clear, specified environmental objective, which

would clearly concern certain protection areas (the shores of lakes and rivers), the groundwater in certain areas, the maximum quantities of pesticides and, possibly, fertilizers, etc. The measures should also be defined clearly. A general tax on fertilizers, which is tax-deductible, is too superficial to function properly, if it functions at all.

More and more attention is being paid to the *quality* of agricultural products. The remnants are followed continuously. Agricultural production that uses chemical substances involves real or imaginary problems. Some consumers favor biodynamically 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.

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 the consumers. However, this is possible only if the consumers are prepared to pay a higher price for food stuffs, because extensive production would lead to an increase in costs.

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. They are based on the law, acts, as well as official decisions of the government and other authorities.

The four most important acts the running of agricultural policy is based on are Farm Income Act, Act on Directing and Balancing Agricultural Production, Act on Directing Animal Husbandry (i.e. the regulation of the establishment of

large production units) and Farm Act. These are complemented by the dual price systems for milk and egg production.

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 the 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, which comes into effect in the pricing year 1990/91, is being prepared at the moment.

An essential part of income policy is support policy, which aims at equalizing the income disparities between the different parts of the country and between farms of different sizes. Additional price and income support are graded regionally in order to maintain agricultural production in the northernmost parts of the country, too (see Chapter 12.2).

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 large 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 11.7).

Farm Act aims at developing *the structure of agriculture*. It determines the general framework for granting loans and subsidies to agriculture, and, consequently, makes it possible to influence the structural development (see Chapter 13). *The dual price systems* of milk and egg production as well as *the regulation of the establishment of large production units* (see Chapters 11.4-6) regulate the structure of agriculture a great deal.

The means of agricultural policy are manifold, and they contribute to reaching either one or several of the objectives. 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.

Table 17. Production ceiling for dairy milk (mill. liters) and export ceilings for meat, eggs and grain (mill.kg) in 1983-1989.

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

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.

11. Regulation of supply

In the following, the regulation of supply means directing, restricting and supporting production. During the last few years the focus has been on restricting production. Except for the last couple of years, production has clearly exceeded domestic consumption, as well as the production and export ceilings set for agriculture. A considerable amount of export cost charges has been collected from agriculture, which has lowered the income level of farmers by 5-7%.

Production can be directed through price settlements made in the negotiations on farm income. This was possible especially during the high inflation in the 1970s because nominal raises were great. The rise of prices has slowed down, which means that major changes in price relations are no longer possible. Also, certain factors within agriculture make it difficult to change the price relations, because all production lines require corresponding raises. Consequently, production has mainly been directed through measures to restrict production.

Production targets can be regarded as formed according to the production and export ceilings set in the farm income acts (see Table 17). Agriculture has to export the surplus for the world market prices, which are usually very low, and, consequently, it is not profitable to increase production to the extent that it exceeds the production ceilings. Through the means of the production policy an attempt has been made to reduce production at least to the level of the ceilings, but in practise production is already clearly below them.

'Agriculture 2000' commission recommended that, in the long run, production should correspond to consumption, although some overproduction is allowed due to seasonal variation. This can be regarded as the production target of the government.

As Table 18 shows, especially the ceilings of milk, beef and eggs used to be exceeded. However, the situation changed radically last year: only the export of eggs exceeded the ceiling, whereas the other products were clearly below the ceilings. No grain was exported, but some grain was used as feed for fur animals for the world market price, which is comparable to export. As in the case of animal products the shortfalls can be regarded as compensation for the exceeding of the export ceilings, no export costs remained to be paid by agriculture last year. In 1987 they still amounted to FIM 274 mill.

The most important measures to restrict production are *the dual price systems for milk* (since 1985) and *eggs* (since 1986), as well as *the regulation of the establishment of large production units*.

In addition, there are various *voluntary*

Table 18. Excesses and shortfalls of production and export ceilings and the share of agriculture of the export costs in 1983-1988.

		1983	1984	1985	1986	1987	1988 ^e
Dairy milk	mill.l	153	175	78	93	-6	-130
Pork	mill.kg	8.6	4.8	3.4	-3.8	4.1	-5
Beef	'	2.7	7.2	8.9	8.3	6.4	0
Eggs	'	15.2	20.4	20.1	12.5	10.7	8
Bread grain	'	-	-	-	-	-	-74
Feed grain	'	-	-	-	169.9	-230	-453
Export costs		380	452	482	602	274	0

^e estimate

systems, for which an act was passed in 1983 (the Act on Regulating and Balancing Agricultural Production). According to the act, the government can annually decide on the various measures to restrict production. The measures used have shaped in the course of years, for example, contracts to reduce

- agricultural production
- animal production
- milk production
- pork production
- egg production

as well as

- fallowing contracts and
- the support of afforestation.

Last year especially contracts to reduce milk production (milk bonus contracts) and fallowing contracts were made. The contracts to reduce agricultural production made with young producers concerned the shift from agriculture to forestry, or other industrial activities in the countryside. In addition, some earlier contracts were still in force.

The licenses required for the establishment of large production units are one of the most important means of regulating production. In addition to covering the marketing responsibility, the export cost charges collected for financing the export of surpluses, as well as the tax on fertilizers and feed have a restricting effect on production. The act on the soil bank system was still in force last year, but it had hardly any effect. The land clearing charge, which has stopped land clearing almost completely, also aims at restricting production.

Another means of restricting pro-

duction are the measures concerning farmers' pensions: an attempt has been made to promote retirement through improving pensions, as well as through abolishing hectarage subsidies and additional price of milk from farmers over 65 years of age from the beginning of 1988, and the additional price of eggs from the beginning of July 1988. In addition, the connection between retirement and giving up production has been tightened by introducing a modified pension system, which requires a definite commitment not to use farm land for agricultural production.

Production is also supported to some extent, for example, the production of beef and mutton is supported through an additional price (see Chapter 11.7.).

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

11.1. Restricting 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 animal 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. Last year 350 new contracts were made. Priority was given to farmers

under 55 of age, but as there were only 170 applicants, contracts were also made with older farmers. The contracts made with young farmers are in force for ten years, and they include the condition that the farm has to turn to *forestry* or to some kind of *small-scale industry*.

For the first five years a farm that turns to forestry or industrial activity receives a compensation according to the income, and for the last five years only a basic compensation of FIM 10,000 a year. When the contract is made the timber output of the farm had to amount to the minimum of 150 solid cubic meters a year. The afforestation of arable land was supported by doubling the afforestation compensation.

In general, an increase in *the afforestation of arable land* would be desirable. Last year altogether 4,200 ha arable land was afforested, and the compensation was paid for 1,200 ha.

