

AGRICULTURE AND RURAL LIFE

2005/2006



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DEAR READER



The year 2005 was a good year for farmers. Yields were good, incomes and export volumes increased. The economic success of agriculture has had a positive effect on rural development. The latest public opinion polls reveal that the ten years of negative attitudes toward the Estonian agriculture are now the past and a large number of Estonians have been more optimistic about agriculture over the past three years.

Rural enterprise appears to have overcome the crisis; the grants paid to farmers and the vivification of rural life are positively acknowledged. People believe that the positive changes are largely due to the implementation of the EU agricultural policy in Estonia — implying that the policy has been accepted despite the initially somewhat sceptical attitudes.

The post-accession results indicate that the Estonian food sector is one of the most successful among the former socialist countries: agricultural incomes have grown the most, a diversity of products has been introduced to the market, and the product range is growing constantly.

However, the most important thing is the return of the understanding that rural areas, not only cities, are places where one may live, sustain the family, raise children, and rest assured of the future.

The high rates of support granted to farming activities conceal a hidden danger – the producer may put too much trust in external support.

Contrary to frequent mistaken notions, agricultural support is not essentially a social benefit. The purpose of the support is to reduce the environmental hazards of agriculture to a minimum, to keep food safe for the consumers and meet the consumers' expectations in terms of food quality.

Those familiar with the matter know well that nobody has been “oversupported” in Estonia, not even the major agricultural enterprises. Economic analyses made by specialists indicate that the secret of success does not lie solely in high support rates, favourable climate or the size of the enterprise, but also in the farmer’s wisdom and ability to adapt to new economic conditions, to take new opportunities.

The preparation of the new rural development plan for 2007–2013 also offers new opportunities. The plan will be drafted in cooperation with various stakeholders, while keeping in mind the interests of the society as a whole. This common interest could be summarised in this context as follows: society’s sustainability requires a balanced development, of which stable rural development forms an essential part.

According to the principles of the development strategy, small households, which have been frequently highlighted to the public recently, have the possibility to use support for diversifying joint and business activities. Subsistence farms will continue to be supported during the new planning period.

The possibilities of increasing the income of small households by way of agricultural production should be considered carefully since the payback period of investments is long, and instead of the expected results, the economic situation may even deteriorate. The times when 10 hectares of land and two cows were considered good enough for a farm should not be idealised. Those times are over: a farm or small business must be self-sufficient.

The constant confrontation of big and small farms causes social tensions in the society and draws attention away from the main question: why are many small agricultural holdings successful, while some of the large ones are not? The state supports those who have the wish and willingness to manage.

Ester Tuiksoo
Minister of Agriculture

A handwritten signature in black ink, appearing to read 'Ester Tuiksoo', written in a cursive style.

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1. THE FOOD INDUSTRY IN THE NATIONAL ECONOMY

The value added in agriculture and hunting from 1Q2005 to 3Q2005 was MEEK 2371.1 in current prices; it exceeds the indicator for the same period of 2004 by MEEK 12.2 or 0.5%. The share of the value added by agriculture and hunting relative to the total value added in Estonia increased by 0.1% in 2004 compared to 2003 (Table 1).

The employment indicators of agriculture and hunting have steadily decreased over the past three years. In 2004, the sector accounted for only 4.1% of the total employment of the republic.

Table 1. Relative share of agriculture in value added and employment, 2001–2004

	2001	2002	2003	2004
Value added in agriculture and hunting in current price (MEEK)	2 756.1	2 732.4	2 773.7	3 224.9
Relative share in value added (%)	3.0	2.6	2.5	2.6
Value added in agriculture and hunting 2000 in constant prices of 2000 (MEEK)	2 466.8	2 351.0	2 397.3	2 545.5
Relative share in value added (%)	2.8	2.5	2.4	2.4
Employed in agriculture and hunting ('000)	29.0	30.1	25.9	24.2
Employment (%)	5.0	5.1	4.4	4.1

Source: Estonian Statistical Office

1. THE FOOD INDUSTRY IN THE NATIONAL ECONOMY

Figure 1. Structure of the value of agricultural production in 2005

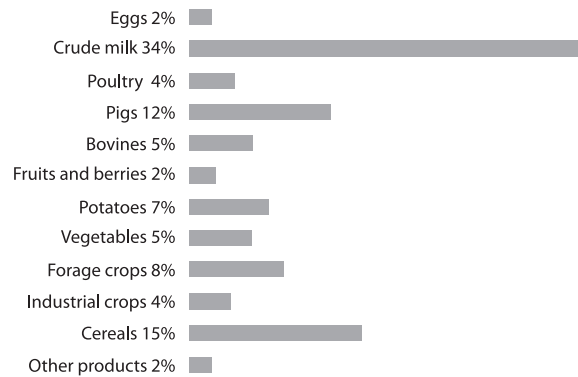
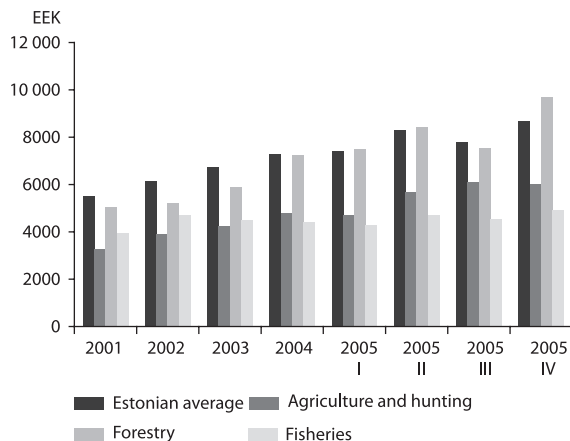


Figure 2. Average monthly gross wages by fields of activity in 2001–2005



According to preliminary information, the value of agricultural production (including support payments) in 2005 was BEEK 7.9, of which crop production, livestock production and other production formed 37.5%, 53.4% and 9.1%, respectively. The largest production value is created in milk production (Figure 1).

Monthly gross wages were one of the lowest in agriculture and hunting compared to the other sectors in 2005. In 1Q2005, the average monthly gross wages in agriculture and hunting were EEK 4705, that is 63% of the national average, in 2Q2005 EEK 5681 or 69%, in 3Q2005 EEK 6085 or 78% of the national average. The gross wages dropped to EEK 6031 in the fourth quarter and formed 69% of the national average (Figure 2).

The monthly gross wages in agriculture and hunting increased over 15% in 2005 compared to 2004. According to the Statistical Office, the monthly gross wages in agriculture and hunting were 12% higher in 1Q2005 than in 1Q2004, 19% higher in 2Q2005 than in 2Q2004, and 20% higher in 3Q2005 and 4Q2005 than in the respective calendar quarters of 2004.

1. THE FOOD INDUSTRY IN THE NATIONAL ECONOMY

The structural survey of 2005 showed that there were 27 688 agricultural holdings in total and they were using 828 900 hectares of agricultural land. According to the structural survey of 2003, there were 36 800 agricultural holdings in total and they were using 795 600 hectares of agricultural land. The number of agricultural holdings decreased by 9104 or by 25% from 2003 to 2005. Only the number of agricultural holdings with more than 100 ha of land increased (by 227 holdings).

Of all holdings, 65% used an area of land smaller than 10 ha and this accounted for 8.6% of all agricultural land. A majority of agricultural land (65%) is used by holdings with more than 100 ha of land each; an average holding of this size category holds 411 ha of agricultural land.

A farm accountancy data network has been compiled to assess the situation of agriculture; the network covers only the so-called professional business undertakings that derive most of their income from agricultural production and the output of which implies a principal job and sufficient income for at least one worker.

The economic size of an agricultural holding is characterised by standard gross margin, which is the difference between the value of the holding's agricultural production and the variable costs (unit costs) incurred for it. The lower limit of economic size established in Estonia is 2 ESU (European Size Units), which corresponds to EEK 37 550. Table 2 shows that the number of agricultural holdings larger than 2 ESU decreased by 86

Table 2. Number of holdings and distribution of agricultural land used by them, broken down by holding size (structural surveys of 2003 and 2005)

	Total	<5 ha	5–<10 ha	10–<20 ha	20–<30 ha	30–<50 ha	50–<100 ha	≥ 100 ha
Number of holdings in 2003	36 792	18 671	7 264	5 347	1 889	1 482	1 051	1 090
2005	27 688	12 506	5 572	4 390	1 653	1 303	946	1 317
Agricultural land in 2003, ha	795 640	45 929	50 546	74 004	45 493	56 422	71 704	451 542
2005	828 926	31 294	39 715	60 982	40 096	49 786	65 043	542 011

Source: Estonian Statistical Office

1. THE FOOD INDUSTRY IN THE NATIONAL ECONOMY

or 1.3% in the year 2005 compared to 2003. We thus had 6724 agricultural holdings in 2005 which corresponded to the criterion of a so-called professional business undertaking.

Table 3. Structure of holdings by economic size (structural surveys of 2003 and 2005)

	Holdings of an economic size of <2 ESU	Holdings of an economic size of 2-<16 ESU	Holdings of an economic size of >16 ESU
2003	30 049	5 838	972
2005	21 022	5 616	1 108

Source: Estonian Statistical Office

Fishing

A total of 98 700 t of fish was caught in 2005: 79 760 t from the Baltic Sea, 2400 t from inland waters, and 16 540 t by deep-sea fishing. The fishing fleet comprised 148 vessels on the Baltic Sea and 11 vessels on the Atlantic. A total of 886 coastal fishing boats and 350 inland fishing boats had been entered in the Fisheries Information System as of 2005.

Food industry

The total output of food industry undertakings was BEEK 12.9 in 2005; this accounts for 18% of the total output of the processing industry. 27% of the food industry output was exported. Dairy industry, beverages industry and meat industry continue to be the largest contributors to Estonia's total food industry output with 30%, 20% and 18%, respectively. The profit of the food industry totalled MEEK 819, i.e. 5% of turnover on average.

According to the Veterinary and Food Board, 40 dairy enterprises (including 6 enterprises processing their own farm's milk), 138 meat handling enterprises (17 large capacity and 121 small capacity enterprises), and 342 enterprises handling non-animal raw material for food and food had been registered as of 2005. Of the latter category, 171 enterprises were engaged in the cereal and cereal-based products processing industry, 153 enterprises were in the business of handling bread products, bakery products, pastry products and biscuits (hereinafter bread and bakery products), and 18 enterprises handled cereals and cereal-based products.

The food industry employed 16 600 persons on average in 2005. Of these, an average of 2600 worked in the meat sector, 2581 in the fish sector and 2568 in the dairy sector.

The average monthly gross wages in the food industry were EEK 7580 in the year 2005, which is EEK 468 or 6% less than the national average wages.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Matti Piirsalu, Eha Niinepuu, Elsa Nurk, Katrin Karolin, Lya Mägi, Maarja Purik, Hannes Ulmas, Õrne Pill

The year 2005 was favourable for agricultural production. The biological yields of field crops were good and the climate at the time of harvesting allowed to harvest the crops without major losses. The active growth period of plants (average daily temperature constantly above 10°) was 12 days longer than usual and occurred later than average. Active heat accumulation was 2016°, which is 202° more than the average for previous years. Precipitation was 306 mm in summer (from 1 May to 31 August); this exceeds the average by 20 mm.

Both crop and livestock production increased due to the more favourable growth conditions. Agricultural output increased 7% in base prices in 2005 compared to the previous year. Export volumes increased by 25% compared to the previous year. Cereal and potato yields were 25% and more than 1/3 higher than in the previous year, respectively.

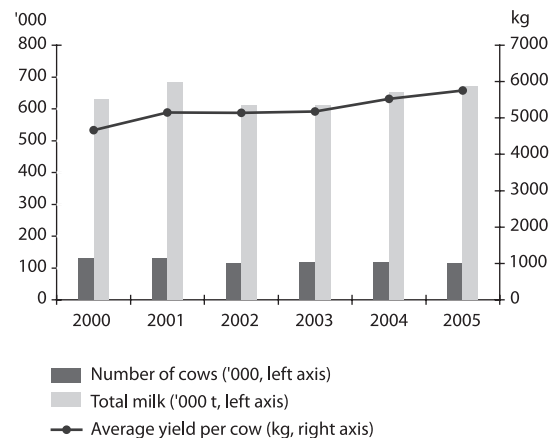
Milk yields also increased, milk quality improved, the quantity of milk bought in and the buying-in price of milk both increased. Meat production has stabilised over the past four years.

2.1. Milk market: production and processing

Milk production

According to preliminary data, 670 400 t of milk was produced in 2005, which is 18 000 t or 3% more than in 2004. Järva county produced the largest quantity of milk: 118 100 t, followed by Lääne-Virumaa with 77 900 and Pärnumaa with 70 200 t. As of 31 December 2005, there were 113 100 cows in Estonia, which is 3 400 cows or 3% less than at the same time in 2004. The number of cows decreased mostly on account of small producers' giving up the dairy business, while major producers increased their numbers of cows in order to fulfil the milk quota and to be able to increase the quota in the future.

Figure 1.
Number of cows, total milk output and yield per cow in 2000–2005



2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

The dairy industry was sold 571 200 t milk of 4.1% fat content, that is 35 100 t more than in the previous year. The marketability of milk improved compared to 2004: the percentage of milk sold to the dairy industry grew from 84% to 85% in 2005 compared to 2004. Of the bought-in milk, 96% was premium and higher grade milk and 4% was first grade milk.

The average yield per cow was 5751 kg in 2005, which is 223 kg (4%) more than in 2004. The yields were over 6000 kg per cow in Põlvamaa – 6545 kg, Tartumaa – 6416 kg, Järvamaa – 6378 kg, Jõgevamaa – 6213 kg, and Lääne-Virumaa – 6126 kg. Nearly 90% of the dairy cows in Estonia are currently subject to performance testing. In performance tested herds, the average yield per cow reached 6500 kg for the first time in 2005. The highest average yield per cow, 10 632 kg, was obtained once again in Põlva Agro OÜ.

The productivity growth was achieved mainly by supplementing the herds with valuable purebred heifers and by improving the nutrition and rearing conditions. Cows with lower yields have been removed from the herds and replaced by more productive animals. Successful milk producers: Tiit Niilo from Võrumaa, Toivo Kens from Jõgevamaa, Märt Riisenberg from Raplamaa, Raivo Musting from Põlvamaa, etc. have purchased purebred Holstein heifers from the Netherlands, Switzerland and Germany to supplement their herds, since these breeds have a much greater genetic potential compared to the Estonian red and Estonian cows.

More exactly balanced feed rations are prepared and complete feedingstuffs are increasingly used, following the example of advanced milk producers. Many milk producers have

extended free range rearing of dairy herds in cold cowsheds. Research carried out by the Estonian University of Life Sciences in 2003–2005 and the practical experience of Põlva Agro OÜ show that cows have better welfare conditions in cold cowsheds and a possibility for species behaviour, which ensures a fuller realisation of the cows' genetic production potential.

The extra income earned from efficient production and the relatively high buying-in price of milk enabled greater investments in production facilities and cattle welfare. While 5 new milking sheds were commissioned in 2004, the number of new sheds reached 20 in 2005, accommodating a total of 13 000 cows.

Estonia transferred to the milk quota system, on which the EU milk and milk products market organisation is based, on 1 April 2004. The purpose of the quotas is to limit excessive milk production in the Member States. Three-fourth of the quota year 2005/2006 ended on 31 December. During these nine months, the 1774 milk producers who are quota holders fulfilled nearly 69% of the milk quota distributed by the Agricultural Registers and Information Board (ARIB), having supplied and marketed 440 400 t of milk in total. Milk producers sold 434 000 t of milk to the industry and 6400 t of milk to end consumers.

According to the intervention buying-in and using support statistics for 2005, twelve tenders for buying in butter were made from March to July, totalling 968 300 t, and MEEK 49.14 was paid. Forty-one using support tenders for dairy products were submitted in 2005, totalling 557 t, and the expected sum to be paid is MEEK 2.04.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Dairy industry

According to preliminary data, dairy industry accounted for 5.4% of the total output of the processing industry and 30.0% of that of the food industry. The export of dairy products formed 19.6% of the export of agricultural and food products, and 35.8% of the export of foodstuffs in 2005.

Number and location of dairy enterprises in Estonia

There were 40 registered dairy enterprises in Estonia as of 24 January 2006 according to the data of the Veterinary and Food Board. Their regional distribution is as follows: 10 in northern Estonia, 8 in central Estonia, 5 in western Estonia, 15 in southern Estonia, and 2 in north-eastern Estonia.

The only county without its own dairy industry is Läänemaa. Of the approved enterprises, 33 procure crude milk, including one that acts as a collection point for crude milk (Ühistu Paunvere Piim in Jõgevamaa); one engages in storage and deep freezing; two have specialised in packaging only; five industries use other processors' products as raw material (pasteurised cream, curds, powders, butter). Six enterprises that procure crude milk process their own farms' milk. Farm dairies mainly produce cheese, soft cheese, curds, cottage cheese and soured milk products (yoghurt, sour cream).

Table 4. Relative share of the dairy industry

	1992	1996	1998	2000	2001	2002	2003	2004	2005
Share of dairy industry in the processing industry, %	7.9	8.8	8.0	5.6	5.5	4.7	4.4	6.2	5.4
Share of dairy industry in the food industry, %	21	26	28	26	26	25	25	32	30.3
Share in export of foodstuffs, %	**	33	32	26	22	23	27	40	35.8
Number of enterprises	12	28	41	44	38	38	41	42	40*

*end of year, ** data not available

Source: Estonian Statistical Office, Ministry of Agriculture calculations

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

The Estonian industries may be divided by their specialisation:

- producers of city dairy products (drinking milk, yoghurt, kephir, cream, sour cream, curds, cottage cheese, puddings), who as a rule also engage in other activities (packaging, storage, juice production, powders);
- cheese producers who additionally produce butter or powder, depending on the market situation;
- producers of glazed cheese curds, who buy curds from other industries;
- ice cream manufacturers, who buy cream, butter, powder;

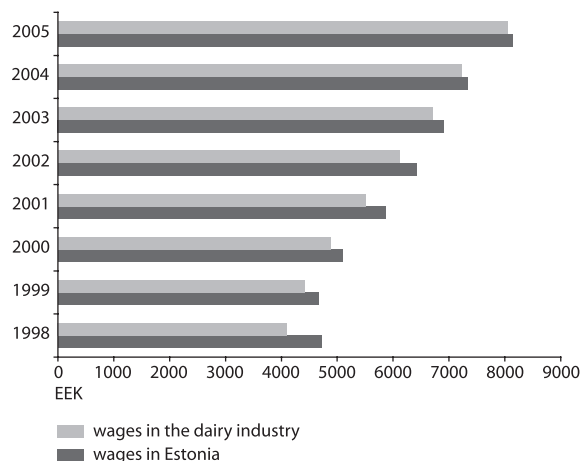
Processing areas of the enterprises:

- drinking milk – 10 enterprises;
- fresh cream – 15 enterprises;
- soured milk products – 20 enterprises;
- kephir – 8 enterprises;
- butter and butter mixes – 15 enterprises;
- cottage cheese, curds, desserts, sauces – 22 enterprises;
- cheese – 11 enterprises;
- processed cheese – 2 enterprises;
- soft cheeses – 9 enterprises;
- UHT – 1 enterprise;
- milk-based powders – 6 enterprises;
- ice cream – 4 enterprises (including 2 that produce ice cream only);
- packaging – 4 enterprises;
- other activities – 12 enterprises.

Number of employees and wages in the dairy industry

The number of employees is constantly falling in the dairy industry. The Estonian dairy sector employed an average of 2568 persons in 2005, which is 149 less than in 2004. The lesser need for human labour can be attributed to modern technologies and equipment, which improve production efficiency.

Figure 2.
Average gross wages in Estonia and in the dairy sector in 1998–2005



Source: Estonian Statistical Office

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Wages have constantly increased over recent years. The average gross wages in the dairy industry amounted to EEK 8137 in 2005, being 10.9% and 12.8% higher than the average monthly wages of the total processing industry and food industry, respectively. Compared to the year 2004, the average income of dairy industry workers has increased by EEK 733. The difference between the Estonian average and the dairy sector wages has shrunk during the past year. In 2004 it was EEK 117 and in 2005 it had decreased to only EEK 88. One of the reasons for this was the 10.5% increase in the national average wages (EEK 8049).

Raw material quality and price

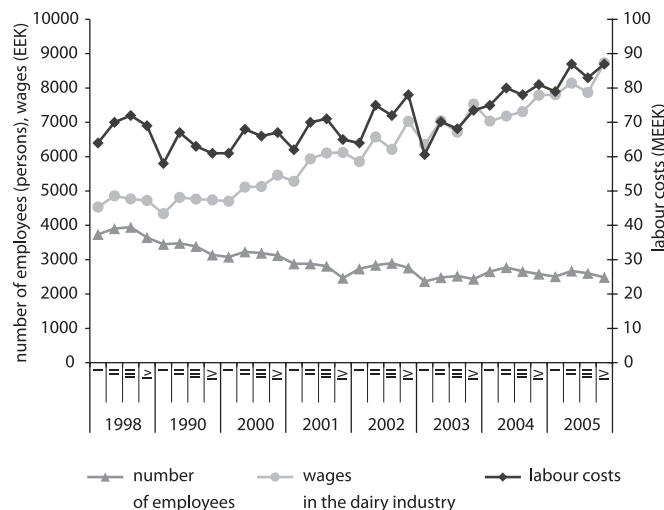
According to the Estonian Statistical Office, 670 400 t of crude milk was produced in 2005, which is 2.8% more than in 2004. The relative share of milk bought in by dairy enterprises in the total production has increased over the years.

Table 5. Production and buying-in of crude milk

	1989	1992	1996	1998	2000	2001	2002	2003	2004	2005
Crude milk production ('000 t)	1 277	919	675	730	629	684	621	611	640	670
Bought-in milk, %	62	59	73	73	63	62	80	79	84	85

Source: Estonian Statistical Office

Figure 3. Average number of employees, labour costs and average monthly gross wages in the dairy industry, 1998–2005 (EEK)

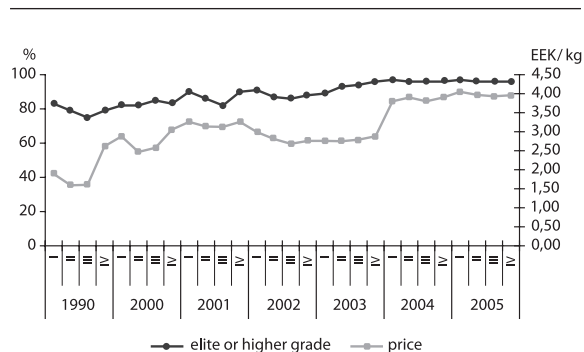


Source: Estonian Statistical Office

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

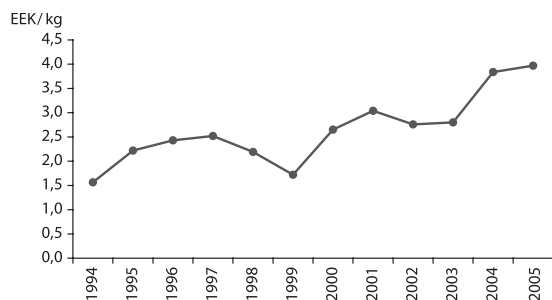
The industries procured 571 200 t of milk or 85.2% of the total milk produced in 2005. 96% of the milk produced was premium or higher grade, 3% was first grade; the average protein and fat contents were 3.3% and 4.1%, respectively.

Figure 4. Crude milk quality in 1999–2005 (share of higher grade milk in bought-in crude milk, %)



The average buying-in price of crude milk was EEK 3.975 per kg in 2005, which was 3.6% higher than in 2004.

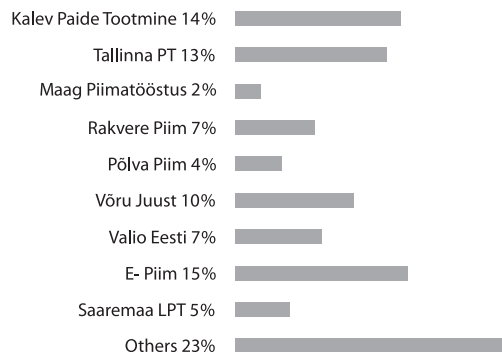
Figure 5. ?



Source: Estonian Statistical Office

Enterprises belonging to the Estonian Dairy Association bought 73% of the total bought-in milk.

Figure 6. Buying-in of crude milk, 2005



Source: Estonian Dairy Association, Ministry of Agriculture

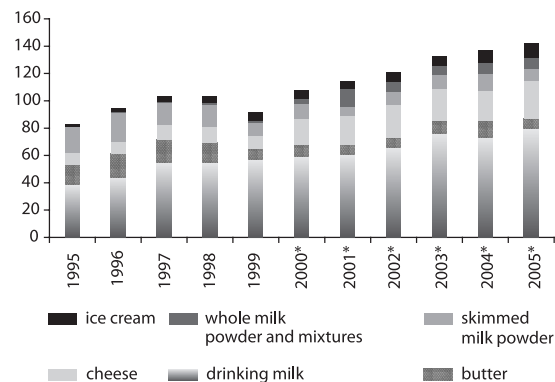
Production, sale and export of dairy products

The dairy sector is characterised by intense competition both in respect of raw material supply as well as entry into retail chains. To survive in this competition, it is crucial to keep up with the changes and make continuous improvements. Product development and increasing the share of higher value added products play an important role.