Contracts to reduce animal production made in 1984 are more limited than the contracts concerning the whole production. A condition for joining this system was that a farmer had to give up all animals causing overproduction for five years. The compensation was 25-30% of the earlier income. In 1984 1,380 contracts were made. Similar contracts were made in 1980-1982, and the last ones of these ended in 1988. In 1988 the effect of the contracts made in 1984 on production was about 4 million kg pork and 1.3 million kg eggs.

In addition to fallowing, *contracts to reduce milk production* were the most important restrictive measure last year. 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. The compensation could amount to the maximum of FIM 80,000, and in both cases it is paid for five years.

The system was well received, and the number of applications was double with regard to the number that the funds reserved for this purpose allowed. In

practice, only the second type of contracts could be made. About 3,500 contracts were made, and their effect on production is about 120 mill. liters (about 22,000 cows). The compensations amount to FIM 143 mill. a year.

Milk production has decreased considerably. Restrictive measures have been effective, and, in fact, the compensations may even have been too high. On the other hand, crop failures and the aging of farmers have also led to giving up production.

Contracts to reduce pork production made in 1984 had a very strong effect on production. The contracts expired in 1987, and no new ones were made last year. It seems that the production on these farms has recovered more slowly than was estimated, because pork production decreased last year, although it should have increased as a result of the expired contracts.

Contracts to reduce egg production made in 1984 expired last year. In 1987 five-year contracts to reduce egg production were made. The compensation was FIM 70/hen up to 1,000 hens and FIM 60/hen for more. If the producer committed himself to giving up production completely, the compensation was FIM 30/hen higher. Thus the state bought production quotas from farmers. Contracts were also made with large poultry farms, which had to abolish the minimum of 1,000 hens from production. The contracts made in 1987 covered about 6 mill. kg eggs. No new contracts to reduce egg production were made in 1988.

It is estimated that, including the contracts to reduce agricultural and animal production, the measures to restrict egg production will decrease production by about 11 mill. kg a year.

An attempt has also been made to reduce egg production by *restricting hatchings*. For this purpose, general instructions on the number of hatchings have been issued. In 1988 the number allowed was the same as in the previous year. During the last few years, expanding hatcheries and setting up new ones have been prohibited.

Fallowing is becoming a central means of restricting production. Last year about 17,000 one-year contracts were made,

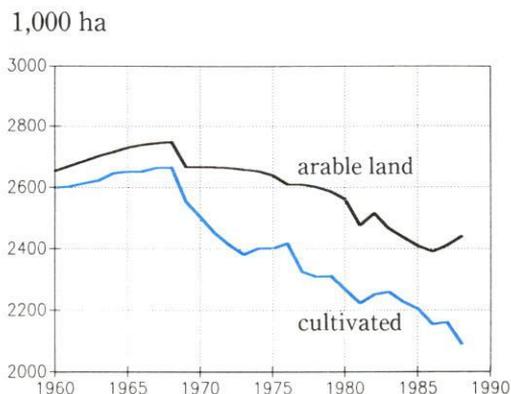


Figure 10. Arable land and the area under cultivation in 1970-1988.

with the total area of 117,000 ha. The area to be fallowed had to be at least 1/5 of the total arable land of the farm, the minimum area being 3 ha. The compensation was graded regionally, and it amounted to FIM 1,100-2,200/ha (on the average, FIM 1,825/ha). Altogether FIM 210 mill. were used for the compensations, the share of agriculture being FIM 63 mill.

The soil bank system was launched in 1969. A compensation was paid for stopping the whole production of the farm for a certain period of time. Until 1974, altogether 36,050 contracts were made, and they covered 239,800 ha arable land. In June 1988 this system covered only 2,300 ha.

The soil bank system will expire finally in April 1989. In the situation in the early 1970s, when there was a lot of overproduction, this system was an effective way of reducing the area under cultivation, but soon it was criticized heavily. In fact, in Eastern and Northern Finland it was too effective, leaving as many as a third of the farms uninhabited in some regions. As a result of the quick economic growth, rural depopulation would probably have been strong in any case, but the system also contributed to giving up agriculture.

The beginning of the structural development of agriculture was uncontrolled, but the development would probably have started in any case. It is still going on because our farm size does

not meet the modern requirements. However, today we are to some extent prepared against rural depopulation, as industrial activities in the sparsely populated areas are supported, for example, from the state funds. The rural population itself has also started to support actively the development of their villages and districts of residence.

In practise, the clearing of new arable land has been made unprofitable through a *land clearing charge* of FIM 30,000/ha. Earlier, 3,000-4,000 hectares arable land was cleared each year, and in the summer of 1987, just before the act came into force, land clearing increased very strongly. Consequently, the area of arable land has increased during the last couple of years.

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 1988 this pension system covered about 61,000 hectares arable land.

11.2. The cost and effects of production restriction measures

The disposable appropriations for measures to restrict production are prescribed in the Farm Income Act. In the state budget, a sum which is 20% of the appropriations for export subsidies, except for grain, has to be reserved for this purpose. In 1988 this amounted to about FIM 417 mill. This was not enough, however, but the surplus of FIM 63 mill. collected from agriculture as marketing charges were spent on fallowing in 1988. Finally, the budget appropriations were raised up to FIM 522 million.

Table 19 presents an estimate of the effects of all measures to restrict production in 1988. If the quantities covered by the contracts had been exported, the export costs would have amounted to about FIM 1.4 bill., mainly to be paid by

Table 19. Summary of the extent of production control measures in 1988.

	Contracts	Area ha	Cows	Beef cows	Hens	Pigs	Compen- sations FIM mill.
Soil bank	490	2 300					4
Decreasing agricultural production ¹	3 450	29 200	15 700		25 000	4 200	103
Milk bonus ²	3 500		22 000				145
Restricting animal production	1 380				94 000	30 000	32
Restricting egg production	980				632 000		2
Fallowing	17 231	117 355					210
Beef production contracts	490			5 790			7
Pension systems	6 000	61 000					0.5
Pea production contracts	120						
Total	33 790	209 855	37 700	5 790	751 000	34 200	609
Corresponding production mill. kg		grain 630	milk 185	beef 1	eggs 11	pork 4	
Export cost savings	1 403	881	351	33	90	47	
Value of production, FIM mill.	1 772	1 070	485	32	120	64	

¹ including the contracts on the change of the production line of 4§

² on the average during the whole year. The contracts made in 1984 ended in 1988.

The export cost savings have been calculated according to the estimated export price of 1988. The figures refer mainly to the amount of export subsidies, if the production calculated for the table had been exported. The value of production is the sum of the target price and the estimated production premium. Export cost charges have not been deducted. Does not include production subsidies.