Dairy industries use raw material according to the market situation. As a rule, those products are made which can be sold at the best price in the given market situation. The main goal of enterprises is to stay ahead in the competition (both on the domestic and foreign markets), be viable and earn a profit. Various technologies are used to make the products cheaper, such as adding cheap powders or butter and by making composite articles of milk products and vegetable fat. Dairy industries do not coordinate their activities mutually, although they buy each other's products for raw material and use each other's services.

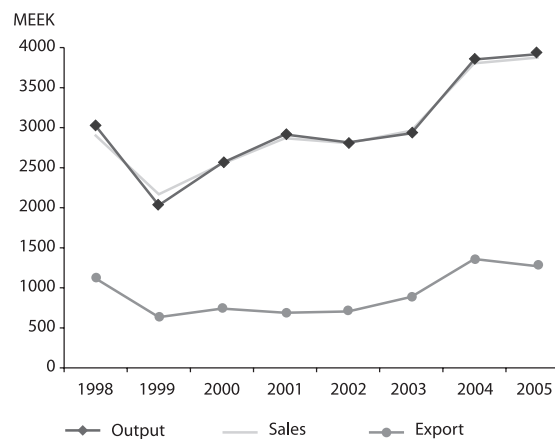
The development of dairy production is characterised by orientation to higher value added products. According to preliminary data, the production of skimmed milk powder and butter has decreased by 28.5% and 35.5%, respectively, while the production of cheese, fermented milk products and ice cream has increased by 23.3%, 10.7% and 17.6%, respectively. The production of drinking milk has increased by 8.3%.

Figure 7. Production of dairy products in 1995–2005 ('000 t)



Source: Estonian Statistical Office
(*cheese including curds; presented separately in previous years)

Figure 8. Output, sales, and export in 1998–2005



Source: Estonian Statistical Office

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

The foreign trade balance of dairy products has been positive for many years (+ MEEK 1052.05 in 2005). Export of dairy products accounted for 19.6% of total agricultural exports in 2005. According to preliminary data, export totalled MEEK 1370.75 in 2005, having increased by 10.8% (MEEK 133.35) since 2004.

Most of the products were exported to the EU Member States (88.2%). The major partners among EU countries were Germany (36.1%), the Netherlands (11.7%), Finland (10.0%), Latvia (8.5%) and Italy (6.9).

Export to Russia increased 3.6 times and formed 10.2% of total export. Export to Russia increased in 2005 because of the export licences granted to dairy enterprises by the Russian Federation. Currently, 12 dairy industries are licensed to export to Russia.

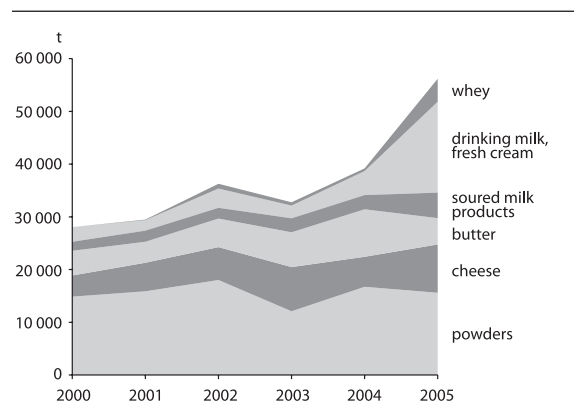
The export of cheese increased 1.5 times, that of whole milk powder 1.4 times, yoghurt 1.9 times and whey products 8.5 times (the export volumes of these products were 9054, 7903, 4407 and 4349.4 t, respectively). The export of butter decreased 2.2 times, that of skimmed milk powder 1.4 times and ice cream 3.5 times (the respective export volumes were 3709, 7869 and 586 t). The export prices of cheese, skimmed milk powder and ice cream were higher, and those of whole milk powder and yoghurt were lower than in the previous year.

Import of dairy products decreased 17.9% (by MEEK 318.7) in 2005 compared to 2004 and formed 2.9% of total agricultural import. 97.7% of the import came from EU countries (Lithuania 36.4%, Germany 14.1% and Latvia 14.0%). The main import articles were cheese (3607 t), yoghurt (1404.5 t) and ice cream (1377 t). The imports of butter and skimmed milk powder decreased

the most (42 and 101 times, respectively). The consumer survey carried out by the Estonian Institute of Economic Research shows that dairy industries are successful in product development. Compared to other sectors of the food industry, the dairy industry certainly takes the lead in this respect. It successfully cooperates with various research institutions to make the products more healthy. The assortment of domestic dairy products available in the shops has significantly widened in recent years. Great progress has been made in the development of yoghurts, curds, cheese, and ice cream. Surveys show that consumers increasingly prefer domestic dairy products.

The output and sales of dairy products increased in 2005 compared to the previous year. The total output was MEEK 3917 (+1.7%) and sales amounted to MEEK 3875 (+1.9%). Exports amounted to MEEK 1270 in 2005, which is MEEK 89 less than in 2004 (-6.5%).

Figure 9. Dynamics of the export volume of dairy products, 2000–2005 (t)



Source: Estonian Statistical Office

2.2. Meat market: production, processing

Meat production

Meat production amounted to 66 700 t in 2005, which is 6% or 4500 t less than in 2004 (71 200 t). Beef, poultrymeat and pigmeat production decreased 15%, 7% and 3%, respectively.

Table 6.

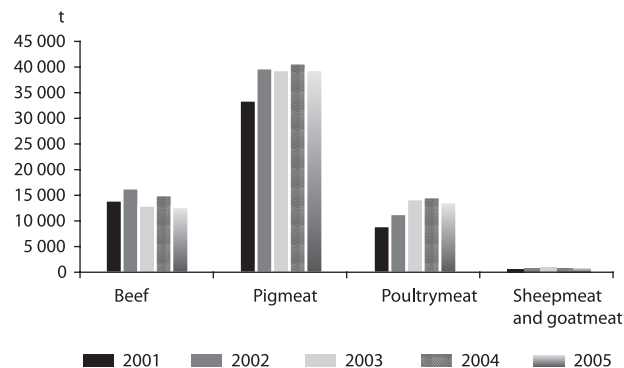
Dynamics of the export volume of dairy products, 2000–2005 (t)

Type of meat	2004	2005	2005/2004	
			+/-	%
Pigmeat	40.9	39.6	-1.3	97
Beef	15.2	12.9	-2.3	85
Poultrymeat	14.8	13.8	-1.0	93
Sheepmeat and goatmeat	0.3	0,4	+0.1	133
Total	71.2	66.7	-4.5	94

Source: Ministry of Agriculture

Meat production has stabilised over the past four years to an annual level of 67 000 – 70 000 t. Pigmeat forms more than a half of the total meat production; beef production has decreased; poultrymeat production has grown substantially, but sheepmeat and goatmeat production is negligible (less than 1% of the total meat production).

Figure 10. Meat production by type, 2001–2005



Beef production

As of 31 December 2005, there were 252 200 bovine animals in Estonia, which is 2400 animals or 1% more than at the end of 2004. Beef production amounted to 12 900 t and it formed 19% of the total meat produced in 2005. Compared to the previous year, beef production decreased by 2300 t. The reduction is mainly due to the fact that many small producers sell their bull calves at an age of up to three months for raising to other EU Member States, mainly Spain, Germany, Italy and the Netherlands. Therefore, 20% less of bulls and bullocks were slaughtered in Estonia in 2005 than in 2004. Direct aid for increasing beef production is not yet stimulating.

The buying-in price of beef continued to be relatively low, according to the Estonian Statistical Office, although the prices rose 23% on average since 2004.

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While the average buying-in price of beef was EEK 18 785 per tonne in 2004, in 2005 it was already EEK 23 114 or higher by EEK 4329. The buying-in price of beef was the highest in March 2005: EEK 24 915 per tonne.

Complementary national direct payments were granted for beef farming in addition to single area payment in 2005. MEEK 164.9 was paid for rearing bovine animals and dairy cows, and MEEK 7.5 was paid for suckler cows.

Pigmeat production

As of 31 December 2005, there were 351 600 pigs in Estonia, i.e. 11 500 pigs more than at the same time of 2004. Meat plants bought in 346 600 pigs in 2005, which is 17 900 pigs more than in the previous year. The average live weight of a pig carcass was 77–79 kg. Pigmeat output was 39 600 t and it continued to play a large role in total meat production, maintaining a secure first place among types of meat with 59%.

The EU system of organisation of the market in pigmeat is effective and has a positive impact on the development of our pigmeat sector. It was acknowledged at the meeting of the Management Committee for Pigmeat on 7 December 2005 that the situation in the pigmeat market was stable and good in virtually all the Member States, and that demand and supply were balanced. The Member States' average price of pig carcasses was EEK 21 370 per tonne on the 47th week.

No special measures such as private storage were applied in the organisation of the EU market in pigmeat in 2005. Export refund rates were reduced by 5% in December, since the dollar

to the euro rate had improved by 3% and the products would earn a higher income.

Applications for pigmeat export licences and export refunds were granted in Estonia for the first time from August till the end of 2005. ARIB issued 14 export licences over the five months. Bird flu has caused problems in Asia for the past three years and now in Europe; this will probably increase the consumption and export of pigmeat.

Sheepmeat and goatmeat production

As of 31 December 2005, there were 51 800 sheep and goats in Estonia, which was 10 100 animals more than at the same time of the previous year. The number of sheep has grown owing to complementary national direct payments for ewe breeding and to environmental support. Complementary national direct payments for ewe breeding were paid in 2005 to 880 applicants for breeding 25 616 ewes, in a total sum of MEEK 5.5. Sheepmeat and goatmeat production amounted to 400 t in dead weight and their relative share in total meat production continued to be 1% in 2005.

Poultrymeat production

As of 31 December 2005, there were 1 804 200 poultry in Estonia, which is 378 000 or 17% less than in 2004. Poultrymeat production amounted to 13 800 t, which is 1000 t or 7% less than in 2004, owing to a salmonellosis outbreak. Poultrymeat accounted for 23% of total meat production.

The EU market survey showed that the markets for both eggs and poultrymeat were stable in 2005. The Member States lo-

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cated close to Turkey reported a sharp decline in poultrymeat consumption at the end of 2005, but egg consumption remained on the former level. In Greece, poultrymeat consumption decreased about 20%. Bird flu did not influence the situation on the Estonian market in poultrymeat and eggs in 2005.

According to preliminary data, 197.6 million eggs were produced in 2005, which is 33.3 million or 14% less than in 2004. This is the greatest fall in egg production compared to earlier years. Close competition with the Baltic area egg producers is a major factor that decreased the egg production.

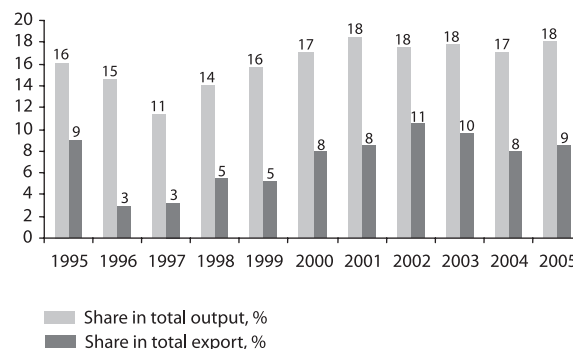
In 2005, AS Eesti Munatooted produced 68 t of egg powders, 124 t of cooked and shelled eggs, and 1111 t of liquid egg products. The productivity of hens increased by 8%, from 255 eggs in 2004 to 276 eggs in 2005.

Meat industry

Position on the food market

The Estonian meat market is characterised by similar product ranges, a low level of specialisation and tough competition on the domestic market. Only 5 major plants provide nearly 80% of the sector's total output. In the structure of the food

Figure 11. Share of meat industry in the food industry (%)



Source: Estonian Statistical Office

industry as a whole, the meat sector has kept a stable share over the past five years, providing on average 18% of the total output and 9% of export.

As of the end of 2005, there are 138 meat handling enterprises in Estonia according to the Veterinary and Food Board (VFB), including 17 large capacity and 121 small capacity enterprises. Compared to the year 2004, the number of enterprises has dropped by four, this has occurred on the account of small capacity enterprises. Two large capacity enterprises were added in 2005.

Table 7. Number of meat processing enterprises over the years

Type of enterprise	2000	2001	2002	2003	2004	2005
Large capacity enterprises	17	15	15	14	14	16
Small capacity enterprises	262	204	153	121	128	121

Source: VFB (Veterinary and Food Board)

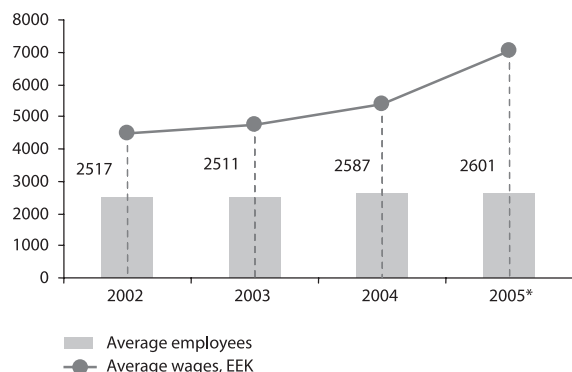
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Employees and wages

According to the Estonian Statistical Office, the meat sector employed 2601 people on average in 2005. The number of employees has increased nearly 1% since 2004. The annual average monthly wages in the meat sector were EEK 7024, which exceeds the average for 2004 by EEK 1638 (30%) and that of 2003 by EEK 2260 (47%).

Figure 12.

Average number of employees and wages in 2002–2005 (EEK)



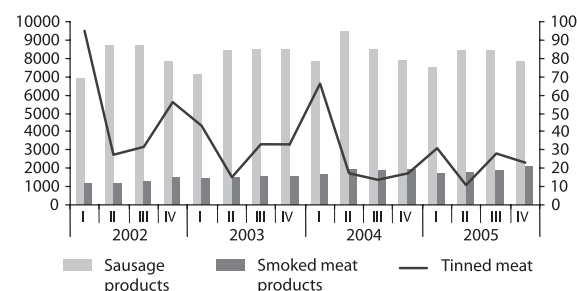
* preliminary data

Source: Estonian Statistical Office

The wages in the meat sector and the food industry were respectively 15% and 3% below the national average in 2005.

A total of about 32 000 t of sausage products, 7000 t of smoked meat products and 93 t of tinned meat were produced in 2005. Although the output of meat products decreased by an average of 1% by volume since 2004, its monetary value was 14% higher and totalled MEEK 2344.

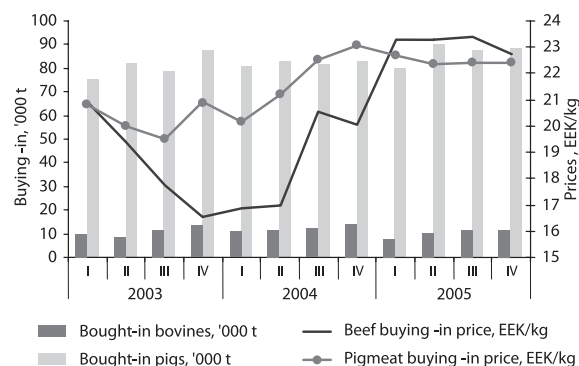
Figure 13. Production of meat products in 2002–2005 (t)



Source: Estonian Statistical Office

The year's average buying-in prices were EEK 22.45 per kg for pigmeat, which was EEK 0.69 higher than in 2004, and EEK 23.18 per kg for beef. In open market conditions, the prices paid to Estonian pigmeat producers depend on the price changes on the world market.

Figure 14. Buying-in of meat and buying-in prices in 2003–2005

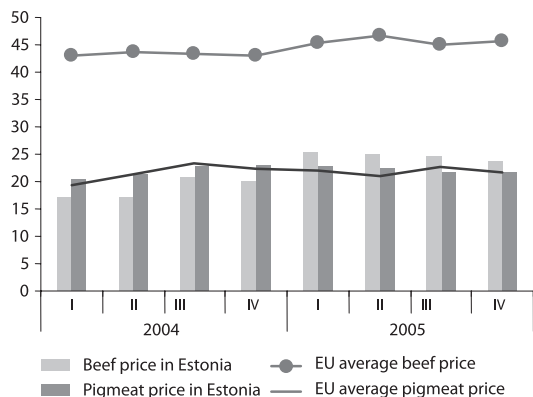


Source: Estonian Statistical Office

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The prices of pigmeat and beef have risen 3% and 25%, respectively, compared to the average prices of 2004. Compared to the EU average buying-in prices, pigmeat prices are more or less the same as the EU average. Beef buying-in prices are nearly two times lower in Estonia than in the EU on average. While the EU average buying-in price for beef was EEK 45.65 per kg in 4Q 2005, it was only EEK 23.75 in Estonia.

Figure 15. Average meat prices in Estonia and the EU (EEK/kg)



Source: Estonian Institute of Economic Research

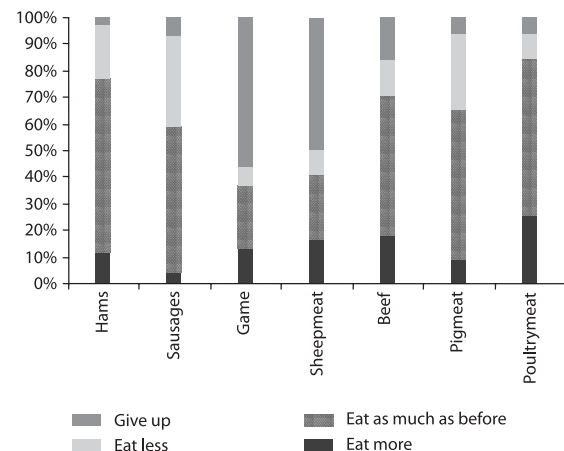
Meat consumption

Meat consumption as a whole is increasing, mainly because of the growing purchasing power and quickening tempo of life of the population. Higher incomes influence the purchasing behaviour, since an average of 74% of the population have

the means to purchase the healthy food they want, and those means are used. Food quality and freshness are growingly appreciated. The survey of the nation's eating habits and purchasing preferences for food products carried out by the Estonian Institute of Economic Research shows that overall consumer satisfaction with the choice of meat and meat products was increasing.

Purchasing meat and meat products in shops is becoming more popular (54%) compared to the earlier popular place of purchase – the market. The preference for shops increased 4% since the previous year.

Figure 16. Consumers' wish to change meat consumption in the future (% of respondents)



Source: Estonian Institute of Economic Research

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The relative shares of domestic products and purchasers in the shop are the largest with respect to smoked sausages and hams (91%), and 63% of consumers prefer domestic products of this category. The survey by the Estonian Institute of Economic Research showed that consumers would like to increase the consumption of poultrymeat (26%) and beef (18%) the most in the future. According to the survey, 56% of the respondents wish to give up game and 50% wish to give up sheepmeat. The survey shows that compared to the previous years, the share of respondents who do not consider the country of origin of food products important has increased. For the Estonian meat producers, this means even greater struggle for the market share.

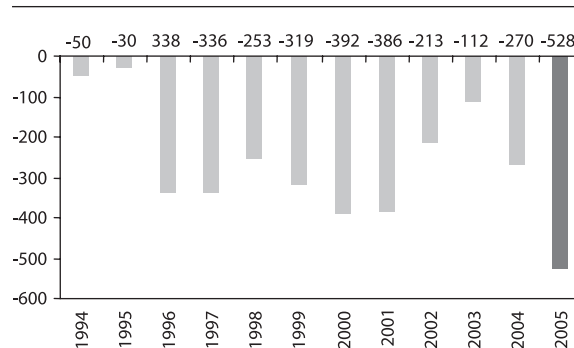
Trade in meat (sales, export, import)

Seventeen Estonian meat plants hold licences for export to other EU Member States. In addition, one plant is licensed to import its products to the USA and four plants have licences to import to Russia.

Since import products have played a significant role on the meat market for years, the foreign trade balance has been strongly negative over the past ten years. The opening of the market has enlivened export; the share of imported products, which was already large, has also grown substantially. The foreign trade balance deficit of meat products was about MEEK -528 in 2005, which is almost twice as much as a year before.

Figure 17.

Foreign trade balance of meat and meat products in 1994–2005 (MEEK)



Source: Ministry of Agriculture

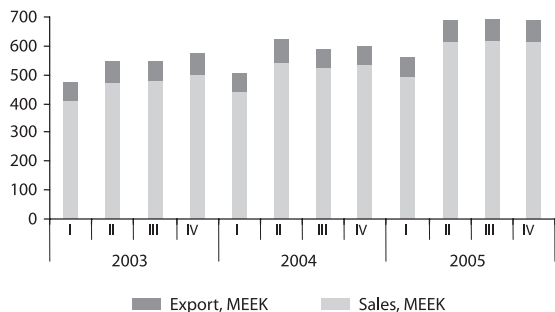
Like in the previous year, export accounted for 13% of total sales in 2005. A total of 16 500 t of meat and meat products with a total value of MEEK 499.8 were exported. Although the volume of meat exports has decreased by nearly 10% compared to the year 2004, no financial losses have ensued, since the export prices were higher.

The average export prices of pigmeat, beef and sausage products have risen by EEK 4.6, EEK 8.3 and EEK 3.3, respectively. Only the price of poultrymeat has dropped, by EEK 0.5 per kg on average. The main export articles were pigmeat, sausage products and poultrymeat. The EU Member States continued to be the main export partners, receiving an average of 96% of the meat and meat products exported from Estonia. Of this, 75% was exported to the new Member States like Latvia and Lithuania.

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Figure 18.

Sales and export of meat and meat products in 2003–2005 (MEEK)



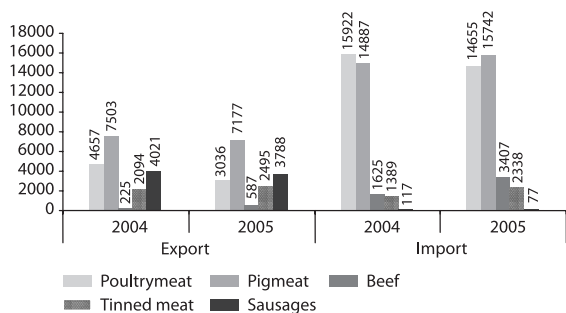
Source: Estonian Statistical Office

The import of meat and meat products increased by 2319 t (7%) or by MEEK 306.4 (43%) in 2005. On average, 92% of meat and meat product imports come from the EU Member States, including 27% from the new Member States.

Estonia's main import partner among third countries is Brazil, from which imports have increased 28 times during the year and form about 8% of the total import of meat and meat products. Imports from EU countries and from third countries have increased by MEEK 257 (37%) and MEEK 49.5 (245%), respectively, over the year.

The growth was the largest with respect to the import of beef and tinned meat: 2.1 and 1.7 times, respectively. Poultrymeat imports decreased 8%. The main import partners in 2005 were Finland, Denmark, and Lithuania.

Figure 19. *Major trade articles in 2004–2005 (t)*



Source: Estonian Statistical Office, Ministry of Agriculture calculations

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2.3. Cereals market: production and processing

Cereal growing

According to the preliminary data of the Estonian Statistical Office, cereals production totalled 761 800 t in 2005, which is

153 700 t or 25% more than in 2004. Potato production totalled 224 800 t, which is 36% more than in 2004 (165 700 t), and rape and turnip rape seed production amounted to 77 500 t, which is 13% more than in the previous year (65 600 t in 2004).

Winter cereals were sown on the following areas for the 2006 harvest: winter wheat on 32 700 ha, winter rye on 7000 ha,

Table 8. Production of the main crop products in 2003, 2004 and 2005

Crop	2003			2004			2005 (preliminary)		
	growing area ('000 ha)	quantity ('000 t)	yield (kg/ha)	growing area ('000 ha)	quantity ('000 t)	yield (kg/ha)	growing area ('000 ha)	quantity ('000 t)	yield (kg/ha)
Total cereals	263.2	505.7	1 922	261.0	608.1	2 330	277.3	761.8	2 747
incl. rye	15.2	23.3	1 531	8.1	18.1	2 228	8.5	23.0	2 704
winter wheat	25.5	45.1	2 200	23.1	66.5	2 869	19.3	70.3	3 642
summer wheat	41.7	99.7	2 394	55.2	130.2	2 357	67.6	197.6	2 922
barley	131.4	253.6	1 930	127.2	293.5	2 307	140.9	3 656.1	2 598
Total legumes	4.4	5.0	1 131	4.3	3.3	757	4.1	6.1	1 463
Spring swede rape	45.5	67.8	1 491	48.4	65.6	1 356	42.7	77.5	1 817
Potato	17.0	244.4	14 393	16.0	165.7	10 335	15.8	224.8	14 220
Area under field crops	517.3	x	x	495.4	x	x	504.4	x	x

Source: Estonian Statistical Office, Ministry of Agriculture

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and triticale on 4300 ha. While the area sown with winter rye decreased by 1500 ha compared to 2005, the area under winter wheat was larger by 13 400 ha or 69% compared to the autumn of 2005.

According to the preliminary data of the Estonian Statistical Office, the growing area of cereals was 277 300 ha in 2005, accounting for 55% of the total growing area of field crops (504 400 ha). Rye was sown on 8500 ha and winter wheat was sown on 19 300 ha in the autumn of 2004 for the harvest of 2005, forming 3% and 7% of the total growing area of cereals, respectively.

In the autumn of 2004, the winter crops sown in the first half of September began to hibernate in the sprouting stage and survived the winter in a satisfactory manner despite the changing weathers of the first half of the winter and the great thaw and rains in January.

Summer cereals were sown at an optimum time and the seeds germinated, and sprouted and the initial development of the plants occurred in suitably humid soil. The moderate temperature regime till 20 May and sufficient water stock in the soil favoured an even sprouting of the sown crops and the development of strong roots.

The biological yields of summer cereals were relatively high, while the protein content of the grains was lower than usual (according to trials conducted by the Jõgeva Plant Breeding Institute), especially for cereals grown with little fertilising.

Harvesting conditions were very good in the middle of August and longer ripening varieties of winter wheat were harvested

in time, which assured their quality. The climatic conditions were good during the sowing period of winter crops sown for the harvest of 2006. The productive water supply was optimum in September and in the first half of October, and since the weather was warmer than usual, the early sown winter crops tended to grow too much for hibernation. Vegetation ended on 24 October and the tempering conditions were good in the autumn of 2005 thanks to plenty of sunshine and favourable temperature fluctuations.

Estonia's need for food, seed, fodder and industrial grains totals about 750 000 – 800 000 t a year. The need for fodder grains and legumes is 480 000 – 485 000 t and the need for seeds is about 55 000 t. The population's annual need for food grains is 150 000 t, of which food rye should form 45 000 – 50 000 t. Since the yield and quality of rye as a winter crop depend more on the weather, the produced quantity should be at least 30% above the needs, i.e. about 75 000 t.

The area under rye, which was about 62 000 ha in 1993 (the year with the largest area of rye sown in the previous decade), decreased to 7000 ha by the harvest of 2006. Rye bread is mostly made of imported rye and rye flour.

The samples received at the laboratory of the Agricultural Research Centre show that the summer wheat of 2005 had good or, in some cases, even very good protein contents (the average protein content of the samples was 13.4%). The quality (gluten index) of summer wheat was good. The protein and gluten content of winter wheat was relatively low in the analyses: protein 11%, gluten 21%; this means that many lots of winter wheat are not suitable for baking bread.

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Cereals prices dropped in 2005 compared to 2004 (except for fodder barley). The price drop was the greatest in the cases of food wheat and fodder rye. While fodder rye cost EEK 1495 per tonne in December 2004, it had already decreased to EEK 1300 in 2005. Food wheat cost EEK 1648 per tonne in December

2005 (EEK 1818 in December 2004). Comparing the months of November and December 2005, the prices of cereals rose in December; only the price of fodder rye remained the same and food oats cheapened. The price fall was due to greater supply of cereals and low import prices.

Table 9. *Buying-in prices of cereals in Estonia (weighted average price of processing plants, EEK/t, excluding VAT)*

	28.12.2004	25.11.2005	23.12.2005	Change +/- %	
				23.12.2005/	23.12.2005
				25.11.2005	28.12.2004/
Wheat					
food wheat	1818	1604	1648	2.7	-9.4
fodder wheat	1519	1388	1422	2.4	-6.4
Rye					
food rye	1626	1459	1581	8.4	-2.8
fodder rye	1495	1300	1300	0.0	-13.0
Barley					
fodder barley	1416	1416	1447	2.2	2.2
Oats					
food oats	1551	1500	1464	-2.4	-5.6
söödakaer	1265	1118	1159	3.7	-8.4

Source: "Price Information" of the Estonian Institute of Economic Research, Ministry of Agriculture

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Estonia applies intervention buying-in of cereals since accession to the EU, in order to stabilise the market in cereal-based products and ensure a fixed minimum price level for the producers. Storage contracts for intervention bought-in cereals have been concluded with three storage undertakings: Farm Plant Eesti AS, which owns storage facilities in Viljandi and Taebbla, Kesko-Agro Eesti AS, which owns stores in Keila and Tamssalu, and Tartu Veski. These intervention centres/stores have been approved by the European Commission.

The intervention price, which is established by the European Commission, was EEK 1592 per tonne in November 2004. To avoid the supply of all cereals in the first month of tendering, i.e. November, the intervention price is gradually increased by EEK 7.20 every month beginning from November. Thus, the intervention price offered for cereals in May was already EEK 1636 per tonne. Cereal supplies have to be finished not later than by the end of the fourth month following the month of the tender, but not later than 31 July. The first tender was received on 12 November 2004 and it was accepted to the intervention store in January 2005.

A total of 72 tenders for intervention buying-in were accepted in 2005. The largest number of tenders were received in May (53), when the intervention buying-in price had risen to EEK 1636 per tonne and a quantity of 8332 t was offered. The main suppliers were Farm Plant Eesti AS, Kemira GrowHow AS and Kesko Agro Eesti AS. In total, MEK 35 was paid for 18 400 t of cereals.

In addition to intervention buying-in of cereals, sale of intervention stocks was launched in 2005. The cereals bought in by ARIB are put up for sale in Estonia by invitation to tender in accordance with Article (1) 1 of Council Regulation (EC) No. 2131/1993. A quantity of 4908 t of barley was put up for sale on 30 March 2005, but ARIB had not received any tenders for these cereals by the end of the year.

Thirty cereals export licences were issued in 2005, under which 10 000 t of cereal-based products were exported to Kazakhstan. About 513 000 t of cereal-based products were imported from Ukraine under the 46 import licences issued during the year. The quantities exported/imported are not final, since the applicant licensees may prove their actual export transactions over a period of 12 months; there are also undertakings which apply for a licence but do not actually use it.

Production and consumption of and trade in cereal-based products

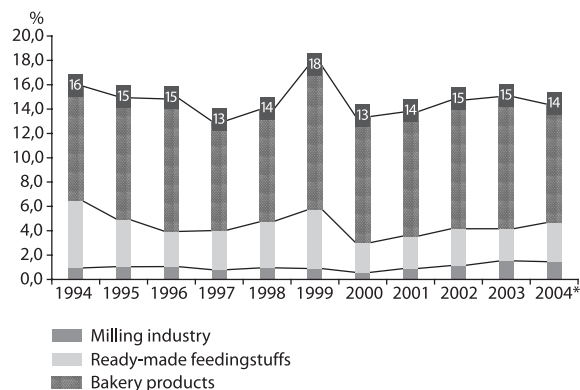
The cereal processing industry comprises milling industry enterprises and enterprises producing feedingstuffs, bakery products, bakery products and other products made of flour.

The cereal processing industry provides about 15% of the total output of the Estonian food industry in terms of value. The total output of bread and bakery enterprises accounts for over three-fourths of this, and that of the milling and feedingstuffs industries accounts for one quarter.

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Figure 20.

Share of cereals processing industry in the total food industry output



* Calculations for 2004 are based on realised net turnover

Source: Estonian Statistical Office

The relative share of the cereal processing industry in the total output of the food industry decreased remarkably in 1990. The reason for this was the cut in the outputs of the entire sector. The sudden rise in the cereal processing industry's share in 1999 is explained by the "Russian crisis": the output of the Estonian exporting branches of the food industry (dairy, fish industry) decreased, while that of the cereal processing industry remained the same. Cereals industry has kept a steady share of 15% of the entire food industry since 2002.

According to the Estonian Statistical Office, the cereal processing industry accounted for 4.6% of the exports of foodstuffs

and beverages in 2005. Cereals exports formed more than a half and milling industry products formed one-fourth of these exports. The cereal processing industry has relatively lower export figures compared to other sectors of the food and beverages industry.

Number of cereal processing enterprises

The Veterinary and Food Board (VFB) supervised 342 enterprises handling non-animal raw material for food and food as of 14 March 2006. Exactly 50% of these enterprises (171) were cereal processing plants. 153 enterprises engaged in handling bread, bakery and pastry products and biscuits (hereinafter bread and bakery products) and 18 enterprises handled cereals and cereal-based products.

The number of cereal processing plants has not changed much since 2004. However, 9% of the enterprises handling bread and bakery products have changed over the year. 14 new bread and bakery enterprises were established and 11 enterprises terminated their business.

Since "handling" is understood also as the packaging of imported products, not all of the above enterprises actually produce foodstuffs. Enterprises handling bread and bakery products do not include those enterprises for which bread and bakery products is not the principal business. All handling entities have been counted separately, disregarding the ownership relations.

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Feedingstuffs enterprises are supervised by the Plant Production Inspectorate (PPI), according to whose data there were five registered and ten approved enterprises producing ready-made feedingstuffs (for sale). The activities of one registered and one approved enterprise were suspended.

Enterprises producing lower risk feedingstuffs are subject to registration and those producing higher risk feedingstuffs are subject to approval. Enterprises producing feedingstuffs for their own consumption form a third category.

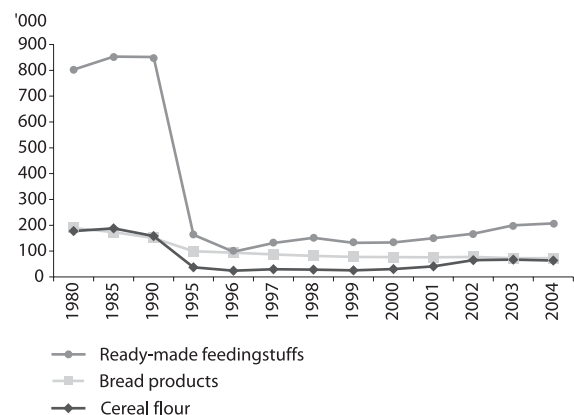
There were 30 registered and approved intermediaries of feedingstuffs in Estonia as of 27 February 2006. The approval decisions were suspended with respect to four of them.

Production and consumption of cereal-based products

According to the Estonian Statistical Office, 66 800 t of milling industry products, 81 800 t of bread and bakery products and 207 300 t of ready-made feedingstuffs were produced in Estonia in 2004. The production of ready-made feedingstuffs increased the most in 2004 compared to 2003: 3.9%. The production of bread and bakery products increased 1.9% while the production of milling products decreased 4% over the year.

According to the Estonian Institute of Economic Research (Investeeringuvajadus põllumajandussaadusi töötlevas tööstuses. Teravilja ja teraviljasaadusi käitlevad ettevõtted (Investment needs in the agricultural processing industry. Cereal processing enterprises).

Figure 21. Production of cereal-based products



Source: short-term statistics of the Estonian Statistical Office

Estonian Institute of Economic Research, Tallinn: 2005), enterprises engaged in the primary processing of cereals used an average of 60% and 56% of their capacities in summer and in winter, respectively. On the other hand, enterprises using flour as raw material used an average of 68% and 75% of their capacities in summer and winter, respectively. The use of production capacities varied greatly across the enterprises who participated in the survey.

The production of bakery products has more than halved since 1990. The production of bakery products dropped from 151 000 t in 1990 to only 72 800 t in 2004.

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Table 10. Production dynamics of bakery products, '000 t

	1990	1995	1998	1999	2000	2001	2002	2003	2004
Bakery products	151.0	99.7	81.6	77.3	76.5	75.1	77.2	72.4	72.8
Pastry products	14.9	5.0	4.5	6.4	4.4	6.0	7.4	7.9	9.0

Source: Estonian Statistical Office, Ministry of Agriculture

According to the Estonian eating habits, rye and wheat products are consumed more or less equally, but rye bread has been losing popularity in recent years. Almost all the bakery products consumed in Estonia are domestic (Estonian Association of Bakeries, <http://www.leivaliit.ee>).

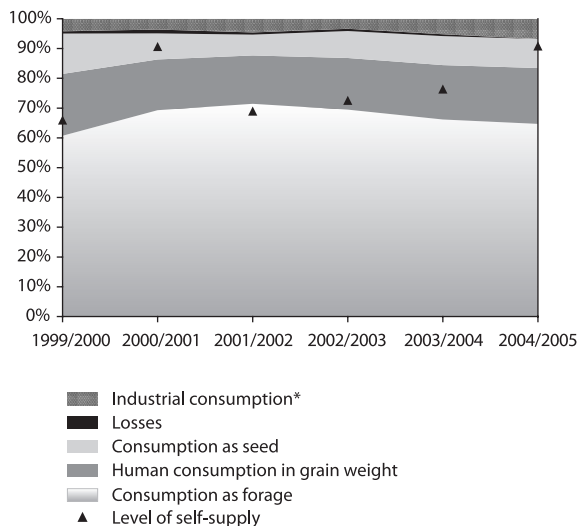
Flour forms about 70% of the weight of bread and bakery products. Rye flour accounts for about 37% of bakery products (the changes in "black" bread consumption have not been taken into account in this case; rye flour need may have been higher than 37% in earlier years) and wheat flour accounts for 60%. Because of the decreased consumption of bakery products, the demand for rye flour has dropped over 15 years by about 20 000 t every year $[(151.0 - 72.8) \times 0.7 \times 0.37 = 20.0]$ and the demand for wheat flour has dropped by about 33 000 t every year $[(151.0 - 72.8) \times 0.7 \times 0.6 = 32.8]$. The output of bread and bakery products as well as cereal flour decreased sharply at the beginning of the 1990s. The decrease in the production of ready-made feedingstuffs is related to the lessening of the number of animals.

About 19 000 t of rye flour $(72.8 \times 0.7 \times 0.37 = 18.9)$ and 31 000 t of wheat flour $(72.8 \times 0.7 \times 0.6 = 30.6)$ was required for the output of bread and bakery products of the year 2004. According to the Estonian Statistical Office, 19 900 t of rye flour and 43 900 t of wheat flour were produced in Estonia in 2004. The domestic mills can thus cover Estonia's annual need for cereal flour at their present capacities. Rather, a problem may arise from the decreasing production of domestic raw material, especially rye, and the uneven quality of cereals, which forces bakeries to use more imported raw material.

Estonia's own production of cereals usually covers 65%–90% of the consumption, depending on the harvesting year. In the harvesting year 2004–2005, Estonia covered an estimated 91% of its total cereals need (less according to some sources).

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Figure 22. Use of cereals and level of self-supply
(includes cereals not grown in Estonia: rice, maize, millet, buckwheat)



* for the production of alcoholic beverages and other products, except for food and feedingstuffs

Source: Estonian Statistical Office, Ministry of Agriculture

Comparison with neighbouring countries: according to the Estonian Institute of Economic Research, Latvia meets largely over 100% of its cereal needs from its own resources. Estonia's shortage of domestic cereals is mostly compensated for by imports from the other Baltic states.

The quality (application) of the cereals should also be taken into account. For example, a remarkable part of Estonia's cereal yield in 2005 was suited only for animal feed because of its quality. This is why there are relatively more fodder grains and less food grains on the Estonian market: there was pressure for greater export of the former and greater import of the latter.

According to the survey conducted by the Estonian Institute of Economic Research in November 2005 (Investeeringu vajadus põllumajandussaadusi töötlevas tööstuses. Teravilja ja teraviljasaadusi käitlevad ettevõtted (Investment needs in the agricultural processing industry. Cereal processing enterprises). Estonian Institute of Economic Research, Tallinn: 2005), the Estonian cereal processing enterprises considered the uneven quality of raw material a major problem (42% of the respondents). There was also dissatisfaction with the gluten content of cereals and the varying quality of raw material obtained from different suppliers. The higher prices of domestic raw material were also pointed out (39% of the respondents).

Trade in cereals and cereal-based products

Wheat flour import to Estonia amounted to 12 905 t in 2005; this equals 29% of Estonia's annual total wheat production. Rye flour import totalled 584.1 t during the same period; this is less than 1% of Estonia's annual rye flour production.

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Table 11. *Export and import of cereals and cereal-based products in 2005 (EXTRASTAT and INTRASTAT total)*

HS code	Chapter	Unit	EXPORT			IMPORT		
			Quantity	Sum (EEK '000)	Unit price (EEK)	Quantity	Sum (EEK '000)	Unit price (EEK)
1001	Wheat, maslin	T	34 167	56 000	1 639	15 506	26 898	1 735
1002	Rye	T				16 694	26 869	1 610
1003	Barley	T	53 105	88 979	1 676	4 239	7 217	1 703
1004	Oats	T	17 550	32 465	2 061	1 218	1 799	1 477
1005	Maize	T	1	9	14 864	17 714	29 717	1 678
Total 10				180 261			144 763	
1101	Wheat flour	T	11 102	35 125	3 164	12 905	33 416	2 589
1102	Flour of other cereals	T	542	1 421	2 622	612	2 260	3 692
1103	Groats, meal	T	233	716	3 068	5 778	15 753	2 726
1104	Pearls, flakes	T	2 054	9 920	4 830	3 608	24 500	6 790
1107	Malt	T	5 995	31 364	5 231	20 432	86 529	4 235
Total 11				87 882			201 822	

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1901	Malt extract	T	335	5 392	16 122	2 576	71 173	27 631
1902	Pasta	T	76	1 874	24 563	7 469	85 079	11 392
1904	Prepared foods obtained by the swelling of cereals	T	61	2 343	38 519	1 838	56 819	30 919
1905	Bakery products	T	1 424	27 103	19 038	11 682	239 642	20 514
Total 19				48 776			499 877	
2302	Cereal processing residues	T	5 470	4 473	818	1 156	848	733
2303	Starch production residues, brewing and distilling waste	T	0	0	33 953	9 699	14 723	1 518
Total 2302,2303				4 473			15 571	
TOTAL				321 393			862 032	

Source: Estonian Statistical Office, Ministry of Agriculture

The import of cereal flours to Estonia has not significantly changed compared to 2004. The imports of wheat flour and rye flour decreased by 13% and 4%, respectively, over the year. Import of unprocessed wheat decreased three-fold from 2004 to 2005. The import of unprocessed rye increased 42%.

Accession to the EU has resulted in major changes in Estonia's trade in cereals. Before accession, Ukraine and, to a lesser extent, Russia were Estonia's main cereal trading partners. After EU accession, the trade was restructured: imports from third countries stopped and were replaced by imports from EU Member States.

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Table 12. Estonia's main trading partners and their relatives shares in cereals trade (2002–2005)

2002	Wheat	Wheat flour	Rye	Barley	Oats
	Ukraine 63%	Finland 25%	Ukraine 84%	Ukraine 56%	Ukraine 92%
	Latvia 23%	Latvia 25%	Germany 9%	Sweden 19%	Finland 7%
	Lithuania 6%	Germany 23%	Latvia 6%	UK 12%	
2003	Lithuania 33%	Latvia 68%	Ukraine 49%	Ukraine 72%	Ukraine 69%
	Russia 24%	Finland 22%	Russia 29%	Russia 19%	Russia 23%
	Latvia, Ukraine 22%		Germany 18%		
2004	Germany 34%	Latvia 57%	Latvia 80%	Lithuania 82%	Finland 77%
	Lithuania 27%	Finland 39%	Lithuania 20%	Latvia 8%	Latvia 23%
	Latvia 27%				
2005	Latvia 63%	Latvia 73%	Latvia 75%	Latvia 76%	Latvia 99%
	Lithuania 35%	Finland 19%	Germany 17%	Lithuania 23%	
		Lithuania 8%			

Source: Estonian Institute of Economic Research, Estonian Statistical Office, Ministry of Agriculture

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Prices

Estonia did not apply any significant trade restrictions before accession to the EU. The domestic cereals market was therefore directly influenced by foreign competition. In the open market conditions, the Estonian cereal producers were price takers; the prices paid to them developed under the influence of world market prices.

The costs of producing cereals, flour and bread have constantly grown in Estonia after the country regained independence (inflation, other factors). The prices of cereals and cereal flour have not grown because of foreign competition. The prices of bakery products have risen. This is due to the fact that bread is

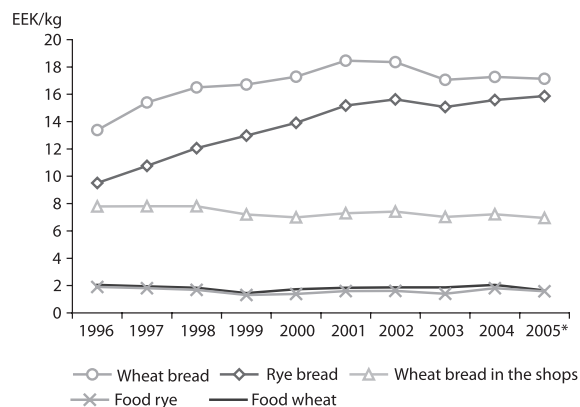
a highly perishable product, which poses a natural trade barrier (not price takers). However, there is no such barrier to the import of flour and cereals (price takers).

Estonia's accession to the EU and application of the Community market organisation did not result in a price rise in the cereals sector. For example, the buying-in prices of cereals dropped in 2005 compared to 2004. The probable cause lies in the good grain yields in other EU Member States. Upon accession, various EU support and compensation schemes became available to the Estonian cereal growers and primary processors of cereals (e.g. investment aid for mills).

At the same time, the prices of raw materials for bread and bakery industries (such as sugar) rose upon accession. On the other hand, the retail prices of bread and bakery products have not risen much: in fact, the price of wheat bread even dropped in 2005 compared to 2004. This could be due to the pressure from retail businesses, which does not allow for transferring the higher price of raw material to the product price.

The development of the retail price of bread is illustrated by Figure 5. The Figure is based on the premise that 1 kg of rye yields about 0.7 kg of flour, which in turn makes about 1 kg of rye bread.

Figure 23. Prices of cereals and cereal products

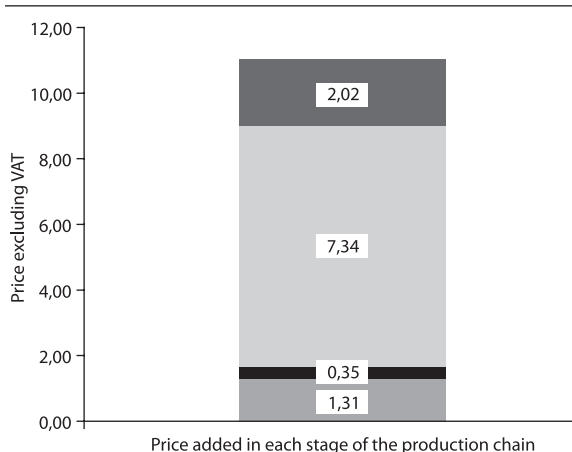


* 11 months

Source: Estonian Institute of Economic Research

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Figure 24. Development of rye bread price



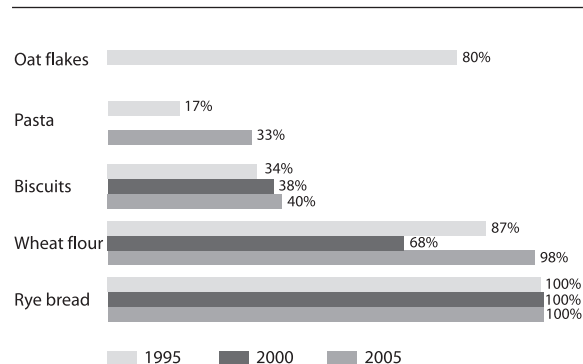
Source: Observations and assessment by the Ministry of Agriculture

Mills bought rye in 3Q 2005 for EEK 1.31 per kg (excluding VAT); the price may have risen somewhat by now. The price of a kilogram of rye flour for bakers would be EEK 2.37 (excluding VAT), based on the rye price. The bakers sell rye bread for an estimated EEK 9 per kg excluding VAT, but the price of other ingredients (sugar, margarine, additives) in the ready-made bread and the production costs should also be considered. The consumer pays about EEK 13 per kg of bread after the retail margin and VAT are added. Finally, the producers receive only one-tenth of the retail price of bread.

Consumption

According to the Estonian Institute of Economic Research, 79% of Estonian consumers prefer domestic food products. Of the cereal-based products available in shops, the share of domestic products is highest in the consumption of bread and bakery products – nearly 100%. These are followed by wheat flour – 87%, biscuits – 34%, and pasta – 17%. The growth of the market share (share in sales) of foreign biscuits came to a halt in 2005, although the range of imported products available has increased. The market share of foreign pasta products, however, has grown both in terms of sales and the range of products available.

Figure 25. Share of domestic cereal-based products in the sales of shops

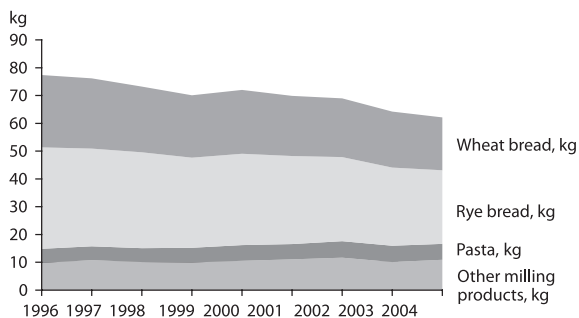


Source: Estonian Institute of Economic Research, Ministry of Agriculture

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According to the Estonian Statistical Office, every member of a household consumed on average 26.4 kg of rye bread, 19.1 kg of wheat bread, 10.9 kg of milling products and 5.8 kg of pasta in 2004. The consumption of pasta and milling products other than flour has been stable during 1996–2004. Bread consumption, on the other hand, has decreased throughout the period.