Source: The National Board of Agriculture

the state. Consequently, it was profitable for the state to apply the above-mentioned measures. However, it seems that the effects have been overestimated to some extent, because part of the reductions would also have occurred without any compensations.

11.3. Export cost charges

Last year agricultural production decreased to the extent that only the export

ceiling of eggs was exceeded. The marketing responsibility of agriculture for this amounted to FIM 63 mill. Milk and meat production remained below the ceiling, and the value of this was about FIM 400 mill. As in animal production the amounts that remain below the export ceiling can be used as a compensation for the excesses of other products, no marketing responsibility remained to be carried by agriculture last year. The amounts saved went partly to the state, too. However, the following export cost charges were collected from agriculture last year:

Pork:	1 p/kg
Tax on fertilizers:	3 p/kg Jan. 1st - Sept. 31st and 5 p/kg from Oct. 1st
Tax on feed mixes:	2 p/kg Jan. 1st - June 30th
Tax on protein feed:	FIM 1,50/kg Jan. 1st - Sept. 30th, FIM 0,75/kg from Oct. 1st

Tax on protein feed was carried on raw protein, except for grain. The tax on each feed mix is determined according to the protein content, and it is estimated to amount to about FIM 50 million.

Large-scale poultry farms and pig producers have to pay a so-called *additional marketing charge* if their sales income exceeds the set maximum (FIM 1 mill. for pig production and FIM 0.55 mill. for poultry production). The size of the enterprise that exceeds the income level is about 400 pigs and 3,000 hens.

Table 20. Export cost charges in 1987 and 1988 (FIM mill.).

	1987	1988 ^e
Milk	12.8	-
Quota charge	23.0	25
Pork	1.7	2
Tax on fertilizers	128.9	46
Tax on feed mixes	77.8	12
Tax on protein feed	57.3	50
Additional marketing charge	17.0	15
Total	318.5	150
Transfer from the previous year	41.0	86
Share of agriculture	274.0	63 ¹
Transfer to the next year	85.5	173

¹ spent on following compensations.

^e estimate.

Source: Ministry of Agriculture and Forestry.

Export cost charges were estimated to amount to about FIM 150 mill. in 1988. As in the previous year a surplus of FIM 86 mill. had been collected from agriculture, the state would owe altogether FIM 236 mill. to agriculture (Table 20). However, it was agreed in the farm income negotiations that FIM 63 mill. of this will be spent on following compensations during 1988. Also in 1989 part of the export cost charges will be spent on this purpose.

As production has fallen clearly below the production ceilings, there would be no need to carry marketing charges any more. However, the tax on fertilizers seems to remain in force, but its main purpose is probably to prevent an increase in the use of fertilizers in order to reduce production, as well as environmental problems.

11.4. Dual price system for milk

The dual price system for milk came into effect at the beginning of 1985. Each farm was determined a quota on the basis of the level of milk production in either 1981/82 or 1982/83 (i.e. according to the higher one). All farms that produced milk at the beginning of 1985 could, however, produce up to 30,000 liters a year without a license. It is not possible to buy or sell quotas.

If the amount of milk delivered to dairies exceeds the quota, a quota charge, which in 1988 was FIM 2.05/l, is collected for the excess. The principal is that producers get only the world market price for the amount that exceeds their quota.

Quota charge is very effective because it makes it unprofitable to increase production to the extent that it exceeds the quota. The number of farms that exceeded their quota was about 7,400 in 1985, 7,100 in 1986 and 7,000 in 1987, and the excesses amount to about 10-12 mill. liters a year. No estimates of the number of farms that exceeded their quota in 1988 have been made.

It was admitted that the quotas are quite stiff, and the quotas of some farms remained too small for various reasons.

To correct the most unreasonable decisions, additional quotas for 55 mill. liters in 1985, 25 mill. liters in 1986 and 1 mill. liters in 1987 were granted. Last year, additional quotas were available for 18 mill. liters.

Propositions have been made, which aim at making the dual price system a little more flexible. It has been suggested, for example, that the quotas of the farms that have stopped producing could be distributed to farms that need additional quotas very badly. Suggestions have also been made public, according to which milk production should be based on contract production regulated by the dairies. The rapid decrease of milk production contributes to the attempts to make the quota system more flexible.

At the beginning of 1988 a quota system for dairies came into force. The dairies have to pay a quota charge of FIM 0.50/l for the amount of milk that exceeds the amounts of 1986. The aim is to prevent the dairies from taking advantage of the free quotas of farms that produce less than 30,000 liters a year, or, in general, from increasing milk production for economic reasons.

Milk production is completely regulated by the state. It is supervised through a three-fold quota system: the highest level is the production ceiling for the whole milk production, dairies have their own quotas, and the most effective means of restricting milk production are the quotas for individual farms.

11.5. 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. Altogether the quotas amount to more than 100 mill. kg.

In this system the regulation of production is based on an additional price, which last year was paid as follows, depending on the quantities produced:

The provinces of Oulu and Lapland		Additional price	
tons	Jan. 1st FIM/kg	Sept. 1st FIM/kg	
0-10 tons	2.65	2.90	
10-100 tons	1.85	2.05	
over 100 tons	-	-	
Other parts of the country			
0-10 tons	2.35	2.55	
10-100 tons	1.85	2.05	
over 100 tons	-	-	

The grading of the quantities and the additional price were altered at the beginning of the year. In the spring settlement an agreement was made on a raise of the additional price from the 1st of September.

Producers are paid 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. Instead, if the quota is over 10,000 kg, additional price is paid for only 90% of the part exceeding 10,000 kg, and after that the producer gets a reduced target price. The payments of the additional price are realized only through the packers.

The grading of the price is regarded as so great that it is not profitable for farmers to exceed their quotas. Egg production has decreased continuously, partly as a result of the contracts to decrease production, too.

Regulating egg production is complicated by the fact that part of the production still goes directly to the retail, which makes it possible to avoid exceeding the quota. Last year about 80% of egg production went through the packers.

11.6. Regulation of the establishment of large production units

The licenses required for the establishment of new production units have become an effective means of preventing

increasing production. A license from the authorities is required for establishing new animal production units or extending the old ones.

According to the system, establishing a production unit with more than 200 pig places, 1,000 hens, 30,000 chickens or 60 beef animals is subject to a license from the National Board of Agriculture. A license from the local authorities is required for the establishment of production units with over 25 pig places, 100 hens or chickens (or other poultry), or 30 beef animals.

In 1988 licenses were granted on the additional condition that the self-sufficiency in feed was 3/4 on larger farms, i.e. farms that applied for the license from the National Board of Agriculture, 2/3 on smaller farms, and 1/5 in chicken production. These restrictions do not apply to milk production because it is regulated separately through the quota system.

In 1988 licenses to establish and expand pig production were granted for about 50,000 additional pig places. Licenses were granted to young farmers who took over a farm, as well as to farms that changed their production line.

Poultry production units could be established or expanded only in a few exceptional cases, and beef production units only in the northern and eastern parts of the country. Licenses were granted on condition that the ownership of the farm changed, and even then production could only be continued in the same extent.

11.7. Production support

Finnish production policy is mainly characterized by supply control measures. 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 weights exceed certain limits. Additional price for slaughter animals of

over 180 kg (heifers over 130 kg) was paid according to the footnote in Appendix 7. The weight limits were changed slightly last year.

Beef production is also supported through the so called *beef cow premiums* (FIM 900/cow in 1988). In 1988 this system covered about 5,800 cows, and there were about 640 contracts.

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 0.25/kg and that of feed grain FIM 210/ha.

12. Agricultural support

12.1. Agricultural support in general

The discussion of agricultural support has increased, especially as a result of the study of the support that is being carried out in OECD. The study of the agricultural support in Finland was completed during last fall, but it will not be published until in the spring of 1989, and, consequently, no results can be presented in this connection.

In the study, the support is measured by a PSE (producer subsidy equivalent) indicator, which is calculated, roughly, as the difference between the producer price and the 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 account for all possible kinds of support.

The OECD study has been both praised and criticized in many ways. The share of the support becomes very big because it is calculated on the basis of the world market prices, which are very sensitive to the disturbances in the market, especially to oversupply. In the last few years the world market prices have been very low.

In general discussion agricultural support usually means the support that is paid through the state budget. It is mainly a result of the price system in agriculture, which guarantees the farmers a certain price level for the quantities determined by the production ceilings. In 1987 the support amounted to about FIM 8 bill. (Table 21).

Part of the price support is a result of the system for equalizing incomes within agriculture, which includes, for example, hectareage subsidies, regional subsidies, as well as the additional price of milk and meat, and which is realized through the budget (see Chapter 12.2. on price policy support).

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 13). Agricultural advising 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. It amounted to FIM 1,178

Table 21. Agricultural support (gross) FIM mill.

	1986	1987
Agricultural production	3 237	3 102
- price policy support	2 114	2 043
- structural support	707	680
- other	417	380
Food stuffs	947	1 178
- price support	901	1 127
- other	46	51
Marketing	4 005	3 792
- export support	2 575	2 347
- sales tax	700	652
- export of processed products	722	785
Other	9	9
Total	8 188	8 072

Source: Economic Survey 1988

mill. in 1987. The major part of this is returned to the state as import levies and excise taxes paid by the consumers.

To realize this price level the state has to pay export subsidies and compensations for price differences to prevent the export of surpluses from lowering the producer prices. For computational reasons, the refund of the sales tax on export products is also regarded as export support.

12.2. 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 are transferred to target price products and part 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 agricultural income settlement altogether FIM 2,093.9 mill. was reserved for price policy support, including FIM 612.6 mill. for regional support, FIM 603.8 mill. for hectareage subsidies, FIM 877.5 mill. for additional price of milk, meat and eggs, and FIM 30.0 mill. for compensations for crop damages.

The support paid according to the *farm size* (the so called hectareage subsidy) is tied to the area of the farm and to the number of animals, 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.). Farms with 7-8 hectares get the biggest subsidies.

In 1988 hectareage subsidy was FIM 715 per production unit, which will be paid during 1989, graded according to the income and region. Farm families whose income remains below FIM 69,000 get the

hectare subsidy in full. In Northern Finland the subsidy is up to 40% higher. Farmers over 65 years of age do not get the subsidy at all, instead, farmers under 35 years of age get the subsidy raised by 40% if their income is below FIM 69,000. In 1988 altogether 74,000 farmers were entitled to hectare subsidies.

In 1988 hectare subsidies were still tax-free, but after that they are subject to tax.

In the recent discussions about agricultural policy direct income support has been put forward very strongly as a means of dealing with farmers' requirements concerning their income level, if we give up the protective foreign trade. Direct income support should be neutral with regard to production, and it should not increase production. Actually, it might even reduce production due to the limit for minimum income. There has been no reason to increase production if the advantageous tax-free hectare subsidy had been lost as a result.

Regional subsidy is paid to milk and meat producers as production support per production unit. For this purpose the country has been divided into 8 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 0.15-0.29/l in the province of Oulu. In the northernmost parts of the country the subsidy for milk was FIM 0.63/l, for pork FIM 0.75/kg and for beef FIM 8.70/kg. This subsidy has proved very effective for 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, 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 130 and 1,275 per animal unit. In the southernmost parts of the supported area the subsidy is doubled for the first five dairy cows, and in the north it is tripled for the first six dairy cows.

The additional price of milk was

introduced in 1974 to slow down inflation. Initially it was the same for all farmers, but later it has been graded according to the quantities of milk (see Appendix 7), 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.

13. Developing the structure of agriculture

Developing the structure of agriculture requires investments (e.g. new buildings and machines), land improvements (sub-surface drainage) as well as incorporations of farms or their lands. These measures are partly financed privately, and partly through state support. The Farm Act defines the general framework for this activity.

The state supports agricultural investments by granting *low interest loans*, as well as direct *subsidies* through the Agricultural Development Fund. These have been granted, in the first place, to the developing areas.

In 1988 altogether FIM 390 mill. were transferred to the Development Fund. Income from interests and instalments of loans were estimated to amount to FIM 588 mill. and, consequently, the Fund had altogether FIM 978 mill. at its disposal. FIM 630 mill. were spent on farm loans, FIM 130 mill. on purchasing land, and the rest on, for example, subsidies and premiums to farmers, to those engaged in reindeer husbandry or biodynamic agriculture, as well as to loans prescribed by the act on small-scale industries in the countryside.

In addition, FIM 167.8 mill. were reserved in the state budget to be used as

interest support for the loans prescribed by the Farm Act. Thus the interest on the loans from private banks could be lowered to the same level with the interest rate of the Development Fund. New interest support loans were granted for about FIM 760 mill. The loans of the Development Fund have mainly gone to the developing areas, which means that in the southern parts of the country farmers have had to resort to interest support loans or ordinary high interest loans.

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. The maximum subsidy has been FIM 50,000 to be spent on, for example, buying machinery and implements, or fertilizers. This subsidy aims at preventing young farmers from running into debt, which may easily lead to financial difficulties right in the beginning of starting to run a farm. Altogether FIM 150 mill. of start money was available, and it is estimated that in 1988 2,700 farmers got this subsidy.