Figure 26. Changes in the consumption of cereal-based products



Source: Estonian Statistical Office

2.4. Fruits and vegetables market: production and processing

Open field vegetables were grown on 3200 ha in 2005, according to the preliminary data of the Estonian Statistical Office. The growing area decreased by 229 ha or 7% since 2004. The growing area of carrots decreased by 117 ha (18%), that of onion bulbs by 111 ha (28%) and that of swede by 80 ha (41%).

The areas under cabbage and beetroot have increased: by 80 ha (10%) and 68 ha (18%), respectively. As in earlier years, cabbage (895 ha), carrot (519 ha), beetroot (445 ha) and onions (292) have the largest growing areas.

The Estonian Statistical Office has not yet published information about the vegetable yields of 2005. The last five years' average yields of open field vegetables were 40 862 t, including 16 282 t (40%) of cabbage, 12 602 t (31%) of carrot, 5046 t (12%) of beetroot and 1465 t (4%) of swede. The average yield of greenhouse vegetables (mainly tomato and cucumber) was about 10 t. Since the 2005 vegetation period was relatively favourable for vegetables, last year's vegetable yield was at least on the average level of the past five years according to an expert opinion.

There was sufficient warmth and moisture for vegetable growth; the growing period was long, and in some places vegetables grew very large and even overgrew. For example, the late spring postponed the general ripening of many end-of-summer and autumn cabbage varieties, which resulted in harvesting difficulties in the maturity phase, as well as selling problems with the simultaneous marketing of many varieties. The quality of overgrown cabbage deteriorated, which is why it was not harvested but was ploughed into the field.

The last five years' average yields of orchards and berry gardens, the total area of which is 15 800 ha, was 19 990 t, including 11 564 t of apples, 1380 t of plums, 2371 t of strawberries, 1201 t of black currants and 994 t of red currants.

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Most fruit trees and berry bushes survived the winter well. The summer months offered more than usual sun and warmth, and the harvest in the autumn was plentiful and had good taste qualities.

The apple yield of 2005 exceeded the last five years' average yield according to expert opinions, but the plum yield was not good. Berry yields were influenced by summer droughts in some areas, while irrigated strawberry fields produced high yields. All berry varieties had good yields at the Polli Horticultural Research Centre.

The quality of fruits and berries was a problem in some places. Apples were damaged by scab, a disease quite common in all areas, especially in humid weather. Berries that grew in a lack of moisture were smaller than usual.

Support for investments in horticulture-related agricultural production under Measure 3.1 of the National Development Programme was applied for in a total sum of about MEEK 13 in 2005. Under this measure, horticultural producers can apply for support for the construction and reconstruction of plant production structures, purchase and installation of plant production equipment, as well as the purchase and installation of the sets and equipment, and for the construction and reconstruction of buildings which are required for the diversification of agricultural production, and also for the construction and reconstruction of infrastructure systems, and for the purchase and installation of related equipment. The largest number of applications was filed in Harju and Tartu counties

(6 and 4, respectively). Applications were also received from Jõgeva, Põlva, Valga, Rapla and Võru counties.

Horticultural producers filed single area payment applications for an area of 4630 ha in 2005, which forms 0.6% of the total supported area. The amount of payments was EEK 527 per ha.

Wholesalers of fruits and vegetables were issued 11 precepts in 2005 for failure to comply with the provisions of Regulation (EC) No. 1148/2001. The inspected lots of fruits and vegetables contained rotted, undersized or defective fruits and foreign substances; in some cases the labelling requirements of the lots were ignored and the accompanying documents were not properly filled in. The largest number of precepts were made in respect of goods originating from Russia and Chile.

On ten occasions, the dispatching countries were informed of incompliance with the requirements of regulations, detected upon the inspection of fruit and vegetable lots circulating on the EU internal market, i.e. arriving to Estonia from other EU Member States. The most common violations pertained to incompliance with labelling instructions (Poland, Netherlands, Italy, Greece, Lithuania) and ignorance of size requirements (Spain, Italy).

In 2005, the Estonian fruit and vegetable importers applied for 19 licences for importing goods subject to import restrictions from third countries, including 7 licences for importing garlic, 3 for tinned mushrooms and 9 for bananas. No export refunds were applied for.

2.5. Market in industrial crops, organic products and other agricultural products

The growing area of rape and turnip rape totalled 42 700 ha in 2005; the average yield according to preliminary data was 1817 kg/ha and the total yield was 77 500 ha, which is 13% more than in the year 2004.

Researchers and experienced growers who have obtained larger yields per hectare recommend that rape and turnip rape should be grown on the same field every five years. More frequent growing of rape and turnip rape on the same field reduces yields and facilitates various plant diseases (such as Sclerotinia). An optimum balance of sulphur and nitrogen is vital for higher yields of rape and turnip rape, as well as cereals. Researcher Malle Järvan of the Estonian Research Institute of Agriculture has stressed the need to optimise the balance of these elements in her studies. More than 70% of the rape and turnip rape produced is processed into vegetable oil and rapeseed cake in the local oil plant of AS Werol Tehased. The annual output of AS Werol Tehased is 25 500 t of rapeseed oil.

Oilseed export amounted to 20 000 t according to estimations. Oil is exported to Latvia, Lithuania, Finland, Sweden and Germany.

When the financial report of AS Werol Tehased was introduced at the supervisory board meeting in January 2006, it was revealed that the company had earned about MEEK 6.9 of net profit over the previous five months. The financial year of AS Werol Tehased began on 1 August and the supervisory board approved a conservative budget. The turnover of AS

Werol Tehased for the financial year exceeded MEEK 500 and the net loss was MEEK 42.4.

The share capital of AS Werol Tehased is MEEK 45, of which 98% is state owned. The Government of the Republic announced the sale of its shares in AS Werol Tehased by Order No. 582 of 8 September 2005; one of the conditions of the sale is that the company's principal business should be continued over the next three years.

The growing area of potatoes was 15 800 ha in 2005 and the expected total yield was 224 800 t; the average yield would be 14 220 kg/ha.

Plentiful rainfall in August and higher than average temperatures at the beginning of September were favourable for potato tuber growth. About 1800° of active heat accumulated in Jõgeva from 21 May to 17 September, this is considered sufficient for the biological ripening of late-harvest potato varieties.

According to the Estonian Statistical Office, 72–103 kg of ware potatoes per capita have been produced in Estonia in recent years. Potato exports have remained below 1000 t in recent years and imports have amounted to 15 000 to 26 000 t; 40 000 to 57 000 t has been fed to animals, and up to 55 000 t of potatoes have been used as seed for 16 000 ha of growing area.

According to the crop inspection data of the Plant Production Inspectorate, field inspection was requested for 207 ha of potato seed area in 2005, of which more than 20 ha or nearly 10% was discarded from field inspection. A total of 186 600 ha of potato fields were inspected.

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Oil flax was sown on 91 ha in the spring of 2005. Recent years' yields have been 530–930 kg/ha. The yields of 2005 are expected to exceed the results obtained so far. The produced linseed is processed in Estonia by cold pressing and the oil is sold for timber processing (impregnation oil) and to poultry farms as a feed component for the production of omega-3-enriched eggs. Oil production waste (oilcake) is sold to concentrated feed plants for making starter feeds for calves and feedingstuffs for poultry farms.

Since the trend is to produce nature-friendly building materials (composite materials), it would be reasonable to extend the growing area of oilseed by about 20 000 ha. However, there is currently no technology or product development for reprocessing flax straw, which is why oil flax processing waste is ploughed into the soil.

Estonian producers have given up growing fibre flax over the past two years; the flax factory in Pärnu (annual capacity about 4000 t) uses imported raw material. Every year, 2500–2600 t of fibre flax is imported to Estonia.

Upon accession to the European Union, Estonia received the following quotas for the primary processing of flax: 30 t for long fibre and 42 t for short fibre. Based on the agreements of the accession negotiations, it would be possible to pay the processors of long fibre flax about EEK 2500 per tonne in the financial year 2005/2006 and about EEK 3100 per tonne from 2006/2007. Processors of short fibre flax and hemp fibre can be paid about EEK 1400 per tonne of processing aid until the financial year 2005/2006.

Several existing support schemes and forms of state aid are available for flax production: single area payment, investment support for the purchase of machines and equipment, support for diversifying rural business, and market development support for non-profit associations. Enterprise Estonia supports the founding of new undertakings and assists in the preparation of business plans as well as launching of business.

Hemp production. Four varieties of hemp free of narcotic substance (delta-9-tetrahydrocannabinol, THC) were grown in Estonia in 2005: Beniko and Bialobrzeskie (Polish varieties), Finola and Uso-31 (Finnish varieties). Eight hemp producers applied for support for 15 ha of growing area. ARIB checked all these producers. The chemical composition of the hemp was assessed in the laboratories of the Estonian Chamber of Agriculture and Commerce and the Forensic Service Centre. Control samples were taken in accordance with the methodology provided in Annex 1 to Commission Regulation (EC) No. 796/2004 and none of the samples exceeded the allowed maximum THC content (0.2%).

Renewable energy development trends in Estonia

The following activities have been carried out in Estonia to promote renewable energy:

- the area under energy scrubs is increasing (10 ha in 2004; 50 ha in 2005);

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- attempts are made to grow hemp as an energy crop for the first year;
- relevant research and development is supported;
- the Long-term Public Fuel and Energy Sector Development Plan until 2015 has been drafted, which provides for the planning of necessary measures;
- a transport development plan has been prepared, which provides for the promotion of biofuels, especially in the public transport sector;
- biofuels have been exempted from excise;
- the first biofuel production and excise warehouse activity licence was issued to a biodiesel producing company; five other applications are being processed;
- several biodiesel and bioethanol plants are being established;
- quality requirements have been established for liquid fuels (including biodiesel) and an efficient system of quality supervision has been implemented with respect to the marketing of fuels;
- a considerable volume of wood chips based thermal energy is being produced, a large part of which is exported;
- a limited scope of hydro and wind energy is being developed (natural and technical possibilities being the limitations);
- the officials of five ministries (including the Ministry of Agriculture) are preparing a national development programme for renewable energy which coordinates the regulative, fiscal and economic and information measures for the achievement of the Community goals;
- suitable types of fuels are being selected, the promotion of the production of which will be supported;
- additions are being planned to the legal regulation;
- the collection of necessary statistical data is being planned;
- public procurement is being prepared and support will be planned for research and development, especially for the introduction of modern cost-effective energy production technologies;
- fiscal policy measures are being planned, including measures for facilitating investments and investment support measures;
- additional quality standards necessary for the marketing of raw material and fuels are being planned;
- information measures are being planned;
- measures for the introduction of renewable fuels in public transport enterprises are being planned.

The development of renewable energy requires large-scale, long-term investments. The state needs a stable long-term policy to secure these investments.

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2.6. Alcohol market

This overview uses the foreign trade, production and internal market sales data of the Estonian Statistical Office and the results of retail price surveys by the Estonian Institute of Economic Research.

Production

Data analysis showed that the output of most alcoholic beverages increased in 2005; rectified ethanol (spirit) and spirits

were the exception: their production decreased by 8.5% and 15%, respectively. The reason for the decrease in the output of spirits was the significantly lower production of vodka (nearly 3 million litres less according to the Estonian Institute of Economic Research) compared to the previous year. The production of low-alcohol mixed beverages increased the most (+52%) in the given period of 2004; the production of fruit and berry wines increased by nearly one quarter, and beer production increased almost to an equal extent.

Table 13. Production of alcoholic beverages in Estonia in 2003–2005 (Estonian Statistical Office, '000 000 litres)

	2003	2004	2005*	Change +/-	
				2005 / 2004, '000 000 l	2005 / 2004, %
Rectified ethanol	3.45	4.00	3.67	-0.33	-8.5
Spirits including by assessment of the Estonian Institute of Economic Research:	16.59	18.68	15.82	-2.86	-15.3
vodka	14.2	15.1	12.4	-2.70	-18.0
liqueur	1.5	2.54	2.57	0.03	1.2
Fruit and berry wines by assessment of the Estonian Institute of Economic Research	2.81	3.48 5.7	4.33 9.2	0.85 3.5	24.1 62.3
Beer	103.7	109.73	135.18	25.45	23.2
Low-alcohol mixed beverages	5.13	9.19	13.96	4.77	51.8
Cider	5.60	5.87	9.22	3.35	57.2

* 2005 – short-term statistics of the Estonian Statistical Office (extended to a smaller sample)

Source: Estonian Statistical Office, Estonian Institute of Economic Research

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Foreign trade

According to the foreign trade data of the Estonian Statistical Office for 2005, the export and import of alcoholic beverages increased 47% and by one-fifth, respectively, compared to the previous year. Foreign trade balance continued to be negative, but the negative balance of 2005 was smaller than in the

previous year: import exceeded export 1.7 times in 2005 and 2 times in 2004. Accession to the EU and the resulting new marketing possibilities and market trends contribute to the growth of exports.

Table 14. Basic export and import of alcoholic beverages and export and import prices, 2003–2005

	Price, EEK/l			Turnover, MEEK			
	2003	2004	2005	2003	2004	2005	2005/04 +/- %
EXPORT							
Beer	4.20	4.69	5.68	98.895	126.391	131.445	4.0
Grape wine	11.56	52.10	46.92	0.281	26.696	60.703	127.4
Vermouth	x	31.60	18.80	0.0	1.231	1.136	-7.7
Low-alcohol beverages including cider mixed spirit drinks	8.98	5.99	6.03	21.487	40.317	99.556	146.9
	7.31	7.52	7.21	10.113	14.153	39.448	178.7
	11.07	5.02	5.34	8.992	22.310	42.783	91.8
Ethyl alcohol, >80% alcoholic content	10.73	9.77	9.09	16.782	18.596	14.547	-21.8
Spirits, up to 80% alcoholic content*	70.90	174.63	239.46	136.761	362.333	538.697	48.7
TOTAL EXPORT	x	x	x	274.206	575.565	846.083	47.0

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	Price, EEK/l			Turnover, MEEK			
	2003	2004	2005	2003	2004	2005	2005/04 +/- %
IMPORT							
Beer	6.65	7.25	8.52	105.053	195.452	114.378	-41.5
Grape wine	30.31	30.86	32.50	229.983	333.601	416.532	24.9
Vermouth	28.66	30.69	27.67	10.468	15.257	17.699	16.0
Low-alcohol beverages including cidermixed spirit drinks	16.73	10.70	14.97	119.843	209.440	240.915	15.0
	11.93	13.20	12.72	6.784	41.944	43.795	4.4
	39.47	9.25	17.74	44.757	94.068	133.963	42.4
Ethyl alcohol, >80% alcoholic content	9.25	9.01	9.34	52.546	46.225	27.932	-39.6
Spirits, up to 80% alcoholic content*	145.01	95.96	127.47	175.510	380.500	605.001	59.0
TOTAL IMPORT	x	x	x	693.404	1180.476	1422.457	20.5

* in 100% alcohol

Source: Estonian Statistical Office

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Table 15. Basic export and import of alcoholic beverages by quantity, 2003–2005 ('000 l)

	2003	2004	2005	2005/2004, %
EXPORT				
Beer	23 547.0	26 927.2	23 139.6	-14.1
Grape wine	24.3	512.5	1 293.6	152.4
Vermouth	0	39.0	60.4	54.9
Low-alcohol beverages including cidermixed spirit drinks	2 391.8 1 383.4 812.0	6 734.7 1 882.2 4 440.0	16 501.3 5 471.6 8 006,5	145.0 190.7 80.3
Ethyl alcohol, >80% alcoholic content	1 564.0	1 903.0	1 600.8	-15.9
Spirits, up to 80% alcoholic content*	1 928.9	2 074.9	2 249.6	8.4
IMPORT				
Beer	15 804.0	26 963.8	13 419.2	-50.2
Grape wine	7 586.7	10 808.6	12 818.2	18.6
Vermouth	365.2	497.0	639.7	28.7
Low-alcohol beverages including cidermixed spirit drinks	7 162.4 568.3 1 133.8	19 580.2 3 176.6 10 169.0	16 096.6 3 441.8 7 552.3	-17.8 8.3 -25.7
Ethyl alcohol, >80% alcoholic content	5 678.4	5 129.1	2 989.3	-41.7
Spirits, up to 80% alcoholic content*	1 210.3	3 965.1	4 746.1	19.7

* in 100% alcohol

Source: Estonian Statistical Office

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Consumption and domestic market prices

Retail sales amounted to BEEK 3.44 in 2005, which is 14.7% more than in the same period of the previous year (BEEK 3.0 in 2004). Most of the growth in retail sales was achieved by selling larger volumes, due to both greater domestic consumption and the consumption of alcoholic beverages by tourists. Consumption grew on account of lower-alcohol beverages.

According to the Estonian Statistical Office, 13.2 l of legal absolute ethanol was sold in Estonia per capita in 2005. When the purchases of tourists (2.89 l of absolute ethanol per capita) are deducted from this quantity and illegal alcohol consumption is added -- it amounted to 0.7 l of absolute ethanol per capita in 2005, according to the Estonian Institute of Economic Research -- the total alcohol consumption in Estonia was 11.0 l of absolute ethanol per capita in 2005; this is 1.5% more than in the previous year (10.8 l of absolute ethanol).

Alcohol excise duty was raised 5% on 1 January 2005. The consumer price index for alcoholic beverages increased 2.2% in 2005 compared to the previous year. In September 2005, the retail prices of many alcoholic beverages were lower than in June and in September of the previous year. Beer prices dropped the most (Estonian average price: weak beers -15.7% and strong beers -5.1% compared to the previous year).

Competitiveness of the Estonian alcohol producers

Domestic beer and vodka had a strong position on the Estonian market in 2005, but competition between local producers and importers intensified in both product groups, and local producers must be flexible in renewing the product range and packages to meet the developing demands of consumers. Although the range of imported beers on the Estonian market is growing, its share in sales has not increased. This is proof of the quality of Estonian beer and the consumers' preference for domestic products.

Table 16. Share of domestic and imported beer in the sales of shops (%)

	Total Estonia		including Tallinn		other cities		rural areas		
	Estonian beer	Imported beer	Estonian beer	Imported beer	Estonian beer	Imported beer	Estonian beer	Imported beer	
2002	May	93	7	87	13	93	7	95	5
	Nov	93	7	90	10	93	7	95	5
2003	May	92	8	86	14	92	8	94	6
	Nov	92	8	88	12	92.5	7.5	92	8
2004	May	88	12	83	17	91	9	87	13
	Nov	89	11	78	22	90	10	92	8
2005	May	88	12	70	30	90	10	94	6

Source: Ministry of Agriculture

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Table 17. Share of domestic and imported vodka in the sales of shops (%)

	Total Estonia		including Tallinn		other cities		rural areas	
	Estonian vodka	Imported vodka	Estonian vodka	Imported vodka	Estonian vodka	Imported vodka	Estonian vodka	Imported vodka
2002 May	91	9	87.5	12.5	91	9	92	8
Nov	94.5	5.5	86	14	95	5	97	3
2003 May	92	8	84	16	90	10	97	3
Nov	93	7	82.5	17.5	93	7	97	3
2004 May	93	7	87	13	93	7	95	5
Nov	90	10	71	29	93	7	94	6
2005 May	89	11	67	33	91	9	97	3

Source: Ministry of Agriculture

Share of tourists

The number of foreign visitors accommodated in Estonia grew by 8% in 2005 according to the data for the first ten months of the year, and a total of 4.3 million foreign tourists visited Estonia in 2005. The number of visitors arriving from Finland grew 9% according to the Ministry of Finance of Finland; the numbers of visitors of all other countries have grown much more rapidly. Finnish tourists purchase the bulk of alcoholic beverages purchased by foreign visitors in Estonia. The share of the average purchased quantities of foreign tourists in the sales of shops decreased with respect to vodka, low-alcohol drinks and wine, but increased with respect to brandy, whisky

and liqueur and remained on the previous year's level with respect to beer. Foreign guests' expenditure on alcoholic beverages increased 2.3% this year, amounting to an average of EEK 227 per visitor (EEK 222 in 2004).

The quantity of alcoholic beverages bought on the Estonian domestic market (shops and ships) by foreign guests in terms of 100% alcohol reached 3.9 million litres in 2005, on account of which the alcohol consumption of Estonian inhabitants decreases by an average of 3.51 l per adult person.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Table 18. Quantities of alcoholic beverages taken out of Estonia by foreign tourists in 2005 ('000 000 l)

	Ships	Shops	Total
Beer	9.0	16.7	25.7
Spirits including brandy/whisky	1.7	3.5	5.2
vodka	0.2	0.3	0.5
liqueur	1.0	2.1	3.1
	0.4	0.8	1.2
Wines	0.8	1.5	2.3
Low-alcohol beverages	1.1	2.3	3.4
In 100% alcohol	1.32	2.58	3.9

Source: Ministry of Agriculture

The purchases of foreign guests make up about 23% of the retail sales of alcoholic beverages, reaching MEEK 910–920 in 2005; one-third of this is attributable to vodka.

Population's assessment of alcohol consumption and alcohol policy

Table 19. Population's assessment of personal alcohol consumption in 2005 (% of respondents)

Do not consume	16	Do not drink	18
Consume little	54	Drink little	50
Consume below average	15	Drink moderately	29
Consume on average	12	Drink a lot	3
Consume above average	1		
Cannot assess	2		

Source: Ministry of Agriculture

Low-alcohol beverages are consumed more frequently than spirits; wine and beer are the preferred drinks. Alcohol is usually consumed on social occasions, but other reasons for alcohol consumption are that alcohol helps relax and tastes good.

Those who believe that they consume little alcohol are of the opinion that alcohol consumption is large in Estonia and it should be cut. The respondents believe that alcohol consumers themselves need to take the initiative to drink less in the

first place, but the Government of the Republic, media, local governments and the Parliament should also take relevant measures.

The preferred alcohol policy measures are, for example, a nationwide ban on alcohol sales at night and additional restrictions on points of sale.

Alcohol consumption is influenced by the availability of alcohol; the survey of 2005 showed that one-quarter of Estonian inhabitants can purchase alcohol in the house where they live or in the neighbouring house; if the nearest point of sale is farther away, it would take less than ten minutes for two-thirds of the inhabitants to reach it.

Alcohol consumption gives rise to a number of problems and losses; drunk driving and alcohol consumption by children and youth are considered the most serious problems in the opinion of the population. Offences against persons caused by drinking, health problems and domestic violence are also considered to be problems.

2.7. Fishing, fish processing and fish market

Fishing and fish resources

The Estonian fisheries sector uses the Baltic Sea and inland waters' fish resources; Estonia also has access to the north-west Atlantic (NAFO), north-east Atlantic (Spitzbergen and NEAFC) and south-west Atlantic fish resources. The status of internationally regulated fish resources is assessed by international research organisations. The assessments of fish resources become increasingly critical year by year and it is recommended to ease the fishing efforts. The situation of the fish resources of inland waters mainly depends on the effectiveness of the national control system.

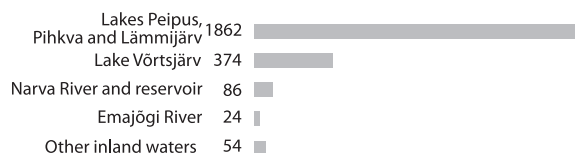
Brisling and Baltic herring from the Baltic Sea are of economic importance to Estonia. The status of these resources is assessed to be good in the Estonian exclusive economic zone, but the resources are shrinking. The resources of codfish and salmon are considered unsatisfactory.

A total of 98 700 t of fish was caught in 2005, including 16 539 t by deep-sea fishing. The bulk of fish – 79 761 t or 81% – is caught from the Baltic Sea; 10% of this is caught from coastal areas. In addition, 2400 t of fish was caught from inland waters.

Fishing in the offshore part of the Baltic Sea is regulated by maximum allowed fishing quantities (quotas), fishing in coastal and inland waters is regulated by the number of fishing

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Figure 27. Fishing in inland waters in 2005 (t).

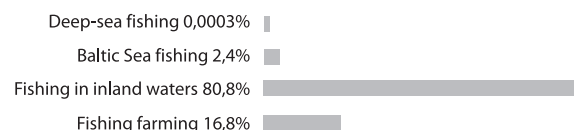


Source: Ministry of the Environment

gear. The fishing restrictions are established by the Minister of the Environment. Deep-sea fishing is very important for Estonia: although it accounts for only 17% of Estonia's total fishing

capacity by quantity, it considerably exceeds Baltic Sea and inland waters' fishing in terms of value. The reason for this is the highly valuable fish species caught by deep-sea fishing, while the main species caught in the Baltic Sea – Baltic herring and brisling – are considered low-value species.