The amount of the start money has been reduced each year. This will also be the case in 1989, when altogether FIM 105 mill. will be available for this purpose. Through this the government aims at promoting the decrease in production, as well as controlling the increase in the sales prices of farms.

It would be necessary to create new jobs in the countryside for those who give up agriculture. For this purpose, the government has started to support industrial activities practiced by farmers in connection with agriculture. The enterprise which is entitled to support must be run mainly by the farm family or can employ, in addition to the owner, outside labor corresponding to 2-3 annual jobs. This form of support has been well received. About a third (35%) of the new enterprises have been small-scale labor intensive manufacturing and service industries. Some have been typical sidelines of agriculture like nurseries and gardens (20%), farm holidays (15%), and fur farms, aquaculture and beekeeping (15%).

In 1988 altogether FIM 115 mill. were reserved as subsidies for *supporting the small-scale industries in the countryside*. The payments will be realized in the space of a few years. In addition, loans from the Development Fund for FIM 77 mill. and interest support loans for FIM 25 mill. are available for this purpose. In 1988 about 2,000 enterprises got financial support, which will create about 1,350 new jobs. About 600 applications were turned down.

14. Social policy

A farmer is an enterpriser and an employee at the same time. 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.

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 35.8 mill. in the income settlement of spring 1988). The state finances the other half of the additional insurance, and the basic insurance is mainly financed by the National Pensions Office.

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 animal production are entitled to an *annual leave* of 18 days. According to the 1988 farm income settlement, the leave was extended by two days. The municipalities are obliged to arranging 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 calculation.

Farmers can get *substitute help* in case of sickness, accidents or childbirth, as well as for the duration of military service or maternity leave (for a maximum of 200 days in the last case). 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 16.8 mill. in the income

settlement of spring 1988). 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 week-ends off as most other jobs do, which means that these farmers have a seven-day working week. A *days-off scheme* has been developed to relieve farmers engaged in animal husbandry from being continuously tied to their work. A farmer is entitled to a maximum of 12 days off a year, either one day at a time or several consecutive days, the maximum per month being five days. 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 11 mill. in the income settlement of spring 1988). Part of the money from the state is regarded as farm income. Only about 15% 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 and conclusions

Like in 1987, the yield level remained clearly below the normal in 1988. The average yield was 2,343 f.u./ha, which is 18% below the trend value. Especially the yields of grain were poor, and the yields of hay and silage also remained smaller than usual. Only potatoes and sugar beets succeeded last year.

The bad crop was caused by the dry and hot early part of the summer and the too rainy harvest season. In fact, the beginning of the growing period was very promising. Spring was earlier than usual, and sowing could be done in good conditions. However, there was not enough rain in May and June and, consequently, sprouting was slow. In places, it sometimes rained a lot, and, as a result, sowing had to be repeated, and the yields suffered from this. The drought had the advantage that haymaking could be done in good conditions. Instead, the second crop of silage was delayed, and the quantity remained below the normal. Pastures also suffered from the drought.

Even if the area of arable land increased from the previous year, the area under cultivation was about 3% smaller than in 1987, as a result of an increase in premium fallowing, as well as of other uncultivated areas. The decrease in the area under cultivation supports the attempts to reduce production.

The area of bread grain is still not large enough to cover the domestic consumption. In grain production, the area of barley increased considerably. Despite the bad crop, the total yield of feed grain covers the needs of animal production.

The amount of crop damages was estimated at FIM 494 million. As the farmers have to account for 20% of the damages, the amount to be compensated was FIM 225 million. The final compensations are FIM 130 million, of which

FIM 45 million will be regarded as farm income in the farm income settlement of 1991.

Animal production decreased considerably last year. The quantity of milk delivered to dairies was 130 million liters smaller than in the previous year. Beef production decreased by 13 million kg, pork production by 8 million kg and egg production by 3 million kg.

Such a drastic decrease in production is a result of the bad crops of the last couple of years and the more effective production restriction measures. Milk production was already affected by the contracts to reduce production made last year, which cover annually altogether 120 million liters. Through these contracts farmers sold their quotas to the state. The compensation was FIM 1.20/l for five years. This was regarded as sufficient, and the number of applications was more than double with regard to the funds available for this purpose.

The decrease in milk production has been quicker than was expected, and dairy industry has found it difficult to adapt itself to the new situation, in which there is not enough raw material for dairy industry to use its whole capacity. Dairy industry is being reorganized quite radically at the moment. However, milk production still exceeds clearly the domestic consumption, but due to seasonal variation the priority of availability of liquid milk will cause difficulties to some dairies that are specialized in processing.

Fallowing has been another important means of restricting production. It will be increased in the future, because, in normal years, the overproduction of feed grain would be considerable due to the decrease in animal production. Last year fallowing contracts covered 117,000 hectares.

Production has dropped clearly below the production ceilings, and, consequently, it should not have been necessary for agriculture to pay any marketing charges to cover export costs. However, FIM 89 million were collected from agriculture as marketing charges, even if the same amount was still left from the previous year. Marketing charges will also be collected in 1989. Part of them will be spent on fallowing premiums. Plans had already been made for obligatory fallowing, but this will not be realized.

In the case of meat we are already close to the self-sufficiency level. Some beef and pork was imported to balance seasonal variation, even if, as a whole, their production exceeds the consumption. Market balance is already quite good.

The general trends of agricultural policy are continuously subject to discussion. For many years the world market prices have been very low. Negotiations have been going on in

GATT on the possibilities to improve the situation, and the pressures to liberate the trade partly or completely have increased. Finland is worried about these objectives, because due to the high production costs we are not able to respond to low import prices. However, Finland is prepared to contribute to the balancing of trade by reducing overproduction.

As a result of the compensations for crop damages, farm income rose about 10% from the low level of the previous year. However, farm income is still clearly below the level of 1986. As the raises of producer prices are small and production decreases, the increase of farm income will remain modest. In the future, the improvement of the income level will depend on how the costs can be reduced, and farms combined to increase the farm size. Agriculture should be prepared to the fact that the development of the income of the farm family can only be secured through rationalization.

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Appendix 1. Cost price index in agriculture with subsidies.