Figure 28. Structure of fishing and fish farming in 2005 (%)



Source: Ministry of the Environment

Table 20. Baltic Sea catch quotas

Name	unit	Baltic Sea catch quotas					
		2001	2002	2003	2004	2005	2006
Baltic herring	tonnes	41 070	39 000	26 036	20 800	21 536	31 487
Brisling	tonnes	41 200	41 200	35 123	43 260	56 650	48 204
Codfish	tonnes	1 869	1 353	1 335	1 060	1 079	1 290
Salmon	individuals	15 807	14 877	14 154	2 555	2 000	3 200
	including individuals in the Baltic Sea	8 297	9 297	9 504	2 000	1 800	9 504
	including individuals in the Gulf of Finland	6 510	5 580	4 650	555	200	1 581

Source: Ministry of the Environment (individuals – 1 tonne = 200 individuals)

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Table 21. Estonian catch quotas

	m/ü	2001	2002	2003	2004	2005	2006
NAFO							
Redfish ²	t	13 850	13 850	13 850	9 071	1 571	1 571
Redfish ³	t		7 500	7 500	5 000	5 000	5 000
Squid (Illex) ⁴	t	1 133	1 133	1 133	128	128	128
Yellow tail flounder ²	t	67	65	73	73		
Greenland halibut ⁵	t	1 971	2 167	2 070	985	380	371
Deep-sea mackerel	t						245
Rajiformes	t					546	546
Shrimp (in zone 3L)	t	67	67	144	145	145	245
Shrimp (in zone 3M)	fishing day	1 389	1 667	1 667	1 667	1 667	1 667
Spitzbergen							
Shrimp ⁶	fishing day	377	377	377	377	377	377
NEAFC							
Redfish ⁷	t	1 175	1 175	500		344	284
Mackerel ⁷	t	1 000	600	511		115	119

Source: Ministry of the Environment (2 common quota for Estonia, Latvia, Lithuania and Russia for 2001–2004, 3 so-called „others“ quota for Member States who have not been assigned an individual quota for the given species, 4 common quota for Estonia, Latvia, Lithuania and Russia for 2001–2003, 5 so-called „others“ quota for Member States who have not been assigned an individual quota for the given species for 2001–2004, 6 maximum three ships simultaneously, 7 so-called cooperation quota assigned to non-members of the NEAFC (Japan, Canada, Estonia, Latvia, Lithuania) for 2001–2003)

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Table 22. Fishing from the Baltic Sea in 2005

Species	Coastal fishing	Deep-sea fishing			Total
		Estonian waters	foreign waters	Total	
Baltic herring	6 000	1 512	387	16 099	22 099
Brisling	68	51 459	3 758	55 217	55 285
Codfish	2		587	587	589
Flounder	403				403
Salmon	8				8
Sea trout	11				11
Eel	9				9
Houting	19				19
Baltic vimba	40				40
Bream	7				7
Pike-perch	68				68
Pike	23				23
Perch	689				689
Smelt	203				203
Roach, white bream	85				85
Garfish	156				156
Other	67				67
Total	7 858	67 171	4 732	71 903	79 761

Source: Ministry of the Environment

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Table 23. Fishing from Estonian inland waters in 2005

Species	Lakes Peipus and Lämmi-järv	Lake Võrtsjärv	Narva River and reservoir	Emajõgi River	Other inland waters	Total
Eel	0.1	16.7	0.0	0.2	2.2	19.2
Houting	1.5	0.0	0.0	0.0	0.1	1.6
Bream	328.2	57.1	7.9	17.6	8.5	419.3
Pike-perch	673.0	35.0	0.1	1.8	2.0	711.9
Pike	64.2	54.6	2.2	1.4	3.8	126.2
Perch	374.3	16.8	3.7	0.0	4.0	398.8
Smelt (Lake Peipus)	169.1					169.1
Roach, white bream	231.2	0.2	9.8	2.2	26.9	270.3
Ide	0.5	0.0	0.2	0.4	0.3	1.4
Burbot	16.7	3.0	0.0	0.0	0.0	19.7
Lamprey		0.0	57.2	0.0	4.8	62.0
Other	3.0	191.0	4.7	0.2	1.8	200.7
Total	1861.8	374.5	85.8	23.8	54.4	2 400.2

Source: Ministry of the Environment

Fishing fleet

In 2005 there were 148 vessels fishing on the Baltic Sea and 11 vessels on the Atlantic Ocean. A total of 886 coastal fishing boats and 350 inland fishing boats had been entered in the Fisheries Information System as of 2005.

Baltic Sea fishing is divided into open sea fishing and coastal fishing. Brisling, Baltic herring and codfish are caught on open sea. Trawls are the main fishing gear. Many species of fish are caught by coastal fishing: economically, the most important are Baltic herring, perch, flounder, smelt, garfish, as well as pike-perch and Baltic vimba, and to a lesser extent eel, sea trout, pike and houting. Traps, nets and longlines are the main fishing gear.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Table 24. Estonian fishing vessels as of 19 January 2006

Segment / indicator	4S1	4S2	4S3	4S4	TOTAL
Fishing ground	Baltic Sea	Baltic Sea	Sea, except for Baltic Sea	Inland waters	
Fishing gear	Trawls, gillnets	Unspecified	Trawls	Unspecified	
Species caught	Pelagic and benthic species	Pelagic and benthic species	Pelagic and benthic species	Unspecified	
Overall length	12 metres and more	Less than 12 metres	24 metres and more	Unspecified	
Possibility to add to segment	no	no	no	yes	
Number of vessels (registered)	154	892	13	352	1 411
Active	148	886	11	350	1 395
Capacity (kW)	26 723	15 251	25 738	10 316	78 028
Number of non- power driven vessels	0	106	0	87	193
Tonnage (GT) London	10 188	1 823	15 611	806	28 428
Data not available	0	0	0	69	
Average year of build	1 980	1 989	1 980	1 990	1 985

Source: Ministry of the Environment

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Inland water fishing. Industrial fishing is carried out on a considerable scale on Lake Peipus and Lake Võrtsjärv. The main species caught are pike-perch, bream, perch, smelt, roach, white bream and lamprey. Nets, traps, pound nets and demersal seines are the main fishing gear.

Deep-sea fishing. Estonia's deep-sea fishing is carried out on the Atlantic Ocean. Shrimp is the main species caught. Other major species caught are: redfish, hake, squid, Greenland halibut, ray, roundnose grenadier and rough rattail. Fishing is carried out by trawlers.

Production, consumption, sale and export of fishery products

Fish processing

Freezing and filleting, making canned fish, fish preserves and ready-to-eat foodstuffs are the main activities of the Estonian fish processing enterprises. Canned fish continues to be orientated to the Eastern market and Central and East European markets, the rest of the products are exported to the Western market. Ready-to-eat foodstuffs are marketed on both the Eastern and Western markets. A large part of the product range is represented on the domestic market.

Table 25. Relative share of fish processing in the processing industry and food industry

	2000	2001	2002	2003	2004	2005
Share of fish processing in the processing industry, %	3,9	3,5	3,3	2,5	2,2	1,4
Share of fish processing in the food industry, %	15,3	14,2	14,8	12,3	11,9	8
Share in export of foodstuffs, %	44,4	43,1	36,9	31,9	24,9	22
Number of handling entities	135	109	97	95	96	100

Source: Estonian Statistical Office, Veterinary and Food Board

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

The Veterinary and Food Board supervised 100 enterprises as of 22.3.2006 that process fish and produce fishery products.

Table 26. Location of fish processing enterprises by county

County	Number of enterprises	% of total enterprises
Harjumaa	29	29
Hiiumaa	3	3
Ida-Virumaa	9	9
Jõgevamaa	5	5
Järvamaa	1	1
Läänemaa	7	7
Lääne-Viru	1	1
Pärnumaa	21	21
Põlvamaa	1	1
Saaremaa	11	11
Tartumaa	12	12
Total	100	100

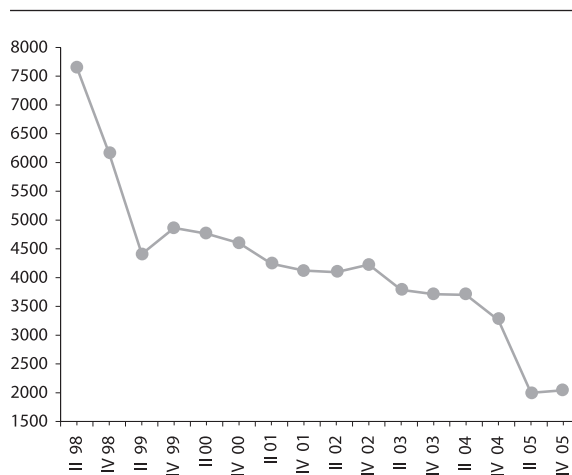
Source: Veterinary and Food Board

As the Table above shows, most fish processing enterprises are located in Harju and Pärnu counties.

Labour force

The number of persons employed in fish processing has constantly decreased. Fish processing enterprises employed 2042 persons at the end of 2005.

Figure 29. Employees of the fish processing industry, calendar quarters of 1998–2005



Source: Estonian Statistical Office

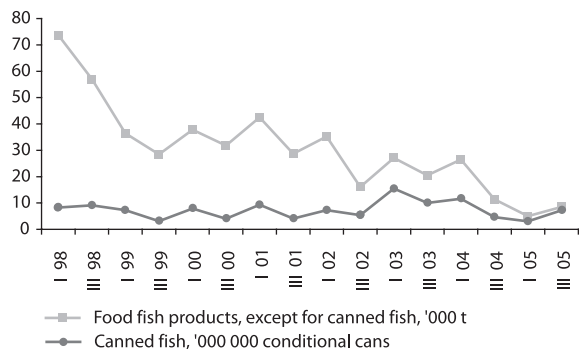
2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Production and sales

The local Baltic Sea species of Baltic herring and brisling are the main raw material for Estonian fish processing enterprises; filleting businesses use freshwater fish like perch and pike-perch. Ready-to-eat foodstuffs are mainly made of imported raw material.

A total of 36 200 t of food fishery products (except for canned fish) were produced in 2005. Canned fish production amounted to 7300 t or 20.9 million conditional cans.

Figure 30. Production quantities



Source: Estonian Statistical Office

Figure 31. Quantities of fishery and marine products sold in 2004 (%)



Source: Estonian Fisheries Association

Companies that are members of the Estonian Fisheries Association sold 44 682.8 t of fishery and marine products in 2004; this is almost 37% less than in 2003.

Figure 32. Production of canned fish 2004 (t)



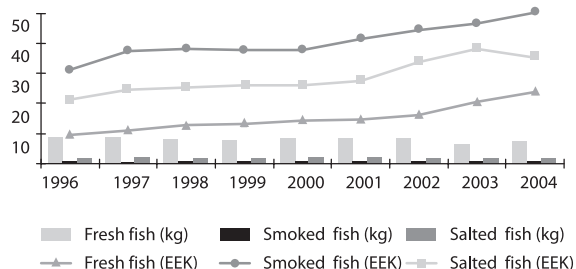
Source: Estonian Fisheries Association

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Consumption

The share of fish in food rations tends to decrease rather than increase in many countries. The Estonian consumption level (17 kg per capita of raw material) is considerably lower than the Nordic countries' average. Consumption growth is restricted in Estonia because of the price rise, the poor availability of fresh fish, and the relatively low purchasing power of the population compared to the Nordic countries.

Figure 33.
Average purchasing quantities and price of fishery products, 1996–2004



Source: Estonian Statistical Office

Fresh, chilled and frozen fish form the bulk of fish consumed in Estonia, according to the Estonian Statistical Office. Salted fish, canned fish and smoked fish are also important products for the Estonian inhabitants.

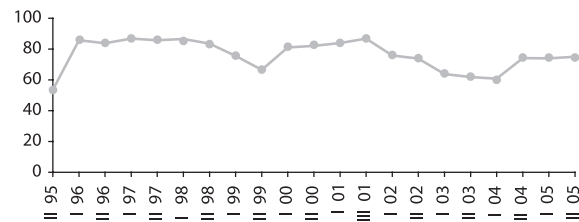
Consumer surveys by the Estonian Institute of Economic Research have shown that more than a half (57%) of the Estonia's inhabitants eat fish and fishery products at least once a week,

and nearly one-fourth (26%) eat fishery products at least once in two weeks. Only 1% of Estonia's inhabitants do not eat any fish or fishery products. Inhabitants of the larger cities, wealthier and older people eat fish more frequently than others.

Export

The share of export remained stable in 2005; it increased from 74% in 1Q to 76% in 4Q. More attention is being paid to the domestic market, where the prices obtained and the quantities sold are not high, but the market itself is relatively stable.

Figure 34. Share of export in sales (%)



Source: Estonian Statistical Office

Frozen fish is Estonia's greatest fish export article by volume, while fish fillet takes the first place in monetary terms. Canned fish were mainly exported to the eastern market and Central and East European markets in 2004. Fish fillet is mostly sold to the western market.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Table 27. Export and import of fish and fishery products in 2005

			EXPORT		IMPORT	
HS code	Chapter	Unit	Quantity	Sum (EEK '000)	Quantity	Sum (EEK '000)
0301	Live fish	T	1.6	74.8	2.8	971.5
0302	Chilled fish	T	6 257.7	31 905.5	4 687.9	149 126.9
0303	Frozen fish	T	57 750.1	231 010.1	19 359.3	162 353.9
0304	Fish fillet	T	7 098.8	603 657.2	7 275.2	285 844.4
0305	Dried, salted and smoked fish	T	2 071.5	24 066.7	596.9	28 660.2
0306	Crustaceans	T	3 506.5	82 332.9	2 568.3	87 568.7
0307	Molluscs	T	20.2	827.6	160.1	3 901.2
1604	Canned fish	T	50 753.7	511 205.2	7 517	200 307
1605	Canned crustaceans	T	332.4	26 019.1	262.2	19 191.5

Source: data of the Tax and Customs Board, calculations by the Ministry of Agriculture Trade Policies Bureau

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Table 28. Dynamics of the export and import volumes of fish and fishery products in 2005

Year	Export		Import	
	Fresh and frozen fish (group 03)	Fishery products and canned fish (1604; 1605)	Fresh and frozen fish (group 03)	Canned fish (1604; 1605)
1999	60 719	40 627	29 084	1240
2000	72 702	13 950	39 316	1 402
2001	101 537	46 314	50 537	2 455
2002	63 692	62 134	41 377	2 940
2003	54 099	58 224	38 703	3 522
2004	45 818	38 069	31 515	4 228
2005	76 706	51 086	34 651	7 779

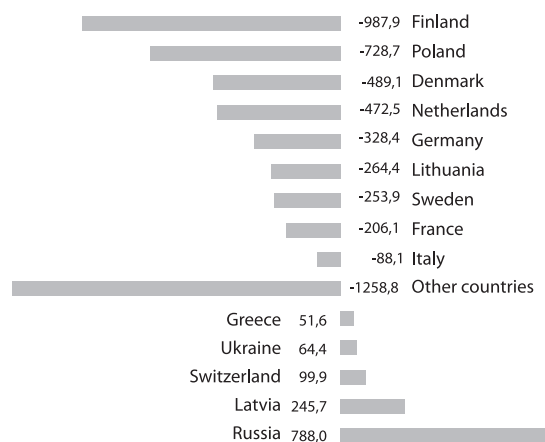
Source: data of the Tax and Customs Board, calculations by the Ministry of Agriculture Trade Policies Bureau

The export volumes of fresh and frozen fish have significantly decreased in recent years (2001–2004), while signs of increased exports were noticeable in 2005 with respect to fishery products and canned fish (34%) as well as fresh and frozen fish (67%).

2.8. General trade

The export and import of agricultural produce and products (chapters 01–24 of the Nomenclature of Commodities) amounted to MEEK 678.8 and MEEK 10 807.1 in 2005. Agricultural produce and products formed 6.3% of total exports and 8.0% of total imports of commodities. The volumes of export and import increased 24.8% and 12.8%, respectively, compared to the previous year; the negative trade balance was MEEK 3828.3. Estonia had positive trade balances with the EU Member States Latvia, Greece, Slovenia, Cyprus, and Malta, and negative balances with all other EU Member States. Among the main partners outside the Community market, Estonia had positive trade balances with Russia, Switzerland, Ukraine, Kazakhstan and Moldova.

Figure 35.
Foreign trade balance of agricultural products in 2005 by country



Agricultural exports to the EU common market amounted to MEEK 5178.9 (74.2%) and exports to the markets of third countries amounted to MEEK 1799.9 (25.8%) in 2005; exports to Russia formed 61.7% of the latter. Commodities worth MEEK 9597.9 (88.8%) were imported from the common market and imports from third countries amounted to MEEK 1209.2 (11.2%), including 26.6% from Russia and 10.3% from Ukraine.

Compared to 2004, the export volumes to the main trading partners Netherlands, France, Ukraine, USA and Lithuania decreased, while exports to the Russian, German, Latvian, Finnish and Spanish markets increased. The export volumes of agricultural products to Russia grew 2.1 times, Germany 2 times, Finland 1.3 times and Latvia 1.4 times. The quantity of dairy products, cereal-based products and fruits and vegetables exported to Russia grew more than 3 times, and the export of fresh and chilled fish, vegetables, coffee and condiments, oilseed, canned meat and fish and miscellaneous foodstuffs to Russia more than doubled. Of the total agricultural exports to Germany in 2005, dairy products formed 72.4% and their export increased 2.4 times compared to the previous year; canned meat and fish formed 10.5% and their export to Germany increased 1.5 times. The main export articles to Finland in 2005 were alcoholic and other beverages (27.2%), oilseed (13.9%) and dairy products (15.5%). Compared to the previous year, the export of dairy products to Finland increased by MEEK 87.2, the export of meat increased by MEEK 39.7, oilseed by MEEK 45.8 and alcoholic and other beverages by MEEK 32.6. The export of tobacco products decreased by MEEK 32.0, sugar confectioneries by MEEK 11.1, and coffee, tea and condiments by MEEK 14.1.

2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Figure 36. Agricultural exports to the main trading partners, MEEK

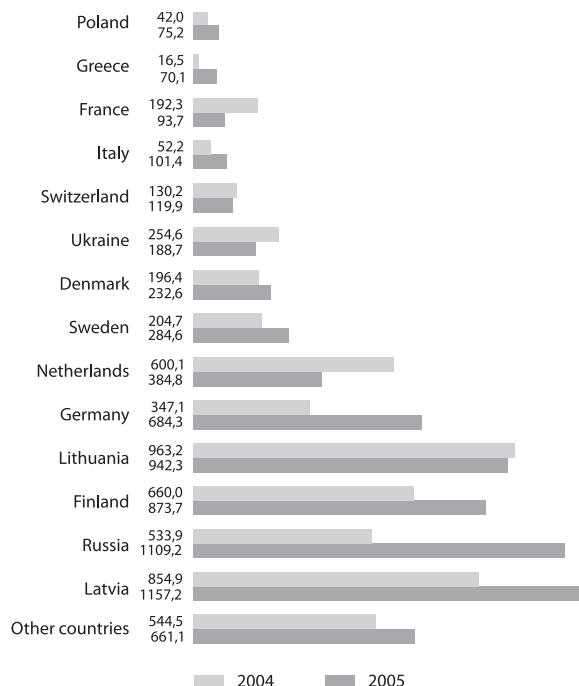
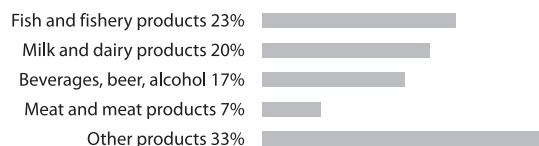
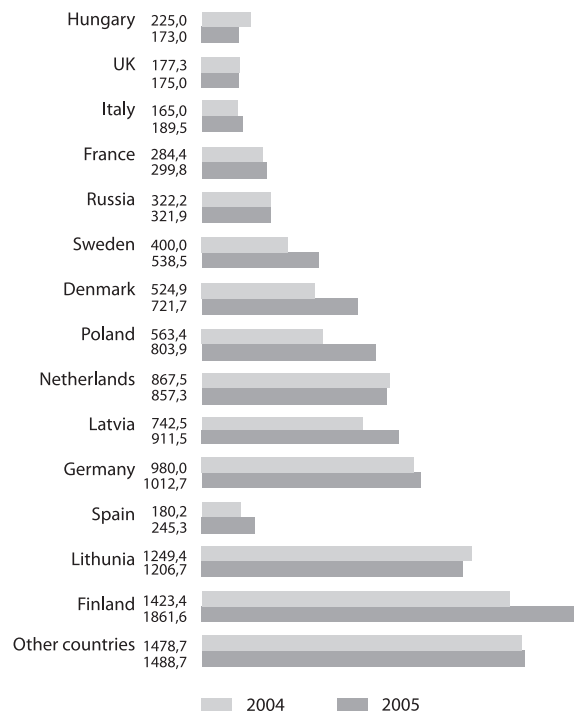


Figure 37. Structure of agricultural exports in 2005, % of total



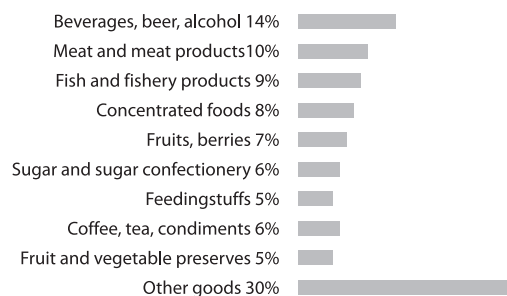
The import of agricultural products from Finland increased by MEEK 438.2, from Poland by MEEK 240.5, from Denmark by MEEK 196.8, from Latvia by MEEK 169.0 and from Sweden by MEEK 138.5 compared to the previous year. Import volumes from the following countries decreased the most: Ukraine by MEEK 99.8, Czech Republic by MEEK 84.7, Norway by MEEK 64.7 and Hungary by MEEK 52.0.

Figure 38. Agricultural imports from the main trading partners, MEEK



2. AGRICULTURAL PRODUCTION, FISHING, PROCESSING, MARKET AND TRADE

Figure 39. Structure of agricultural imports % of total



Intervention buying-in of cereals has been applied since Estonia's accession to the EU in order to stabilise the cereals market; sale of intervention stocks was launched in 2005. Export of cereals (except for rice) amounted to 103 000 t in 2005; the main destinations were Spain (57.4% of the total), Netherlands (35.8%) and Denmark (6.7%). The export of cereals increased 20 times compared to the previous year and the export of cereal-based products converted into cereals increased 2.9 times; this is mainly due to the 7.6 times greater export of malt. One-third of the exported malt was sold to Kazakhstan and another third was sold to Azerbaijan.

Cereals were imported in a volume of 56 300 t, mainly from Latvia (50.3% of the total), Hungary (27.9%), Lithuania (15.7%) and Germany (5.4%). The import of cereals and cereal-based products converted into cereals amounted to 122 800 t, and imports decreased 1.7 times compared to the previous year.

20 000 t of cereals was imported from Ukraine for MEEK 38.7 in 2004. When Estonia joined the EU on 1 May 2004, the free trade agreement between Estonia and Ukraine became invalid and customs tariffs were applied on the border, which is why no cereals were imported from Ukraine in 2005. Import from third countries formed only 0.5% of total import.

The export of milk and dairy products amounted to MEEK 1370.7 and formed 19.6% of all agricultural exports. Export increased 10.8% compared to the previous year. Import amounted to MEEK 318.7 and formed 2.9% of all agricultural imports. Import decreased 17.9% compared to the previous year. The export of dairy products to the Netherlands decreased by MEEK 275.4 in 2005 compared to the previous year. Export to third countries amounted to MEEK 161.2 (growth 30.8%) and import from third countries amounted to MEEK 7.1 (decrease 40.3%). The overall trade balance of dairy products has been positive over the years. In 2005, dairy products were mainly imported to Germany (36.1%), Netherlands (11.7%), Russia (10.2%), Finland (10.0%), Latvia (8.5%) and Italy (6.9%). The export of butter and other butterfat and cheese to Russia has increased.

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Table 29.

Comparison of the export and import prices of the main dairy products

	EXPORT price, EEK /kg		IMPORT price, EEK /kg		Export price %	Import price%
	2004	2005	2004	2005	(2005/2004)	(2005/2004)
Butter (NC 040510)	38.61	34.59	26.62	40.61	89.6	152.6
Cheese (NC 040690)	42.59	44.81	39.96	48.64	105.2	121.7
Skimmed milk powder	28.27	28.67	23.83	28.56	101.4	119.9
Whole milk powder	37.59	34.19	22.81	31.26	91.0	137.1
Yoghurt	14.30	11.37	23.00	20.92	79.5	9.96
Ice cream	20.93	25.03	28.99	28.51	119.6	98.3

The Estonian market in dairy products stabilised after accession to the EU. Producer prices of milk are rising. The structure of both export and import has changed. The export prices of cheese, skimmed milk powder and ice cream were higher in 2005, and those of whole milk powder and yoghurt were lower than in the previous year. Only yoghurt and ice cream had lower import prices compared to the previous year. Export of butter amounted to 3709 t, i.e. 2.2 times less than in the previous year; export of skimmed milk powder and ice cream amounted to 7869 t and 586 t, respectively, i.e. 1.4 times and 3.5 times less than in the previous year. The export of cheese increased 1.5 times, whole milk powder 1.4 times and yoghurt

1.9 times (the export volumes of these products were 9054, 7903 and 4407 t, respectively). The import of all these dairy products decreased in 2005, except for yoghurt. The import of butter (NC chapter 0405 10) was 70 t, i.e. 42 times less; skimmed milk powder 101 t, i.e. 11 times less, and whole milk powder 143 t, i.e. 1.8 times less than in the previous year. The import of cheese amounted to 3607 t, which was 2.9% less than in the previous year.