	Producer price index of agriculture	Cost price index	Requisites and tools	Machines	Buildings
1970	100.0	100.0	100.0	100.0	100.0
1971	103.7	107.9	103.6	109.2	109.2
1972	115.0	116.9	107.6	120.2	123.6
1973	129.4	135.6	122.2	133.4	155.5
1974	150.2	167.9	154.6	162.7	201.4
1975	188.2	205.9	188.4	208.3	230.2
1976	213.6	238.4	255.3	231.2	255.4
1977	229.4	273.6	267.3	258.1	281.4
1978	242.5	285.4	273.8	282.2	294.9
1979	257.2	304.3	282.8	308.7	325.6
1980	288.2	341.7	318.0	341.2	372.1
1981	324.5	394.0	384.9	374.6	400.8
1982	370.0	427.5	423.2	404.0	424.2
1983	394.8	464.2	461.3	445.7	454.3
1984	419.6	501.7	504.0	474.1	479.2
1985	448.4	527.0	531.4	495.9	499.6
1986	456.5	518.6	506.4	517.7	517.1
1987	463.7	522.8	499.5	534.1	535.1
1988 ^e	480.7	538.1	497.4	561.8	563.1

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 ²⁾ agriculture 1000 persons	% of total employed
1970			190	451	20.3
1971			175	424	19.1
1972	274.4	9.31	163	389	17.6
1973	265.9	9.54	151	354	15.6
1974	258.2	9.79	140	353	15.2
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			58	206	8.5
1988 ^e			53		

¹⁾ Over 1 hectare.

²⁾ Source: Labour Reports, Ministry of Labour

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	4905 ^e	1305.1 ¹	5237.6

¹) Including the pigs of dairies

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

	N	P	K
1969-70	58.3	27.2	40.0
1970-71	63.7	29.4	43.5
1971-72	68.5	30.5	46.5
1972-73	69.4	30.8	47.4
1973-74	78.2	33.4	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

Appendix 5. Agricultural total calculation, gross return in current prices, FIM mill.¹⁾

	1981	1982	1983	1984	1985	1986	1987
Crop production							
Rye	121.1	68.6	181.8	221.2	195.8	202.0	189.1
Wheat	346.2	551.2	891.7	919.4	999.9	1081.6	933.2
Barley	644.1	823.8	1334.4	1341.8	1446.7	1521.3	1196.6
Oats	350.9	487.4	781.8	746.4	606.6	680.6	533.0
Potatoes	198.8	362.3	205.6	221.8	280.6	358.8	640.4
Potatoes of processing	107.1	118.6	185.1	221.1	207.8	200.1	92.2
Seed potatoes	-	-	-	-	8.1	8.9	6.9
Sugar beets	253.6	349.9	453.8	425.1	373.1	456.9	243.4
Oil plants	182.1	259.8	355.7	295.5	326.3	451.1	454.4
Peas	20.1	33.7	51.5	72.8	22.7	23.6	12.3
Grass seeds	42.5	45.6	43.4	67.4	36.2	31.5	20.0
TOTAL	2266.5	3100.9	4484.8	4532.5	4503.8	5016.5	4321.7
Garden production							
Root crops	34.2	68.7	65.3	50.7	63.6	82.9	78.6
Vegetables	363.7	414.6	386.8	351.6	516.0	538.1	551.4
Berries	142.1	166.5	153.0	126.4	119.2	123.4	104.1
Fruits	46.9	29.7	50.6	41.8	23.5	48.9	18.7
TOTAL	586.9	679.5	655.7	570.5	722.3	793.3	752.8
Animal production							
Milk	6140.3	6916.2	7640.6	8014.3	8010.5	8048.5	7914.5
Beef	2380.2	2586.4	2840.4	3204.2	3480.1	3529.3	3547.3
Veal	4.1	4.2	2.9	3.0	1.6	1.6	1.7
Pork	2057.9	2290.0	2424.1	2554.1	2787.7	2870.9	2907.5
Mutton	23.9	28.4	31.3	34.3	42.6	38.5	41.2
Horse meat	12.8	12.5	13.4	14.9	18.7	17.4	20.4
Poultry meat	147.7	156.4	182.1	213.0	234.9	266.3	335.1
Eggs	674.2	716.9	825.2	908.5	943.2	896.3	865.4
Wool	3.6	3.6	3.6	3.5	-	-	-
Export of animals	7.4	9.4	10.0	12.1	11.0	12.2	11.2
TOTAL	11452.1	12724.0	13973.6	14961.9	15530.3	15681.1	15644.3
Production total	14305.5	16504.4	19114.1	20064.9	20756.3	21490.9	20718.7
Income from rents							
Means of production	327.2	369.5	386.8	440.9	466.0	473.6	497.4
Buildings and land	98.7	108.0	117.0	122.4	120.7	147.4	149.4
TOTAL	425.9	477.5	503.8	563.3	586.7	621.0	646.8
Subsidies							
by farm size	351.3	426.8	500.4	560.4	567.8	579.5	531.4

Appendix 5. continued. Costs and farm income prices, mill.mk¹

	1981	1982	1983	1984	1985	1986	1987
by number of cows	76.9	93.0	103.1	113.0	119.4	124.2	127.8
Premium of feed grains	-	28.7	30.3	31.7	41.9	42.6	41.4
Premium of bread grains	-	79.5	16.8	-	-	-	-
"Start money"	-	-	10.0	57.2	110.5	90.7	149.3
TOTAL	428.2	628.0	660.6	762.3	839.6	837.0	849.9

Compensations

to reduce production

Production guiding (4a\$)	20.5	48.7	66.1	69.4	65.1	44.8	16.5
Milk bonus	8.6	24.1	49.5	88.8	157.2	129.6	74.1
Pork bonus	-	-	1.5	13.2	13.2	12.6	11.7
Egg bonus	11.9	5.0	5.5	15.2	-	-	37.7
For decreas. animal production	-	-	-	5.0	32.8	32.6	36.1
Premium of beef	3.0	5.2	6.0	6.1	5.1	4.2	5.1
Fallowing compensations	-	-	-	28.0	26.3	82.1	110.0
TOTAL	44.0	83.0	128.6	225.7	299.7	305.9	291.2

Compensations for crop
damages

	2.3	426.8	19.1	7.0	33.0	11.9	34.3
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Gross return total

	15205.9	18119.7	20426.2	21623.2	22515.3	23266.7	22540.9
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Costs