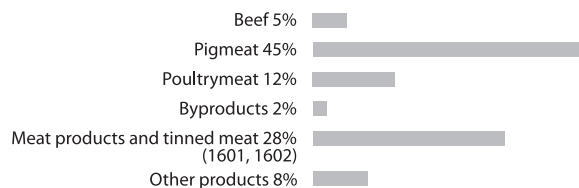
The export of meat and meat products amounted to MEEK 499.8, forming 7.2% of all agricultural exports, and the import of meat and meat products amounted to MEEK 1027.4, i.e.

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9.5% of all agricultural imports. Export and import volumes increased 10.7% and 42.5%, respectively, compared to the previous year. In addition, 5169 bovine animals weighing up to 80 kg were exported to Poland and 972 bovine animals (slaughter animals) were exported to Latvia. Live pigs were sold to Latvian, Lithuanian and Russian slaughterhouses in a live weight of 2074 t (average price EEK 16.77 per kg). The export of meat and meat products was structured as follows: Latvia 36.8%, Lithuania 31.5%, Finland 10.4%, Greece 5.0%, Germany 3.5% and Sweden 3.3%. These markets have grown. Before accession to the EU, Latvia and Lithuania were the main export partners for our meat and meat products; other nearby markets with higher price levels have been added to these now. Estonia exported 587 t of beef, i.e. 2.6 times more, 1142.2 t of byproducts, i.e. 2.4 times more, and 6282.8 t of meat products and tinned meat, i.e. 2.8% more than in the previous year, while the exports of pigmeat and poultry were 7176.7 t and 3035.9 t, i.e. 4.4% and 34.8% less than in the previous year, respectively.

The import of beef (2.1 times) and tinned meat and other meat products (1.5 times) has grown the most. Estonia imported 15 742 t of pigmeat, i.e. 5.7% more; the import of byproducts and poultrymeat has decreased 6.7% and 8.0%, respectively.

Figure 40. Export volumes of meat and meat products, % of total

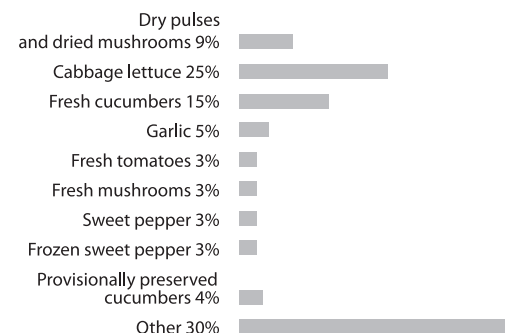


The export of potatoes and vegetables amounted to MEEK 52.0, forming 0.7% of all agricultural exports, and the import of potatoes and vegetables amounted to MEEK 330.5, i.e. 3.1% of all agricultural imports. The largest exported amounts of vegetables are sold on the Lithuanian (31% in monetary terms), Latvian (30%), Finnish (19%) and Swedish (10%) markets.

The most important import articles among vegetables are fresh tomatoes (32%), fresh cucumbers (8%), sweet pepper (7%) and frozen vegetable mixes (6%). The latter are imported from Poland and Belgium. Early potatoes were imported in an amount of 2000 t and ware potatoes in an amount of 7300 t. The import of potatoes increased 2.4 times.

Among the main import articles of vegetables, the import of fresh tomatoes decreased 6.4% (by volume) and their import price rose 19%; the import of onions decreased 32.1% and their price dropped 34.6% (import from Poland forms nearly 60%, average price EEK 1.71 per kg); the import of fresh cucumbers increased 10.6% and their price dropped 2.6%.

Figure 41. Export volumes of potato and vegetables in 2005, % of total



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Edible fruits, berries and nuts

The export and import of fruits and berries amounted to MEEK 185.1 and MEEK 799.5, respectively, forming 2.7% of all agricultural exports and 7.4% of all agricultural imports. Export and import volumes grew 2.3 times and 13.7% compared to the previous year. Fresh, frozen and provisionally preserved berries (including wild berries) form 58% of these exports.

The export and import of fish and fishery products amounted to MEEK 1,689.9 and MEEK 984.2, respectively, forming 24.2% of all agricultural exports and 9.1% of all agricultural imports. Export and import volumes grew 15.6% and 32.6% compared to the previous year. Fresh and frozen fish and fish meat form 65.7% of the export and 76% of the import of fish and fishery products.

	Export		Import	
	Quantity, t	Average price, EEK/t	Quantity, t	Average price, EEK/t
Fish and fish meat, NC chapters 0301–0307				
2003*	54 207	17 337	38 704	15 274
2004*	53 723	17 125	33 107	18 340
2005**	76 706	14 480	34 669	21 594
Canned fish, NC chapters 1604–1605				
2003*	58 309	13 566	3 522	29 021
2004*	43 267	12 528	3 929	29 393
2005**	51 086	10 516	7 779	28 216

* Estonian Statistical Office data (Foreign Trade 2004),

** Estonian Statistical Office preliminary data

3. AGRICULTURAL POLICY

Kristel Maidre, Anna-Maria Veidemann, Margus Palu, Katrin Johanson

More than 400 legislative acts were drafted and adopted in 2004 and 2005 in order to implement the EU common agricultural policy and common organisation of the market. The entry into force of two acts: the European Union Common Agricultural Policy Implementation Act and the Veterinary Supervision over Trade in, Import and Export of Animals and Animal Products Act on 1 May 2004 was especially important.

Representatives of the social partners: producers and farmers' unions, village movements, etc. were involved in the working groups to prepare the EU SAPARD and Rural Development Plan (RDP) for 2004–2005. Their proposals were taken into account in developing the conditions of the RDP support measures insofar as the proposals followed from statistics, analyses and EU legislation.

The social partners became more active when the Rural Development Strategy (RDS) for 2007–2013 was drafted. More than a hundred proposals for amendments to and comments on the development strategy were submitted. Most of the proposals were constructive and relevant.

The Ministry of Agriculture began drafting the "Estonian Food" development plan in 2004. A relevant council and working group were set up by directives No. 465 and 466 of 1 December 2004. The council comprises representatives of other ministries and their sub-offices, professional associations, institutes of higher and vocational education, and the Riigikogu. The working group consists mainly of officials of the Ministry of Agriculture.

The "Estonian Food" development plan for 2006–2008 was approved by the Government of the Republic on 15 December 2005. Its purpose is to facilitate the sustainability, development and competitiveness of the Estonian food sector via marketing activities and consumer awareness of healthy nutrition, food safety, and typical Estonian food. Greater consumer awareness influences the demand for higher quality products, which in turn should motivate producers to make more competitive and environment-friendly products of greater value added. The "Estonian Food" development plan is in line with the goals of the State Budget Strategy for 2005–2008.

The regulations of the European Parliament and Council of Europe -- the "hygiene package" -- entered into force in all EU Member States on 1 January 2006. This essentially means that a majority of the food hygiene legislation formerly applied in Estonia were replaced or adjusted to the above regulations.

New regulation covers the production and handling of food in the primary production stage, and the direct marketing of primary products and some processed products. Direct marketing is understood as the marketing of a small quantity of primary products directly to the end consumer or to a local retailer for intermediation to the end consumer. A small quantity of primary products is understood as products grown or picked by the producer and sold by the producer to the end consumer or on the local market or via a local retail or catering establishment to the end consumer.

The payment of market development support was launched in 2005 under the Rural Development and Agricultural Market

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Regulation Act. Minister of Agriculture Regulation No. 49 of 28 April 2005 "Criteria of eligibility for market development support, procedure for application for support and for processing of applications, list of costs to be compensated by the grant of market development support, and rate of support" set out the procedure for application for support, processing of applications and grant of support. The regulation was amended by Minister of Agriculture Regulation No. 88 of 18 august 2005.

More than 1.2 million ha of agricultural land was declared by 37 700 persons for the register of arable land in 2004. Of them, 19 000 persons applied for area payments for a total of 820 000 ha. Parcels which are not in a good agricultural condition were also entered in the register of arable land; these will be deleted from the register.

More than 252 000 bovine animals, 42 000 sheep and 1600 goats belonging to more than 13 000 keepers were entered in the register of farm animals.

The first period of application of milk quota began on 1 April 2003 and lasted till 31 March 2004. Milk producers used up 78% of the 644 000 t of milk quota allocated, i.e. they supplied and marketed 501 000 t of milk.

The second quota year began on 1 April 2004 and lasted till 31 March 2005. The EU allocated a milk quota of 624 000 t to Estonia for this year. By the end of December, i.e. during the first nine months, milk producers used up 71% of the milk quota of 569 000 t, i.e. they supplied and marketed 404 000 t of milk.

Table 1. Allowed rates and valid payment entitlements for single area payments and CNDPs in 2005

	Maximum rate of support (2005)	Payment entitlements
1) single area payment (SAP)	30%	800 000 ha
2) complementary national direct payment for arable crops (incl. certified seed)	60% field crops 100% certified seed	362 827 827 ha of arable crops 757 ha of certified seed
3) complementary national direct payment for suckler cows	60%	13 416 416 suckler cows
4) complementary national direct payment for cattle	60% bovine animals 90% dairy premium	132 613 LU of other bovines 624 483 t of milk quota
5) complementary national direct payment for ewes	60%	48 000 ewes

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More than 1400 enterprises were approved in 2004 in accordance with the Food Act, Infectious Animal Disease Control Act, Organic Farming Act, etc.

Support under the common agricultural policy

MEEK 727.3 and MEEK 781.7 was paid out as support under the common agricultural policy in 2004 and 2005, respectively.

A Member State could make complementary national direct payments (CNDPs) in an amount of up to 60% of the EU level in 2005 and this rate increases year by year up to 100% in 2013.

The funds of the Estonian state budget and the Rural Development Plan (RDP) were used for CNDPs. The CNDPs must not exceed 20% of the RDP budget; these budgetary funds may be used to an extent of up to 40% of the level of the EU direct payments.

The maximum rates and payment entitlements for single area payments and CNDPs for 2005 are presented in Table 1. If this scope of payment entitlements is exceeded, the unit rates are reduced pro rata for all producers.

MEEK 203.73 and MEEK 145.35 were allocated from the Estonian state budget and the RDP budget in 2005, respectively. Direct payments of MEEK 781.74 were calculated for 2005 (Table 2).

Table 2. Direct payments made in 2004 and 2005 (MEEK)

	2004	2005
Single area payment	332.17	432.71
Complementary national direct payment for arable crops	206.14	160.76
Complementary national direct payment for suckler cows	76.86	7.52
Complementary national direct payment for cattle		175.28
Complementary national direct payment for ewes	4.16	5.47
Support for dairy cows*	108.31	–
Total	727.63	781.74

*national scheme, paid before EU accession

Single area payments were applied for by 19 136 agricultural producers for a total area of 846 400 ha. The applications of 18 687 applicants for a total area of 824 400 ha were satisfied. EEK 526.6 was approved as the per hectare rate of single area payment. The number of beneficiaries increased by 90 applicants and 20 700 ha in 2005 compared to the previous year. The rate of payment increased by EEK 113 per hectare.

Each applicant had an average of 44 ha of land eligible for single area payment.

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Table 3. Applications for CNDP for cattle: bulls and bullocks, heifers and calves in 2004 and 2005

Category of animals	2004		2005	
	Number of animals declared on applications	Number of animals approved on applications	Number of animals declared on applications	Number of animals declared on applications
Bulls and bullocks	19 674	19 257	18 913	18 798
Heifers	48 671	48 465	63 264	63 199
Calves	37 525	37 258	33 015*	32 867

* including 100 young calves
Source: ARIB

CNDP for cattle was applied for by 6936 breeders of bovine animals. The number of applicants increased by 539 compared to 2004. The applications for CNDP for cattle covered 222 208 bovine animals. Payments were made to 6920 applicants for 221 675 bovine animals. The approved unit rate of payment was EEK 791.8. The following coefficients were applied: cows 1.3, bulls and bullocks 1.0, heifers 0.7 and calves 0.2.

Applications for **complementary national direct payment for dairy cows** covered 106 658 dairy cows in 2005. Support was granted for 106 531 dairy cows. The approved rate of payment was EEK 1,029.34 per cow. The number of dairy cows supported has grown year by year: in 2005 the number of cows for which support was granted increased by 5387 or 5.3% compared to 2004.

The CNDP for suckler cows was applied by 732 stock farmers for 5714 suckler cows. Payments were made to 704 applicants in a total sum of MEEK 7.5 for 5523 suckler cows. The approved rate of payment was EEK 1,364 per suckler cow.

The CNDP for ewes was applied for by 889 stock farmers for 26 417 ewes. In 2004, this type of support was applied for by 767 applicants for 19 757 ewes. The number of applicants thus increased by 122 or 14% in 2005 and the number of ewes for which support was applied increased by 6660 (34%) compared to the previous year. Payments were made to 879 applicants for 25 616 animals in a total amount of MEEK 5.5. The unit rate was established at EEK 214 per ewe. Similarly to 2004, 20% of the total amount of support was paid to the sheep farmers in Saaremaa, who raised 4911 ewes.

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Applications for **CNDP for arable crops** were received from 7581 crop farmers for a total of 349 900 ha of land. Payments were made to 7406 applicants for 341 300 ha. The unit rate for this type of support was established at EEK 470.2 per ha.

School milk scheme

The EU school milk scheme is being applied in Estonia for the second year. By now, more than 430 applicants have been approved to supply school milk and they are able to provide school milk for more than 100 000 pupils in 364 kindergartens and 449 schools. This covers about 50% of the target group.

Support under the Rural Development Plan

Support granted under the Rural Development Plan totalled MEEK 616 in 2005.

Support for less-favoured areas was applied for by 9922 farmers for 336 634 ha of land in 2005. Of these, 8881 applications for 317 438 ha of land were approved. Full support was granted to 7391 applicants (181 133 ha) and 1490 applicants (136 305 ha) received partial support (with reductions). A total of MEEK 123.76 was granted in 2005.

Support for environment-friendly production was applied for by 6340 persons for a total of 477 687 ha, including 649 for Natura 2000 areas totalling 73 368 ha. Support for environment-friendly production was divided into two groups of unit rates: field and permanent crops (714 EEK/ha) and permanent/natural grasslands/pastures (331 EEK/ha). The division was as follows in 2005: 348 247 ha of field and permanent crops and 94 184 ha of permanent/natural grasslands/pastures.

Approval was granted to 5473 applications for environment-friendly production support for 442 431 ha of land. Full support was granted to 3399 applicants (126 369 ha) and 2074 applicants (316 062 ha) received partial support (with reductions). A total of MEEK 278.36 was granted as support in 2005, of which MEEK 37.91 was granted to Natura 2000 areas.

Support for organic farming was requested by 999 applicants for 53 887 ha of land. Of these, 897 applications for 48 736 ha of land were approved. Full support was granted to 554 applicants (22 026.7 ha) and 343 applicants (26 709.7 ha) received partial support (with reductions). Support was granted in a total sum of MEEK 66.37. In addition, EEK 708 659 was granted for 536 ha of land under seven applications filed in 2004.

Support for organic farming was divided into three groups of unit rates: permanent/natural grasslands/pastures (1156 EEK/ha), field crops (except for vegetables, herbs and culinary plants) (1516 EEK/ha) and permanent crops and vegetables, herbs and culinary plants (3764 EEK/ha). Support was granted for the following areas in each category: 25 203 ha of permanent/natural grasslands/pastures, 22 664 ha of field crops, and 869 ha of permanent crops and vegetables, herbs and culinary plants.

Support for breeding the Estonian horse was applied for by 259 persons for breeding 951 horses. Of these, 233 applications were approved, covering 921 horses. Full support was granted to 218 applicants (854 horses) and 15 applicants (67 horses) received partial support (with reductions). A total of

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MEEK 2.34 was granted in 2005. Sixty-three horse breeders received a total of MEEK 1.2 million for breeding Estonian draft horses and Tori horses.

Support for breeding the Estonian cattle was applied for by 125 persons for breeding 679 bovine animals. Of these applications, 112 were approved, and MEEK 1.6 was allocated for breeding 593 bovine animals.

For afforestation of arable land, 645 applications were received covering 1689 ha. Of these, 514 applications for 1263 ha of land were approved. A total of MEEK 17.38 was allocated for support (including first year maintenance support).

For subsistence farm adaptation support, 2890 applications were received, of which 2215 were approved. MEEK 34.66 was allocated as support.

Support for bringing manure storage facilities into conformity with water protection requirements was applied for by 865 farms, rearing a total of 124 842 LU of animals. The applications of 2005 will be approved and paid in 2006. Of the applications filed in 2004, approval was granted to 730 applicants who were paid a total of MEEK 92.18. Full support was granted to 287 applicants (42 418 LU) and 443 applicants (196 955 LU) received partial support (with reductions).

Source: ARIB monitoring report for 2005

Support under the National Development Programme

Five measures/submeasures were launched in 2005:

- Measure 3.4: integrated land improvement;
- Measure 3.8: support for advisory and information services;
- Measure 3.9: regulating the fishing capacity of the fishing fleet;
- Submeasure 3.11.3: modernisation of fishing ports;
- Submeasure 3.12.2: finding new markets.

Six measures/submeasures were continued in 2005:

- Measure 3.1: investments in agricultural production;
- Measure 3.2: support for investments in improved processing and marketing of agricultural products;
- Measure 3.5: restoration and development of villages;
- Measure 3.10: modernisation and renewal of the fishing fleet;
- Submeasure 3.11.2: support for investments in aquaculture;
- Submeasure 3.11.4: support for investments in inland water fishing.

As regards the measures of the EAGGF Guidance Section (rural life, agriculture), the applications currently received cover 120% of the budget for the measures; applications have been approved and paid for 75% and 50% of the budget, respectively.

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Priority/measure	Programming period budget for 2004–2006 (EUR)	Applications received	Support applied for (EUR)	Support applied for relative to the budget for the priority/measure (%)
Priority 3	64 173 302	2 134	77 052 649	120%
Measure 3.1	24 393 159	927	33 873 418	139%
Measure 3.2	7 957 000	88	11 275 075	142%
Measure 3.3	6 089 119	103	4 791 498	79%
Measure 3.4	6 496 618	48	3 341 189	51%
Measure 3.5	5 122 263	333	6 433 578	126%
Measure 3.8	2 638 912	439	339 303	13%
Measure 3.9	2 029 834	39	7 516 791	370%
Measure 3.10	2 876 024	55	2 583 062	90%
Measure 3.11	6 570 373	102	6 898 735	105%

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In the FIGF (fishing) measures, the applications filed cover as much as 151% of the budget; 66% and about 25% of the total potential support budget for the projects has been approved and paid, respectively.

A total of 1119 applications were filed in 2005 for a total sum of MEEK 843.7, of which 786 applications for a total of MEEK 378.9 were granted. The three years' combined budget for the third priority is BEEK 1.52.

Measure 3.1 – investments in agricultural production

A total of 464 applications for MEEK 390.9 were filed. MEEK 503 (Estonian public sector and the EU) has been designated for investments in agricultural production in 2004–2006. In 2005, 172 applications in a total amount of MEEK 153.6 were approved. 251 projects have been finished and paid out (including the 2004 applications round) in a total sum of MEEK 185.6. Applying has been very intensive: MEEK 157.9 of budgetary funds had been left for 2005, but twice as much was applied for.

In the second year of support, the largest amount, MEEK 84.7, was allocated to the construction and reconstruction of farm buildings for livestock. In 2004, 63% of the funds were allocated to promoting plant production, but the investment objects were changed in 2005 and livestock farming became the priority. Of support granted for livestock farm buildings, 70% was paid for cattle sheds, 21% for pig sheds, and 5% for the reconstruction of sheep sheds. Allocated to crop farming

equipment was 26.6% of the total amount of support. The most popular activities under this submeasure were storage facilities and dryers of agricultural products, which received 56.4% of the total amount paid under the plant production submeasure. Under the plant protection, manure spreading and seed production submeasure, the purchase of manure spreaders was supported with MEEK 15.3. MEEK 6.6 was allocated to the upgrading of infrastructure systems.

Measure 3.2 – support for investments in improved processing and marketing of agricultural products

A total of 39 applications for MEEK 116.8 were filed. MEEK 177.9 was designated for support in 2004–2006. Because of the tight budget, 15 applications in a total of MEEK 57.9 were approved under measure 3.2. Payments have been made so far for 28 projects in a total amount of MEEK 93.3.

The largest group of beneficiaries in 2005 was the meat industry with 36%, followed by dairy industries with 33%, fruit, vegetables and berries processing with 17% and cereals processing with 14%. The payments made to the sector were smaller this year, except for the cereals industry, which received about MEEK 4 more.

Measure 3.4 – integrated land improvement

Under measure 3.4, 48 applications for a total sum of MEEK 70 were filed. About MEEK 160 was allocated to this measure in the budget for 2004–2006; the first round of applications covered 44% of the three-year budget. No projects have been

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approved so far and no payments have been made. Support was available for the construction, reconstruction and renovation of land improvement systems and for improving the access routes to agricultural land. MEEK 67.1 was applied for to construct or reconstruct land improvement systems and MEEK 3.1 was applied for to renovate roads.

Measure 3.5 – restoration and development of villages

Applications were received from 15 December 2005 to 20 January 2006; 289 applications were filed. The applications covered MEEK 106.7, but the budget amounts to only MEEK 37.3. Some applications filed at the end of 2004 were approved in 2005. Of 306 applications, 172 projects were financed in a total amount of MEEK 62.9. Support was divided between three submeasures: buildings 87%, furnishing 7% and information points 6%. Under measure 3.5, 69 projects were financed in a total sum of MEEK 25.2.

Measure 3.8 – support for advisory and information services

This measure is divided into four submeasures:

- support for setting up advisory centres;
- advisory support;
- nationwide information day;
- county information day.

Support for setting up advisory centres was available for 15 approved advisory centres, one in each county. Applications were received for 15 advisory centres, but the Lääne-Virumaa advisory centre filed an application to waive support. In 2005, 14 projects in a total amount of MEEK 1.7 were approved.

For setting up advisory centres, the largest sum of support was allocated for the procurement of computer hardware and software: 44.7%, followed by office furniture with 11.5% and improvements of rooms with 10.7% of the approved amount.

Advisory support was requested for 217 projects in a sum of MEEK 1.1, which was paid during the accounting year. 52.6% of the funds were allocated for advice on crop farming, 19.8% for advice on livestock farming, 11.7% for financial and business advice. In the framework of the nationwide information day, 23 applications were filed that could not be approved during the accounting year.

On the county information day, 184 applications were received: 134 of them were approved in a total amount of MEEK 1.3.

Measure 3.9 – regulating the fishing capacity of the fishing fleet

A total of 39 applications were received from 30 applicants. In 26 applications out of 39, support was requested for the disposal of fishing vessels, and in 13 cases the applicants wanted to change the intended purpose of the vessels. Since the budget was limited (applications covered 245% of the budget),

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preference was given to changing the intended purpose of the fishing vessels. In total, MEEK 147 was applied for, including MEEK 76.5 for the disposal of fishing vessels and MEEK 70.5 for changing the intended purpose of fishing vessels.

Measure 3.10 – modernisation and renewal of the fishing fleet

A total of 16 applications were received, of which 12 projects in a sum of MEEK 16.9 were approved for support. The approved projects include applications filed in 2004 and 2005. Some of the applications filed in 2005 are still being processed. Nine projects have been implemented, i.e. fully paid under this measure. A total of MEEK 10.2 has been paid out under this measure. MEEK 50 has been designated for support in 2004–2006.

Submeasure 3.11.2 – support for investments in aquaculture

A total of 24 applications were filed, of which 17 projects have been approved by now (including projects of 2004) to be supported by MEEK 28.7. The largest amount was allocated to the renovation of aquacultural buildings and facilities: 92% of the total amount; 4% was allocated to fish farm pounds and pools. MEEK 18.3 was paid out under this measure to support investments totalling MEEK 33.9. Seven projects were paid out in full during the accounting year.

Submeasure 3.11.3 – modernisation of fishing ports

A total of 12 applications from 10 applicants were received for MEEK 51.6. Four applications were filed in Pärnumaa, three in Saaremaa and two in Tartumaa. Eleven projects were approved and will be supported by MEEK 44.1. Of this MEEK 44.1, 76% was allocated to the renovation of port berths, 8% to fishing port roads, and 6% to loading and unloading devices.

Submeasure 3.11.4 – support for investments in inland water fishing

A total of 11 applications were received, of which 7 projects in a sum of MEEK 1.3 were approved for support. The most supported activity was the purchase of vessels — MEEK 5.2. Projects worth MEEK 5.3 in total were approved in 2005 (taking into account the applications round of 2004). Payments of MEEK 764 646 were made and seven projects were paid out in full.