Fertilizers	1333.9	1621.4	1745.9	1744.4	1835.7	1875.2	1604.2
Lime	41.7	72.8	130.6	89.7	146.9	108.1	127.7
Feed concentrates							
- mixture	2920.8	3414.4	3192.5	3197.8	2819.3	2967.0	3308.3
- other	184.9	375.7	238.7	247.9	212.5	171.6	139.7
Feed conserving chemicals	95.8	93.6	126.9	140.7	155.1	143.3	139.7
Pesticides	141.4	140.7	192.5	221.9	229.4	264.8	282.3
Purchased seeds	277.6	377.4	398.1	395.5	484.2	487.2	583.9
Fuel and lubricants	576.5	686.3	635.1	709.8	739.2	536.0	466.5
Electricity	235.6	263.1	262.7	279.8	324.1	372.2	388.8
Agricultural firewood and timber	125.2	140.0	143.6	142.2	142.7	135.2	135.2
Delivery of calves and pigs	37.3	42.9	44.7	41.7	46.5	47.7	46.9
Overhead costs	809.4	888.8	1028.9	1138.4	1204.9	1332.1	1283.1
Hired labor							
- wages	278.9	304.7	298.9	317.8	311.6	335.1	385.6
- social expenses	130.8	153.3	146.2	161.1	158.9	187.6	207.2
Machinery and equipment expenses							
- depreciations	2024.0	2223.0	2496.0	2700.0	2795.0	2921.0	3004.0
- maintenance	484.7	540.0	611.4	671.9	744.6	764.6	768.0

Appendix 5. continued. Costs and farm income prices, mill. mk¹

	1981	1982	1983	1984	1985	1986	1987
Equipment	85.2	96.7	112.4	120.2	135.0	137.5	139.4
Building expenses							
- depreciations	752.0	825.0	930.0	1022.0	999.0	1062.0	1136.0
- maintenance	280.1	334.0	365.1	377.2	409.5	426.4	438.4
Interest payment	590.5	683.3	769.8	920.1	1021.0	1149.4	1298.3
Imports of animals	0.8	0.4	1.5	1.1	1.8	1.8	2.0
Rents							
- means of production	199.0	244.8	288.9	326.8	327.0	329.5	336.1
- buildings and land	129.2	140.7	162.3	200.2	209.9	244.6	247.9
Farmers' share of costs from							
- accident insurance payment	-	8.8	14.2	9.1	21.8	25.8	28.4
- outside help	2.3	4.1	6.2	9.3	15.2	16.8	16.8
- days-off scheme	-	-	-	-	8.3	10.3	10.3
Costs total	11737.6	13675.9	14343.1	15186.6	15499.1	16052.7	16524.7
Gross return	15205.9	18119.7	20426.2	21623.2	22515.3	23266.7	22540.9
Costs	11737.6	13675.9	14343.1	15186.6	15499.1	16052.7	16524.7
Farm income	3468.3	4443.8	6083.1	6436.6	7016.2	7214.0	6016.2

¹⁾ Return calculation is uniform in 1981-87. Cost calculation has been revised so that according to the old calculation fertilizer costs would be FIM 1928.8 mill. and feed concentrate costs FIM 3175.1 mill. in 1985.

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

	1981	1982	1983	1984	1985	1986	1987
Crop production							
Rye	188.1	93.5	217.3	235.7	195.8	191.0	186.8
Wheat	521.1	704.2	992.6	977.9	999.9	1033.3	963.7
Barley	900.9	1001.0	1477.4	1406.1	1446.7	1467.3	1160.8
Oats	505.1	606.0	880.8	788.1	606.6	657.7	515.7
Potatoes	246.5	285.8	279.9	328.4	280.6	326.6	437.2
Potatoes of processing	147.3	134.3	214.3	231.5	207.8	225.2	94.0
Seed potatoes	-	-	-	-	8.1	8.6	6.4
Sugar beets	358.4	418.6	561.9	484.5	373.1	446.8	244.9
Oil plants	272.0	328.9	411.6	314.1	326.3	434.5	431.6
Peas	20.4	28.4	37.8	46.0	22.7	24.0	10.5
Grass seeds	43.0	57.9	52.7	70.8	36.2	36.8	23.2
TOTAL	3202.8	3658.6	5126.3	4883.1	4503.8	4851.8	4074.7
Garden production							
Root crops	40.7	57.9	73.6	54.4	63.6	85.7	52.4
Vegetables	431.8	491.0	534.0	497.6	516.0	514.1	435.1
Berries	171.0	212.2	191.0	105.4	119.2	122.8	86.5
Fruits	47.1	27.3	44.8	36.8	23.5	33.0	12.6
TOTAL	690.6	788.4	843.4	694.2	722.3	755.6	574.9

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

	1981	1982	1983	1984	1985	1986	1987
Animal production							
Milk	8280.8	8250.7	8431.7	8387.9	8010.5	7975.7	7630.3
Beef	3355.8	3215.0	3267.4	3424.9	3480.1	3447.0	3405.5
Veal	4.9	4.9	3.2	3.2	1.6	1.6	1.6
Pork	2913.8	2920.3	2865.3	2757.0	2787.7	2815.2	2845.9
Mutton	28.4	31.2	34.1	36.9	42.6	36.9	36.9
Horse meat	18.7	16.6	16.6	16.6	18.7	16.6	18.7
Poultry meat	194.8	189.1	209.7	225.8	234.9	253.3	306.0
Eggs	853.0	826.2	886.3	946.4	943.2	901.3	867.0
Wool	3.4	3.4	3.4	3.4	-	-	-
Export of animals	10.0	11.4	11.4	12.9	11.0	11.9	10.7
TOTAL	15663.6	15468.8	15729.1	15815.0	15530.3	15459.5	15122.6
Production total	19557.0	19915.8	21698.8	21392.3	20756.3	21066.9	19784.0
Income from rents							
Means of production	450.1	472.8	462.6	466.4	466.0	499.0	444.1
Buildings and land	124.4	127.1	130.3	128.5	120.7	151.3	151.4
TOTAL	574.5	599.9	592.9	594.9	586.7	600.3	595.5
Subsidies							
by farm size	442.9	502.4	557.2	588.5	567.8	595.0	538.4
by number of cows	96.9	109.5	114.8	118.7	119.4	127.5	129.5
Premium of feed grains	-	33.8	33.7	33.3	41.9	43.7	41.9
Premium of breed grains	-	93.6	18.7	-	-	-	-
"Start money"	-	-	11.7	60.1	110.5	93.1	151.3
TOTAL	539.8	739.3	735.6	800.6	839.6	859.3	861.1
Compensations to reduce production							
Production guiding (4a\$)	25.8	57.3	73.6	72.9	65.1	46.0	16.7
Milk bonus	10.8	28.4	55.1	93.3	157.2	133.1	75.1
Pork bonus	-	-	1.7	13.9	13.2	12.9	11.9
Egg bonus	15.0	5.9	6.1	16.0	-	-	38.2
For decreas.							
animal production	-	-	-	5.3	32.8	33.5	36.6
Premium of beef	3.8	6.1	6.7	6.4	5.1	4.3	5.2
Fallowing compensations	-	-	-	29.4	26.3	84.3	111.4
TOTAL	55.5	97.7	143.2	237.0	299.7	314.1	295.0
Compensation for crop damages	2.9	502.4	21.3	7.4	33.0	12.2	34.8
Gross return total	20729.6	21855.2	23191.8	23032.3	22515.3	22852.8	21558.6

Appendix 6. continued. Costs and farm income as 1985 fixed prices, FIM mill.

	1981	1982	1983	1984	1985	1986	1987
Fertilizers	1694.7	1943.6	2043.9	1891.2	1835.7	1863.3	1830.0
Lime	53.7	82.1	140.4	94.3	146.9	103.5	122.1
Feed concentrates							
- mixture	4407.1	4584.6	3747.7	3336.0	2819.3	2997.5	3261.7
- other	312.0	455.2	310.7	281.1	212.5	213.8	171.5
Feed conserving chemicals	112.8	109.3	143.4	146.8	155.1	145.3	146.2
Pesticides	202.1	193.2	227.8	234.2	229.4	261.7	269.4
Purchased seeds	398.5	464.4	452.2	418.9	484.2	487.3	535.8
Fuel and lubricants	656.6	762.6	659.5	715.5	739.2	806.0	750.0
Electricity	246.5	257.4	267.9	290.2	324.1	359.3	360.0
Agricultural firewood and timber	151.7	161.1	162.4	151.1	142.7	138.0	135.0
Delivery of calves and pigs	49.8	51.3	52.5	46.6	46.5	45.7	44.8
Overhead costs	1020.4	1046.3	1145.8	1195.5	1204.9	1300.0	1210.0
Hired labour							
- wages	405.8	394.6	363.2	347.5	311.6	309.4	334.1
- social expenses	190.3	198.5	177.7	176.2	158.9	173.2	179.5
Machinery and equipment							
- depreciations	2622.0	2699.0	2754.0	2796.0	2795.0	2790.0	2746.0
- maintenance	661.3	668.3	678.6	709.5	744.6	736.6	730.0
Equipment	110.5	117.5	124.1	124.6	135.0	131.4	130.0
Building expenses							
- depreciations	955.0	992.0	1036.0	1073.0	999.0	1013.0	1022.0
- maintenance	365.4	416.7	425.3	399.4	409.5	400.7	395.0
Interest payment	725.4	765.1	844.3	903.7	1021.0	1095.5	1247.6
Imports of animals	1.1	0.4	1.7	1.2	1.8	1.8	1.9
Rent expenses							
- means of production	273.8	313.3	345.5	345.7	327.0	312.4	300.0
- buildings and land	163.1	165.9	181.0	210.6	209.9	251.1	252.4
Farmers' share of costs from							
- accident insurance payment	-	10.4	15.8	9.6	21.8	26.5	28.9
- outside help	2.9	4.8	6.9	9.8	15.2	17.2	17.1
- days-off scheme	-	-	-	-	8.3	10.6	10.5
Costs total	15782.5	16857.6	16308.3	15908.2	15499.1	15991.0	16231.5
Gross return	20729.7	21821.3	23158.6	22998.9	22515.3	22852.8	21558.6
Costs	15782.5	16857.6	16308.3	15908.2	15499.1	15991.0	16231.5
Farm income	4947.2	4963.7	6850.3	7090.7	7016.2	6861.8	5327.1

Appendix 7. Target prices of agricultural products in 1970-88.

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

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:

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

and in addition step-up additional price

1.2.1979-31.3.1980	2 p/l	up to 24 000 litres
1.4.1980-31.8.1980	7.5 p/l	up to 30 000 litres
from 1.9.1980	8.3 p/l	up to 30 000 litres
from 1.3.1981	9.8 p/l	up to 30 000 litres
from 1.9.1981	10.5 p/l	up to 30 000 litres
from 1.9.1983	11.5 p/l	up to 30 000 litres
from 1.9.1988	11.5 p/l	up to 37 000 litres

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

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

Production quota	Oulu and Lapland mk/kg	The rest of the country mk/kg
0-10 000 kg		
1.1.1986	2.20	1.95
1.4.1986	2.60	2.30
1.3.1987	2.65	2.35
1.1.1988	2.65	2.35
1.9.1988	2.90	2.55
The part exceeding 10 000 kg		
1.1.1986	1.50	1.50
1.4.1986	1.50	1.50
1.3.1987	1.55	1.55
10 000-100 000 kg		
1.1.1988	1.85	1.85
1.9.1988	2.05	2.05

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

1.4.1974-31.3.1975	1.00 mk/kg	bulls and heifers over 160 kg
1.4.1975-31.8.1979	1.30 mk/kg	bulls and heifers over 160 kg
from 1.9.1979	1.30 mk/kg	bulls and heifers over 160-210 kg
	2.00 mk/kg	bulls and heifers over 210 kg
from 1.4.1980	1.30 mk/kg	bulls and heifers over 160-210 kg
	2.20 mk/kg	bulls and heifers over 210 kg
from 1.4.1981	1.30 mk/kg	bulls 160-210 kg
	2.20 mk/kg	bulls over 210 kg
	2.20 mk/kg	heifers over 160 kg
from 1.9.1981	1.50 mk/kg	bulls 160-210 kg
	2.50 mk/kg	bulls over 210 kg
	2.50 mk/kg	heifers over 160 kg
from 1.3.1982	1.90 mk/kg	bulls 160-209 kg
	2.90 mk/kg	bulls over 210 kg
	1.00 mk/kg	heifers 130-159 kg
	2.90 mk/kg	heifers over 160 kg

from 1.3.1987	2.00 mk/kg	bulls 160-210 kg
	3.10 mk/kg	bulls over 210 kg
from 1.4.1988	3.10 mk/kg	heifers over 160 kg
	4.00 mk/kg	bulls over 260 kg
	3.10 mk/kg	bulls 210-260 kg
	2.00 mk/kg	bulls 180-210 kg
	3.10 mk/kg	heifers over 160 kg
	1.00 mk/kg	heifers over 130-160 kg

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

1.8.1977-31.8.1979	1.30 mk/kg	
1.9.1979-31.3.1980	2.00 mk/kg	
from 1.4.1980	2.20 mk/kg	
from 1.9.1981	2.50 mk/kg	
from 1.3.1982	2.90 mk/kg	
from 1.9.1983	3.20 mk/kg	
from 1.3.1984	3.70 mk/kg	
from 1.3.1985	5.20 mk/kg	over 16 kg
	4.70 mk/kg	12-15 kg
from 1.4.1986	6.20 mk/kg	over 16 kg
	5.70 mk/kg	13-15 kg
from 1.3.1987	7.20 mk/kg	over 16 kg
	6.70 mk/kg	13-15 kg
from 1.4.1988	7.80 mk/kg	over 16 kg
	6.70 mk/kg	13-16 kg

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

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