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Kristel Maidre, Urve Valdmaa, Eha Niinepuu

4.1. Development of revenue in the agricultural sector in 2005 (based on EAA)

According to the preliminary data for 2005, the output of the agricultural industry including subsidies was BEEK 7.9, of which subsidies to crop and livestock farming formed 4.4% (MEEK 349). The output of the agricultural industry increased compared to 2004 in terms of base prices: the increase was 7.0% including subsidies and 8.1% in producer prices excluding subsidies. Agricultural output increased 5.4% in terms of quantity and producer prices rose 2.5% on average. The above assessment of economic results on the macroeconomic level has been made using the Economic Accounts for Agriculture (EAA) methodology following from Commission Regulation (EC) No 138/2004. The current year's results are first assessed in November and for the second time in January of the following year.

Crop production and livestock production formed 37.5% and 53.4% of the value of the output of the agricultural industry, having increased 2.3% and decreased 1.5% compared to the previous year, respectively. Agricultural contract work formed 1.8% of the output of the agricultural industry and inseparable non-agricultural secondary activities formed 7.3%.

Compared to 2004, crop production increased 14%; the value of the output of the crops which suffered from unfavourable weather conditions in 2004 increased the most (potatoes, fruits, berries). The value of potato output increased 89.7%, owing to increases in both the volume of output (50.2%) and

producer prices (26.3%). The value of fruits and berries increased 64.4%, mainly due to the 74.7% increase in the output volume, since producer prices dropped by 5.9% on average. Cereals (36%), fodder crops (19.7%), potatoes (16.6%) and vegetables (13.1%) formed the largest parts of plant production. The relative share of potatoes has increased 6.6% compared to the year 2004.

Livestock production, which is based both on the live weight of slaughtered animals as well as live weight increase and livestock products, increased 4.1% since 2004. The value of sheep and goat production increased the most (28.1%), owing to the increase in the number of animals. The value of poultry and egg production decreased compared to 2004. Raw milk (57.3%), pigs (20.6%) and bovine animals (9.3%) formed the largest parts of livestock production.

Intermediate consumption amounted to BEEK 4526 in 2005, or 57.1% of the output of the agricultural industry. Intermediate consumption increased 5.1% since 2004, including 3.3% owing to quantity and 2.2% owing to prices.

Producer prices were calculated using the Estonian Statistical Office's producer price index for agricultural products, and intermediate consumption is based on the Estonian Statistical Office's purchase price index of capital equipment.

Gross and net value added increased 9%, mainly due to a more efficient use of inputs and a greater rise in the selling prices of the products compared to the prices of inputs.

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Table 1. Economic Accounts for Agriculture indicators in 2000–2005 (MEEK)

	2000	2001	2002	2003	2004	2005*
Crop production	2 413.8	2 328.0	2 524.7	2 646.6	2 607.6	2 972.4
including subsidies on crop production	124.8	112.3	112.6	117.1	206.1	160.8
Livestock production	2 934.3	3 694.1	3 418.1	3 405.3	4 066.3	4 232.4
including subsidies on livestock production	115.0	114.8	116.6	146.4	189.3	188.3
Agricultural contract work	102.0	92.7	106.5	139.8	138.1	141.9
Inseparable non-agricultural secondary activities	517.4	605.8	631.5	559.5	593.1	578.9
Output of the agricultural industry in base price	5 967.6	6 720.6	6 680.8	6 751.1	7 405.1	7 925.6
Intermediate consumption	3 527.6	3 953.1	4 077.0	4 024.3	4 287.1	4 525.9
Gross value added	2 440.0	2 767.4	2 603.8	2 726.8	3 118.0	3 399.7
Depreciation of fixed assets	650.4	669.8	661.7	699.2	716.6	783.2
Net value added	1 789.6	2 097.6	1 942.1	2 027.6	2 401.4	2 616.4
Other subsidies	108.1	88.2	189.8	124.3	822.0	1 116.2
Factor income	1 826.3	2 111.5	2 108.8	2 121.6	3 199.2	3 707.8

*preliminary data, January 2006

Source: Ministry of Agriculture, Estonian Statistical Office

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

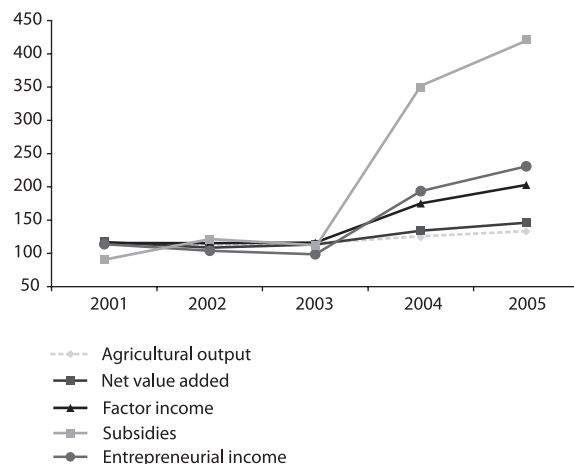
Product subsidies (complementary national direct payments for field crops and suckler cows, bovine animals and ewes) decreased 11.7% in 2005.

Other subsidies (less-favoured areas, agri-environmental support, subsistence farm adaptation support, single area payment, state benefits) increased 35.8% or by MEEK 1116.2 in 2005 compared to 2004 (MEEK 822).

Factor income (net value added including other subsidies less other taxes), which measures the remuneration of all factors of production (land, labour, capital), increased 15.9% since 2004, according to preliminary data.

Figure 1 shows how agricultural output, net value added, factor income, subsidies and entrepreneurial income have changed during 2000–2005. While the economic results for 2004 were most influenced by an increase in subsidies and a rise of sales prices (e.g. the buying-in price of raw milk rose 33.2%), which significantly added to the assets available to agricultural producers, the developments were not so rapid anymore in 2005. The rapid rise of input prices (chiefly fuel and electricity) slowed down the rise of income indicators. Subsidies continued to increase, but the growth was not so fast anymore as in 2004.

Figure 1. Indices of changes in agricultural output, net value added, factor income, subsidies, and entrepreneurial income in 2001–2005 (the year 2000 = 100)



¹ The subsidies have been accounted for using the accrual principle in line with Commission Regulation (EC) No 138/2004.

4.2. Assessment of the economic sustainability of agricultural holdings (based on FADN)

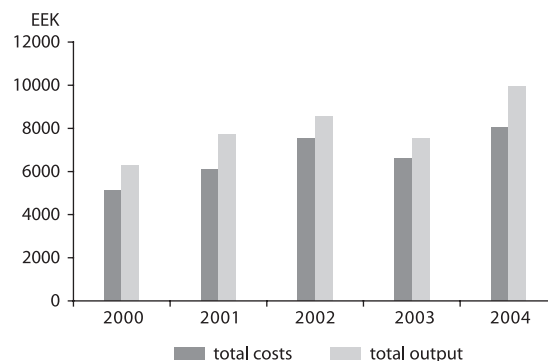
Based on the compilation „Põllumajandustootjate majandusnäitajad 2004“ (Economic indicators of agricultural producers 2004), issued by the Jänedä Training and Advisory Centre in 2005, the average size of an agricultural holdings was 16.3 ESU in 2004. Pig and poultry farms were the largest (78.2 ESU). An average agricultural holding had 117.3 ha of agricultural land (62% of it rented). More than a half (52%) of the land was under fodder crops and about one-third was used for growing cereals in 2004. On average, 3.3 annual units of labour were used in a holding (1 annual unit equals 2200 working hours), of which the unpaid labour of the owners formed 46%. Pig and poultry farms were the most labour intensive: they employed 11.5 persons on average.

An average holding received EEK 182 000 of subsidies -- this is four times more than in 2003. Subsidies per hectare of agricultural land increased from EEK 482 in 2003 to EEK 1551 in 2004.

Total output (including subsidies) amounted to EEK 9947 per hectare of agricultural land in 2004; this indicator increased by EEK 2412 or 32% since 2003. Total costs per hectare increased from EEK 6621 in 2003 to EEK 8041 in 2004, that is 21% (by EEK 1420). A comparison of total output and total costs per hectare of agricultural land shows that EEK 1906 per ha was left for investments and development of production in 2004; this is twice as much as in 2003.

² 1 Economic Size Unit = EUR 1200. The economic size in ESU is calculated by dividing a holding's standard gross margin by EUR 1200.

Figure 2. Total output and total costs per hectare of agricultural land in 2000–2004



Gross value added per labour unit was EEK 146 124 in 2004 or EEK 63 000 more than in 2003. Subsidies accounted for 37.7% of the gross value added in 2004 and only 18.0% in 2003. The average net value added per labour unit was EEK 113 533 in 2004, which is about twice as much as in 2003 (EEK 58 870).

Crop production farms with over 400 ha of land proved to be the most successful in 2004 -- they produced an average of EEK 225 109 of net added value per labour unit.

The above analyses were made on the basis of the data and methodology of the Farm Accountancy Data Network (FADN), which was created by the EU Member States in 1965.

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Estonia collects data from 500 agricultural holdings; the data is checked, analysed, summarised and submitted to the European Union. The Jäneda Training and Advisory Centre (renamed the Rural Economy Research Centre from 1 January 2006) has successfully performed this work.

Following from the FADN objectives, the data network covers only so-called professional business undertakings that derive most of their income from agricultural production and the output of which implies a principal job and sufficient income for at least one worker.

The economic size of a holding is characterised by standard gross margin, which is the difference between the value of the holding's agricultural production and the variable costs (unit costs) incurred for it. The lower limit of economic size established in Estonia is 2 ESU (European Size Units), which corresponds to EEK 37 550. A holding should have at least 20 ha under cereals or 5 cows to cross this threshold.

In order to better compare agricultural holdings, they are classified by the type of farming. The type of farming is determined based on the share of each type of farming activities in the total standard gross margin of the holding. Seven aggregated types of farming are applied in Estonia on the general level: cropping, horticulture, permanent crops, milk, livestock, pig and poultry, and mixed farming.

By the type of farming, croppers, livestock producers and mixed producers dominated. The holding's annual report

and other accounting documents are the main source of data, which is why the data of 2004 can be analysed now. There is an essential difference in the way fixed assets and depreciation are recorded in financial records and in FADN: in the latter, fixed assets are carried at restoration cost and depreciation accumulates on a straight-line basis depending on the useful life of the asset.

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

4.3. Agricultural producer price and purchase price indices

The producer price index of agricultural products characterises the change in the selling prices of agricultural products produced in Estonia. This index changed 0.5% in 4Q 2005 compared to 4Q 2004, including -2.5% in crop production and 1% in livestock production. The selling prices of flowers and sets (18.4%), bovine animals for meat (14.6%) and potatoes (12.3%) rose the most in 4Q 2005, while the selling prices of fruits and berries (21.1%) and fresh vegetables (15.6%) dropped. As regards the quarterly indices of 2005, the price of industrial crops changed the most: it was the lowest in 2Q and the highest in 4Q; the price of milk remained relatively stable.

The purchase price index of capital equipment of agricultural production changed 5.2% in 4Q 2005 (compared to 4Q 2004). This index characterises changes in the prices of the expenditure items of agricultural undertakings. The prices of energy, fuel, and lubricants rose the most (16.2%) compared to the same period of the previous year, while the prices of plant protection products dropped (1.2%).

Table 2. Change in the producer price index of agricultural products in 2005 compared to the same period of the previous year, %

Agricultural product	I	II	III	IV
Cereals (including seeds)	-11.2	-20.8	-11.2	-4.7
Industrial crops	-20.4	-21.1	-16.1	3.3
Vegetables and horticultural products	12.4	6.7	17.0	-4.3
Potato (including seeds)	28.0	24.8	37.6	12.3
Bovine animals for meat	27.2	27.5	12.5	14.6
Pigs for meat	6.1	5.1	1.6	-1.1
Milk	4.7	2.0	3.6	0.2
Eggs	6.8	1.6	4.1	2.4

Source: Estonian Statistical Office

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Table 3. Change in the purchase price index of capital equipment of agricultural products in 2005 compared to the same period of the previous year, %

Chapter	I	II	III	IV
Total	4.3	4.5	6.0	5.2
Seed	2.5	1.7	0.4	0.2
Energy, fuel, lubricants	13.9	17.8	21.9	16.2
Fertiliser and soil improver	4.8	6.1	5.9	6.3
Plant protection products	4.3	0.3	0.1	-1.2
Veterinary costs	2.3	5.5	7.2	7,6
Forage	0.9	-1.1	0.3	1.1
Equipment and material	1.8	2.1	1.2	13
Building materials	10.0	8.2	7.4	8.0
Other goods and services	-0.1	-0.4	0.1	0.5

Source: Estonian Statistical Office

4.4. Taxes and tax arrears of agricultural undertakings

Agricultural undertakings declared MEEK 474 of taxes in 2005, including MEEK 369 of social tax, MEEK 176 of personal income tax and MEEK 108 of refundable VAT. Compared to 2004, MEEK 57 or 10.7% less of taxes were declared in 2005. The average taxes of a legal person engaged in agriculture were EEK 261 000 and those of a sole proprietor were EEK -100 in 2005. Compared to 2004, an average legal person engaged in agriculture declared EEK 36 800 less of taxes and the taxes of an average natural person also decreased by EEK 1400.

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Table 4. Taxes declared by agricultural undertakings in 2004 and 2005 (EEK '000)

Type of tax	2004			2005		
	Legal persons	Sole proprietors	Total	Legal persons	Sole proprietors	Total
VAT	-422	-33 423	-33 844	-49 004	-58 858	-107 862
Social tax	304 357	40 724	345 081	323 950	44 671	368 621
Personal income tax withheld	173 645	9 296	182 941	167 821	8 555	176 376
Sole proprietor's income tax	–	6 142	6 142	–	1 981	1 981
Corporate income tax	10 325	41	10 366	10 894	31	10 925
Unemployment insurance premium	12 720	877	13 597	13 495	924	14 419
Contribution to mandatory funded pension	6 327	443	6 769	8 961	578	9 538
Total	506 952	24 100	531 052	476 117	-2 118	473 998
Number of agricultural producers	1 700	18 538		1 821	20 834	
Average per producer	298.2	1.3		261.4	-0.1	

Source: Tax and Customs Board, Ministry of Agriculture

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

Table 4 shows that across all types of taxes, only legal persons paid taxes in the agriculture sector in 2005, while sole proprietors were entitled to large VAT refunds. Experts are of the opinion that the large VAT refunds arise from investments in fixed assets.

As of 31 December 2005, 7295 agricultural undertakings (1821 legal persons and 20 834 sole proprietors) owed tax arrears in a total of MEEK 192. The total arrears of agricultural undertakings decreased in 2005 by MEEK 45 or 19.1% compared to the year 2004. The number of debtors also decreased by 863 or about one-tenth. The structure of tax arrears did not change

significantly compared to 2004. Social tax arrears continue to be the largest, forming 39% of the total tax arrears in 2004 and increasing another 2% in 2005.

The Rural Development Foundation issued MEEK 109.5 of loans and secured MEEK 166.6 of loans in 2005. Rural undertakings mostly used the security to obtain credit (MEEK 135.6). MEEK 13.8 was paid as grants and EEK 95 000 was spent on promoting rural life.

Tabel 5. Erinevate maksude võla osa koguvõlgnevusest 2004. ja 2005. a (tuh kr ja %)

31.12.2004	Income tax	%	VAT	%	Sole proprietor's income tax	%	Social tax	%	Other taxes	%	Total
Legal persons	4 160	2	65 773	36	31 139	17	72 571	40	6 615	4	180 258
Sole proprietors	14 139	25	16 532	30	966	2	19 435	34	5 639	10	56 711
Total	18 299	8	82 305	35	32 105	13	92 006	39	12 254	5	236 969
31.12.2005											
Legal persons	2 794	2	41 352	32	21 035	17	57 507	45	4 623	4	127 312
Sole proprietors	19 387	30	18 435	29	791	1	20 130	31	5 630	9	64 376
Total	22 181	12	59 787	31	21 826	11	77 637	41	10 253	5	191 688

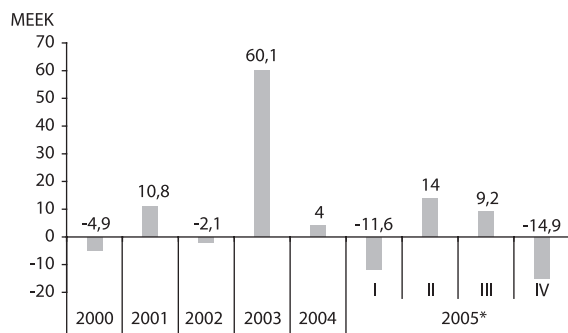
Source: Tax and Customs Board, Ministry of Agriculture

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

4.5. Economic situation in the food industry, dairy industry profits, value added

Although the dairy industry incurred a loss of MEEK 3.3 in 2005, it made profits in 2Q and 3Q: MEEK 14 and MEEK 9.2, respectively. The dairy industry has been favourably influenced by the trend of producing and exporting more and a wider range of higher value added products.

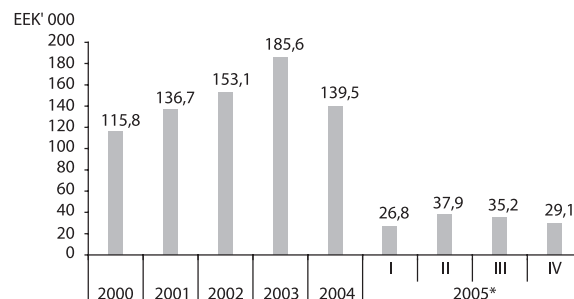
Figure 1. Gross profit in current prices 2000-2005



Source: Estonian Statistical Office (*preliminary data)

The value added per employee is a seasonal indicator, since it is related to the procurement of raw material. The value added is higher in the middle of the year (2Q and particularly 3Q) and lower during the winter season (1Q and 4Q).

Figure 2. Value added per employee 2000-2005



Source: Estonian Statistical Office (*preliminary data)

Investments

Most dairy industries are owned by a smaller group of investors. There are six cooperative enterprises, they own seven processing units. Foreign investments have been made in five enterprises and eight processing units are owned by foreigners.

MEEK 179.94 was invested in fixed assets in the dairy industry in 2005. The scope of investments grew by MEEK 29.36 since last year. MEEK 34 was invested in buildings and MEEK 145 in equipment.

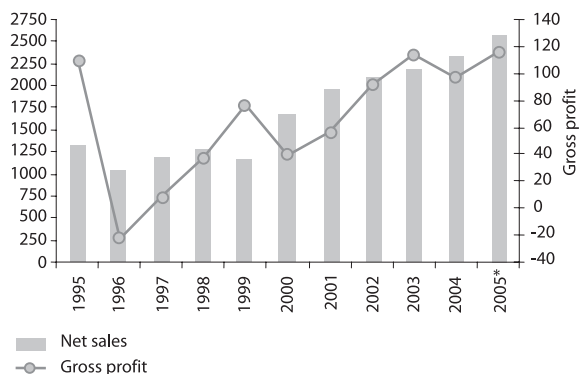
Economic results of meat processing enterprises

Although some years have been successful and others less successful over the past ten years, the sales of the meat sector show a stable growth trend. Net sales increased 10% in 2005

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

compared to the previous year and amounted to MEEK 2565. Sales per employee have also steadily increased, reaching EEK 986 000 in 2005, that is 14% more than in 2004. Sales per employee have increased nearly three times since 1995.

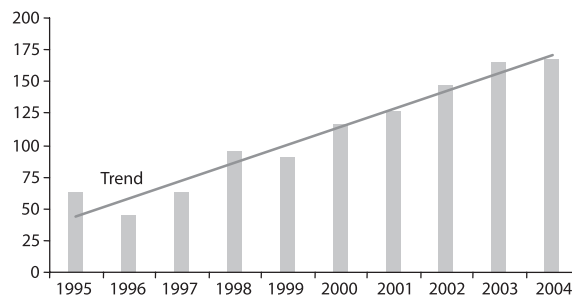
Figure 3. Net sales and gross profit (MEEK), 1995–2005



* preliminary data
Source: Estonian Statistical Office

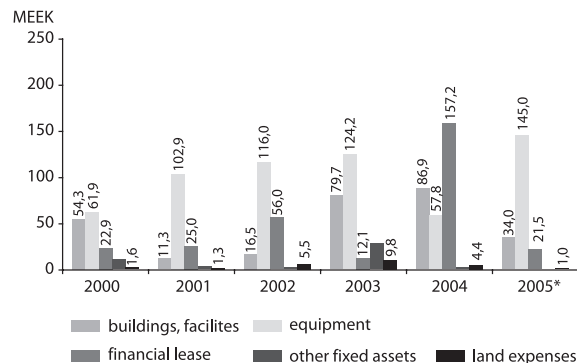
The meat sector earned MEEK 115 or 10% more of profit in 2005 than in 2004. Profit forms nearly 4% of sales, which is on average 0.3% more than in 2004. The meat sector was operating with a loss last in 1996, when the losses totalled MEEK 22. The value added by the meat sector was MEEK 452 in 2005, which is 10% less than in 2004. Value added per employee has more than doubled since the end of the 1990s. The value added per employee was EEK 168 000 in 2004

Figure 4. Value added per employee



Source: Estonian Statistical Office

Figure 5. Investments in fixed assets 2000–2005



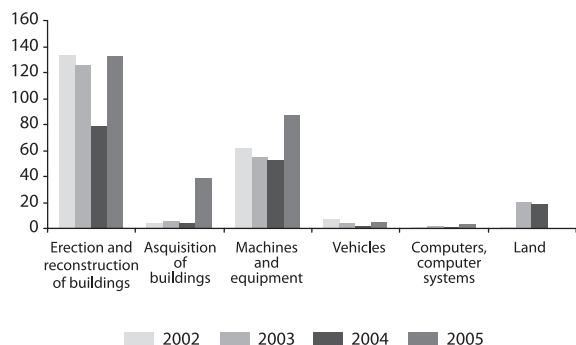
Source: Estonian Statistical Office (*preliminary data)

4. ECONOMIC SITUATION IN AGRICULTURE AND FOOD INDUSTRY

While the investments focused on the renovation of buildings in 2003 and product development (various packing lines) in 2004, the enterprises started in 2005 to invest more in modern equipment to ensure a more stable product quality. Great attention is paid to increasing the share of higher value added products. Small packaging of cheese (varied weights, sliced and grated products) has become more common. Great emphasis is laid on extending the shelf life of products (packing in a protective atmosphere).

Investments

Figure 6. Meat industry investments in fixed assets in 2002–2005 (MEEK)



Source: Estonian Statistical Office

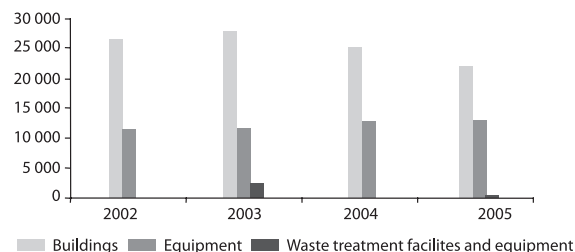
Meat processing enterprises invested much more in fixed assets than in earlier years, these investments totalled MEEK 227 in 2005. The largest investments were made in the erection and reconstruction of buildings and facilities (MEEK 132.4),

purchase of machines and equipment (MEEK 87) and acquisition of buildings and facilities (MEEK 39).

The enterprises have greatly benefited from the investment support granted by the public sector from two sources: SAPARD and Measure 3.2 of the National Development Programme.

Meat processing enterprises have filed applications for investment support in a sum of MEEK 275.3 during four years (2001–2005). MEEK 204.8 was approved and MEEK 152.4 has been paid out. Support has been used the most for investments in buildings and equipment, and to a lesser extent for investments in the building and acquisition of waste treatment facilities and equipment. Meat processing enterprises have not used investment support for quality and control systems or for environmental investments. The probable reason behind this is that so far, the companies have had to focus their investments in meeting the mandatory food safety requirements; less productive investments have been given lower priority or postponed.

Figure 7. Support payments made for various investments in 2000–2005 (EEK '000)



Source: ARIB

5. RURAL DEVELOPMENT

Tõnu Taat, Kristine Hindriks, Cristian Selg, Vahur Võrel, Ants Laansalu

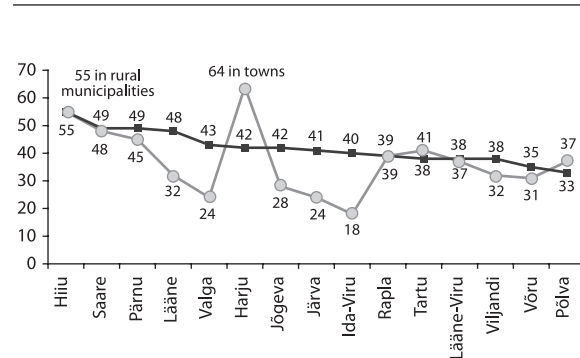
5.1. Brief overview of rural enterprise

According to the Commercial Code, an undertaking is a natural person who offers goods or services for charge in his or her own name, or a company provided by law (public limited company, private limited company, general partnership, etc.). An enterprise is defined as an economic unit through which an undertaking operates. The compilations of the Estonian Statistical Office reflect the number of undertakings entered in the commercial register. The number of rural enterprises has been relatively stable (23 000 – 24 000) in recent years, according to the Centre of Registers.

About 75–80% of the rural undertakings are economically active (operating). Large urban centres and the surrounding rural municipalities are the most viable. Tallinn's influence reaches beyond Harju county to the northern parts of the counties of Rapla and Järva. The sphere of influence of the towns of Tartu and Pärnu is smaller and covers the surrounding rural areas within 20 km from the towns.

Research has shown that one of the major bottlenecks for Estonian enterprises in terms of stimulation of growth is the second to third year of operation. The percentage of survival of enterprises is relatively small (54%) and their ability to make additional investments from equity capital is poor.

Figure 1. Undertakings per 1000 inhabitants, 2004



Enterprise activity and structure of enterprises

Following is an overview of companies (general partnerships, limited partnerships, private limited companies, commercial associations, public limited companies and sole proprietors) included in the statistical profile of the Centre of Registers, i.e. economically active companies. The enterprise activity of the population is characterised by the number of enterprises per one thousand inhabitants. This indicator was 41 in rural areas in 2004, while the variations between the counties were up to 1.7 fold. Enterprise activity was the lowest in the counties of Põlva and Võru (33 and 35) and the highest in Hiiu county (55), Pärnu and Saare counties (49). The average enterprise activity of Estonian towns (47) exceeded that of the rural areas 15%. The towns of Harju county (64) stand out for greater enterprise activity, while those of the counties of Ida-Viru (18), Valga (24) and Järva (24) are the least active.

5. RURAL DEVELOPMENT

Table 1.
Economically active enterprises per 1000 inhabitants, 2003–2004

County	rural municipalities		towns	
	2003	2004	2003	2004
Harju	36	42	58	64
Hiiu	52	55	48	32
Ida-Viru	38	40	17	18
Jõgeva	41	42	27	28
Järva	39	41	22	24
Lääne	46	48	36	32
Lääne-Viru	41	38	30	37
Põlva	34	33	32	37
Pärnu	45	49	41	45
Rapla	36	39	36	39
Saare	49	49	42	48
Tartu	37	38	37	41
Valga	39	43	21	24
Viljandi	34	38	29	32
Võru	33	35	28	31
Keskmine	37	41	43	47

Source: *Towns and rural municipalities in numbers, 2004 and 2005*

In addition to the counties of Hiiu, Pärnu and Saare, enterprise activity is also quite high in the rural municipalities of Lääne county (48 enterprises per 1000 inhabitants). Data analysis leads to the conclusion that the economically active undertakings in the rural municipalities are very unevenly distributed across the regions: the undertakings of the counties of Harju, Lääne-Viru, Pärnu, Rapla and Tartu form 54% of all rural undertakings. The concentration of enterprises near Tallinn (19.1% of all rural enterprises) is also noticeable.

Table 2. *Rural undertakings by sector of the economy, 2003 and 2004*

	2003	2004	2004/2003 %
Total undertakings	17 552	18 805	+7,1
Primary sector	8 758	9 092	+3,8
Secondary sector	2 422	2 904	+19,9
Tertiary sector	6 372	6 809	+6,9

Source: *Towns and rural municipalities in numbers, 2004 and 2005*

The number of rural undertakings increased by 1253 (7.1%) compared to the year 2003. The growth was larger in the secondary sector (19.9%) and smaller in the primary sector (3.8%). The largest differences in the relative shares of various sectors of the economy (up to four times) are evident among primary sector companies: from 70.8% in Jõgeva county and 67.4% in Järva county to 17.5% in Harju county.

5. RURAL DEVELOPMENT

The counties of Harju (20.2%) and Jõgeva (8.5%) have the largest and smallest shares in the secondary sector, respectively, the difference being 2.4 fold; in the tertiary sector the difference between Harju county (62.3%) and Jõgeva county (20.7%) is triple. Following Harju county in the secondary sector are the counties of Rapla (16.1%) and Tartu (30.6%). The share of the secondary sector is low not only in Jõgeva county, but also in Valga county (9.5%).

For the share of tertiary sector enterprises, Harju county is followed by the rural municipalities of the counties of Rapla (44%) and Pärnu (33.4%). Like in Jõgeva county, the share of the tertiary sector is small in the counties of Järva (22.4%) and Saare (23.4%).

Rural undertakings are positive-minded and looking into the future, but they require support to develop their operations, since their own resources are still insufficient to be successful in the toughening competition.

Estonia's economic growth accelerated to 6.2% in 2004. The processing industry, transport, warehousing, communication, and mainly domestic market orientated areas of activity such as real estate and other business services, domestic trade and construction had the largest impact on economic growth. These five areas contributed 84% of the annual growth of value added in the fixed prices of 2000.

In 2005, economic growth reached 9.6%, which was even more rapid than the average growth in 2004. Economic growth was based on domestic demand, which in turn was favoured by good borrowing and leasing conditions, low in-

terest rates of loans and deposits, and positive labour market developments. The continued rapid growth of domestic demand components was confirmed by the increased growth figures of domestic trade, an even more active real estate market, and the continuously favourable situation on the construction market.

The growth of private consumption was supported by the increased number of employed persons, the reduced number of unemployed persons, and the acceleration of the real growth of average wages, which boosted the growth rate of available income. Private consumption expenditure increased mainly on account of the consumption of goods and expenditure on the acquisition of dwelling.

Employment

The economic status of rural inhabitants has changed greatly during 1989–2004. Unemployment and inactivity have become problems. There was virtually no unemployment at the beginning of the 1990s, but in the year 2000 there were 28 500 unemployed persons and 144 300 inactive persons in rural areas (13.8% and 41.2% of the working-age population, respectively). Unemployment decreased over the following years to 8.1% in 2003. The number of unemployed persons decreased by a total of 13 800 in rural areas during 2001–2003. In 2004, the number of the unemployed increased by 1100 and the unemployment rate was 8.6%, which was 0.5% more than in the previous year. The number of the unemployed decreased significantly (by 2700) in 2005, when the unemployment rate was 7.0%.

5. RURAL DEVELOPMENT

Table 3. Rural inhabitants aged 15–74 by economic status, 1998–2005 (annual average, '000)

period	labour force			inactive	total	employment rate %	un-employment rate %
	total	employed	unemployed				
1998	205.0	183.5	21.5	138.9	343.9	53.4	10.5
1999	207.9	181.0	26.9	143.9	351.8	51.5	12.9
2000	205.9	177.4	28.5	144.3	350.1	50.7	13.8
2001	189.5	164.2	25.3	134.7	324.2	50.6	13.4
2002	180.4	163.3	17.0	139.3	319.7	51.1	9.4
2003	182.6	167.9	14.7	135.5	318.1	52.8	8.1
2004	184.9	169.1	15.8	137.9	322.8	52.4	8.6
2005	185.9	172.8	13.1	139.3	325.2	53.1	7.0

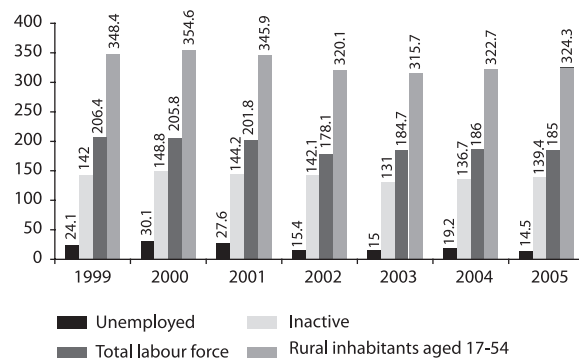
Source: Labour Force Survey data 1998–2005

The relative share of inactive persons decreased in 2001 (0.3%) and in 2003 (1%), but grew 2.1% in 2002; in the three-year total, the number of inactive persons decreased by 8800. In 2004 the number of inactive persons increased by 2400 and in 2005 by another 1400.

In 2005, the unemployment rates in Estonia and in the EU15 were 7.0% and 7.9%, respectively, and the EU25 average was 8.7%. The situation was the best in Ireland (4.3%), United Kingdom (4.6%) and Netherlands (4.7%), and the worst in Poland (17.7%), Slovakia (16.4%) and Greece (10.0%).

Figure 2.

15–74-aastased maaelanikud majandusliku seisundi järgi, 1999–2005 (II kv)



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The role of the primary sector (agriculture, hunting, forestry and fisheries) in employment has decreased more than four-fold in rural areas since 1989 (from 55.9% to 13.6%). On average, 3.9% of all employed persons worked in the primary sector in the EU15 in 2002.

Estonia follows a similar trend and the relative indicator reached 3.8% in 2005, according to preliminary data. The share of the primary sector in Lithuania, Latvia, and Finland, was 17.8%, 15.1%, and 5.3%, respectively. In countries of established agricultural traditions such as the UK and Germany, the primary sector employed only 1.6% and 2.4% of the total labour force, respectively.

The share of the tertiary sector (services) in rural areas has increased 1.9 times during the same period, and that of the secondary sector (processing industry, mining industry, construction, energy, gas and water supply) has increased 1.7 times.

The number of employed persons in rural areas has decreased from 246 300 in 1989 to 172 800 in 2005 (-29.8%). The working-age population has decreased by 8700 persons during the same period (-2.6%). A detailed survey of rural employment and enterprise is available at the website of the Estonian Ministry of Agriculture under the section "Rural Life".

5.2. Development of rural tourism

The rural tourism sector consists of rural accommodation undertakings in villages, towns and small towns with a population less than 10 000.

There were 663 approved or registered accommodation establishments in rural areas in 2005, which is 21% more than in 2004. The exact reasons for this growth are uncertain. The legislation on tourism has been amended to some extent. The Tourism Act has been amended to the effect that undertakings who offer accommodation are required to register with the national register of economic activities in order to commence (or continue) their operations. An undertaking is liable for its activities throughout the operating period, not only at the time of applying for the right to operate.

Bed-and-breakfast facilities and holiday homes form more than a half (56%) of all rural accommodation establishments. The number of holiday villages and hotels is somewhat smaller (29%) and the number of hostels, guest houses, motels and visitor's apartments is the smallest (15% in total).

Rural accommodation establishments are concentrated in the major tourism areas such as the islands (Saaremaa and Hiiumaa), where 32% of the establishments are located, and Valga and Võru counties of southern Estonia, which are the places of operation of 20% of all rural accommodation establishments. Tourism investments continued in 2005 with support from the Structural Funds.

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Support for the development of rural tourism was available in 2004 under Measure 3.3 “Diversification of economic activities in rural areas”. While in 2004, tourism projects with MEEK 35 of public sector support were approved, by the end of 2005, MEEK 17 of projects had been completed along with MEEK 35 of investments. Investments continue and the remaining projects will receive payments provided that the requirements are met. Farm buildings and other rural accommodation facilities are reconstructed and erected, and catering facilities are modernised in the framework of the rural tourism activities.

Investment needs

The larger number of foreign clientele has also increased the need for investments, in order to modernise and improve the conveniences for spending longer holidays (as the foreign customers prefer).

The number of customers wishing to spend wellness holidays has almost doubled over three years. Considering the potential growth trend of this type of holiday, it is necessary to diversify wellness holiday services in rural accommodation enterprises, to complete facilities accessible to persons with reduced mobility, and to train rural accommodation undertakings in the creation of conditions for guests with various health disorders and disabilities and in serving them.

Rural tourism enterprise vivifies women’s enterprise amongst other things. Although no data is available on the role of female managers in the profile of companies in national enterprise statistics, it is possible to determine the share of female

undertakings among sole proprietors (www.agri.ee, “Women’s enterprise studies under the FEM project”). Women accounted for 40% of sole proprietors in 2004. A rural tourism survey, however, indicated a female dominance: 58% of the entrepreneurs were female. Rural tourism contributes to a more active involvement of women in the labour market: 71% of the respondent employees were women.

The survey also points out the average number of employees in rural tourism enterprises: 4.7 (4.3 in 2004). The development can be explained by the increased average occupancy during the peak season, when more helpers are needed.

The study indicated that occupancy rates had somewhat improved compared to the previous year, but the large gap between the occupancy rates of peak and off-peak seasons continued to be a problem. The survey conducted in 2000 showed that the annual average occupancy of rural tourism establishments was 22.4%; occupancy has increased nearly 10% over the last five years.

Although off-peak occupancy rates have grown, the seasonal disproportion has also grown since 2004. The difference between peak and off-peak season occupancies was 33.4% in 2004 and 35% in 2005. This growing disproportion is a dangerous development and the largest problem in the work of rural tourism undertakings.

International cooperation project “Regiofood”

An educational film on local food preparing was completed in 2005. The film follows the Estonian President’s chef Indrek

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Kivisalu step by step as he prepares cottage cheese, meat jelly, potato salad, fish soup with vegetables, meat and dumpling soup, boiled pork with vegetables, potato and cereal porridge, cereal cream with cranberry sauce, rye flour cream, and barley loaf with curds.

In the course of the Leonardo da Vinci project “Active Holiday”, training materials on active holidays were completed, which contain a thorough overview of seven forms of active holidays: hiking, bicycling, horseback riding, water areas, adventure trails, rappelling, winter activities. Three training courses were carried out based on these materials: in northern, western, and southern Estonia.

Activities of MTÜ Eesti Maaturism in 2005

The non-profit association Estonian Rural Tourism currently unites 315 rural undertakings. Among other usual activities (such as marketing and training), product development has made a great leap forward. The training courses conducted by the Rural Tourism association have undergone a qualitative change in their methodology over the years, meaning a change of direction from lectures to exercises, workshops, seminars, and study tours to other undertakings. Undertakings are ready to cooperate within their sectors and product groups as well as regionally. The rural tourism survey carried out among customers and rural tourism undertakings in 2005 concludes that the demand for longer holiday venues is growing – a highly welcomed development for rural tourism. The growth trend applies specifically to active and wellness holidays.

5.3. Private forestry

The state owns about 850 000 ha of the total 2.2 million ha of Estonian woodlands. About 60% (800 000 ha) of woodlands will be passed into private ownership as the land reform draws to a close. About 60 000 persons have become forest owners by now; most of them lack the experience and skills needed for forest management. A large part of private forest owners (60–70%) live far from their forest holdings. The management of private forests by the owners themselves has not been continuous due to historical reasons.

Although the average forest holding is 12 ha, it should be stressed that the size of most cadastral units in each county is 1–4.9 ha, and forest covers less than 10 ha of 80% of cadastral units. Less than 1% of Estonian forest owners have 100 ha of forest or more.

Support for the development of private forests

The principles of supporting private forestry are set out in the Forest Act and in the Estonian Forestry Development Plan till 2010. According to the legislation, private forest owners are supported from state resources via the Private Forest Centre, a foundation established by the state. Support is available via the Private Forest Centre for joint private forestry activities, advising, training, and the development of private forestry support systems. The principles and rates of financing are set out in the procedure for application for and using support, and support is granted to cover specific expenditure.

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Since 2002, private forest owners have been annually supported from the state budget as well as the appropriations of the Environmental Investment Centre and the Centre of Forest Protection and Silviculture. The following amounts of support have been paid via the Private Forest Centre: EEK 1 755 800 in 2002, EEK 3 579 150 in 2003, EEK 4 392 698 in 2004 and EEK 10 551 968 in 2005.

Support for afforestation of agricultural land

The EU CAP rural development measures are implemented in the framework of the Estonian Rural Development Plan 2004–2006. Support for afforestation of agricultural land was implemented in Estonia last year along with other types of support. The purpose of this support, paid from the year 2005, is to preserve the environment and landscape so as to reduce the share of lands withdrawn from agricultural use, lands less suited for agriculture, and lands that have not found an alternative use.

The establishment of a forest plantation was understood as planting forest trees on agricultural land indicated in the support application and activity plan, and the acquisition of forest tree plants and the preparation of soil for planting.

Support was available for the following activities:

- establishment of forest plantations on agricultural land;
- maintenance of forest plantations established with the help of support;
- a single supplementation of the forest plantation established with the help of support in order to restore perished plants.

To receive support, the applicant had to submit to ARIB an application and activity plan approved by the regional land improvement bureau and the county environmental authority.

A total of 645 afforestation applications were received in 2005, of which 506 were approved in an amount of MEEK 17 for the afforestation of 1240 ha. The rate of support for establishing forest plantations was EEK 13 801 per ha; the rate of supplementation support was EEK 2003 per ha, and the maintenance support rate was EEK 1205 per ha.

The afforestation budget for 2005 was over MEEK 55, which would have sufficed to support the afforestation of nearly 4000 ha of land. The same support scheme will apply in 2006 with a budget of over MEEK 98.

5.4. Land improvement and land use

The area of the Republic of Estonia is 4 522 700 ha, of which 3 636 876 ha or 80.4% of the entire republic's territory had been entered in the cadastral register. Among the registered land, there are 1 167 456 ha of agricultural land (arable land and natural grassland), 1 884 733 ha of woodlands, 63 059 ha of land under water, and 521 628 ha of other land.

Land improvement is understood as all activities pertaining to the drainage or irrigation of land, the two-way regulation of the water regime of land, the liming of acid soils, and agricultural land improvement, agricultural engineering and other work to manage land improvement systems in order

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to increase the cultivation value of land intended for use as profit yielding land and of land for residential lots intended for use as residential land but used for agricultural purposes and located in a rural area.

More than 727 000 ha or slightly over a half of Estonian agricultural land is drained (including 646 000 ha by subsurface drainage); about 600 000 ha of woodlands have drainage networks. There are 7600 ha of polders and 21 polder pumping stations. The length of subsurface drainage networks (mostly clay pipes) on agricultural land is 320 000 km and there are 45 000 km of artificial recipients and ditches. There are more than 1300 ha of sprinkler irrigated land and 17 sprinkler irrigation pumping stations.

There are 2.20 million hectares of woodlands in Estonia, of which 1.06 million ha is state-owned forest and 1.14 million ha is private forest. Of all forest lands, 1.06 million ha are excessively wet. 92% of excessively wet state woodlands and only 20% of excessively wet private woodlands have been drained.

Two-thirds of the land improvement systems currently in use have been established before the 1980s. The results of a land improvement survey conducted in 2005 showed that about two-thirds of drained agricultural lands are in use; nearly 11% of them are in a good state of drainage, about 63% are in a satisfactory state and 26% are in a poor state of drainage. More than a half of the artificial recipients are in need of repairs. As the useful life of land improvement systems is considered to be 25–30 years, there is now an urgent need for reconstruc-

tion so as to prevent the systems from complete deterioration. If no land improvement activities are carried about, well-drained arable lands may be lost in about ten years from now, and all drained agricultural lands may be withdrawn from agricultural use in 20–30 years, which will cause rural unemployment and the burden on the social sphere.

Since most land improvement systems have been established by the Soviet large-scale farms, they are now located on the lands of many different owners, which makes it difficult to organise land improvement activities. The renovation and maintenance works of shared land improvement systems should be carried out jointly; non-profit land improvement associations have become one of the forms of organisations performing this work. As of 31 December 2005, 135 land improvement associations with a total of 4015 members had been founded (25 of them in 2005); 338 members are legal persons. Seven regional federations of land improvement and water associations and the Estonian Confederation of Land Improvement and Water Associations have been founded.

The operating area of the land improvement associations is more than 157 000 ha of drained land. In 2005, the land improvement associations cleaned 78 km of ditches from sludges (32 km in 2004), cut grass on 292.3 km of ditch sides (184 km in 2004), repaired 243 culvers (141 in 2004), and repaired damage caused by beavers in 116 places (177 in 2004). In addition to that, 598 drainage wells (344 in 2004) and 1819 drainage mouths (695 in 2004) were repaired and cleaned, and more

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than 60 km of roads were repaired. As a result of land restitution or privatisation in the course of the ownership and land reform, the land improvement systems or their parts belong to the person who owns the land. According to the Land Improvement Act, the state hands over the documents of the land improvement systems to the land owners via the regional land improvement bureaux. By the end of 2005, about 45% of the land improvement system documents had been handed over to the owners.

The maintenance of artificial recipients (27 000 km), which is vital to the functioning of land improvement systems, is in most cases practically and technically impossible for single land owners. The state maintains 5600 km of artificial recipients, but they have been kept only at the technically satisfactory level because of insufficient funding. Renovation and maintenance works for MEEK 8.6 were carried out on these artificial recipients in 2005 (MEEK 10.4 in 2004), including renovation on 89 km (162 km in 2004) and maintenance on 344 km (415 km in 2004).

Maintenance support for land improvement systems

The payment of maintenance support for land improvement systems continued in 2005. This support is available to agricultural producers who are in possession of land improvement systems established on profit yielding land or residential land used for agricultural purposes. The applicant must be a sole proprietor, company (or association of these), or a state or lo-

cal government agency whose business entity engages in agricultural production, or a non-profit association whose statutory activity is land improvement.

Support was paid for the following maintenance works: cutting grass on water conduits, cutting woody plants on water conduits, removing obstacles from water conduits, removing sludges from water conduits, cleaning of drainage mouths, repairs of drainage mouths, cleaning culvers from sludges, cleaning drainage wells from sludges, repairs of drainage wells, polder maintenance, removal of beaver dams.

A total of 767 applications were received for this type of support; 570 applications for MEEK 72.6 were granted.

Integrated land improvement (Measure 3.4)

In order to reduce the threats arising from an unfavourable water regime to agricultural production, improve the productivity of forests, create conditions for the purposeful use of lands, ensure the good status of bodies of surface water covered by land improvement systems, and improve physical access to agricultural lands, MEEK 135 has been allocated as EU agricultural state aid under Measure 3.4, "Integrated land improvement", of the Estonian National Development Programme. The payments were made on the basis of the Estonian NDP 2004–2006.

Measure 3.4 covers land improvement systems shared by several land owners. Investment support was available for land improvement associations and undertakings. The rate of support was up to 90% of the eligible cost of the investment in

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the case of land improvement associations and up to 75% in the case of undertakings.

In 2005, 48 applications for MEEK 70 were received under Measure 3.4. ARIB assigned MEEK 62 for investment support. The maximum amount of support allowed for all the activities of one applicant was MEEK 7 in a calendar year and MEEK 12 under the entire measure.

Support was available for the erection of buildings or facilities that formed a part of a land improvement system or the establishment of a road serving the land improvement system, or for the reconstruction or renewal of these on the conditions and pursuant to the procedure provided in the Land Improvement Act. The construction or reconstruction of private roads was also supported if this was necessary for access to agricultural land.

Liming support

State aid for liming of agricultural land is available for those applicants who use agricultural lands with soil acidity (pH KCL) of up to 6.0 and who have not received liming support for fertilising this land parcel with soil amendment for the previous four years. The state did not allocate any funds for the liming of agricultural land in 2004. In 2005, EEK 13 433 002.2 was paid in support of liming on the basis of 406 approvals (455 of the total 458 applications were approved). The total cost of the work performed with the help of support was MEEK 18 136 733.33 and payments were made for the liming of 11 184.82 ha of land.

5.5. Aquaculture

According to the Estonian Statistical Office, there were 20 aquacultural enterprises in Estonia in 2004 for whom fish farming was the main source of income. There are 20 other enterprises that commercially produce fish in addition to other activities, the quantities of fish they produce are sufficient to regard them as fish farmers. There were 35 enterprises providing only angling services, i.e. fishing tourism enterprises, and nearly 30 new fish and crayfish farmers have made investments to commence aquacultural business. According to the Estonian Statistical Office, 52 persons had a principal job in aquaculture in 2004.

Two enterprises are engaged in the enrichment of water bodies, i.e. artificial reproduction of fish resources: the Põlula Fish Breeding Centre, and the Õngu Juvenile Hatchery. In addition to these, about eight other enterprises contribute to the enrichment of water bodies.

In order to enrich fish resources with pre-bred fry and juveniles, various inland and marine water bodies were restocked with a total of 11 species of aquatic organisms: perch, eel, pike, river trout, crayfish, carp, pike-perch, tench, salmon, sea trout and semi-migratory houting. Sea trout and salmon are being restocked in the largest numbers. In 2004, the Environmental Investment Centre allocated MEEK 2.87 for the restocking of salmon fries.

Divided by the type of fish farming, fish are mostly bred in tanks (216) and ponds (129). Fish were also bred in rapid-flow

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Table 4. Total fish farming output in 1996–2004, t

Species	1996	1997	1998	1999	2000	2001	2002	2003	2004
Rainbow trout	194	227	285	147	313	412	287	304	194
Carp	61	28	23	30	47	52	53	51	47
Total	355	255	312	177	360	464	340	373	258

Source: Estonian Statistical Office

channels (4), pounds (101), and natural water bodies adjusted for fish farming (4).

The total output of fish farming was 258.3 t in 2004. Rainbow trout and carp formed the bulk of the fish farming products: 194.3 t and 47.4 t, respectively. In addition, 1.4 t of crayfish and less than 2 t of other species were produced. The total fish farming output in 1996–2004 is presented in Table 4.

Of the 258 t of fish bred, 217.5 t was sold in 2004; its estimated value was MEEK 10.2. Applications under NDP Measure 3.11.2, “Investment support for aquaculture” were received from 2 June to 14 October 2005. During this period, ARIB received 24 applications. Of these, 17 projects in a total amount of MEEK 28.7 were approved.

The largest amount was allocated to the establishment or renovation of aquacultural buildings and facilities: 92% of the total amount; 4% was allocated to fish farm pounds and pools. The remaining 4% was paid for environmental protection, guarding systems, and project preparatory works.

5.6. Rural initiative

A survey of local initiative development was commissioned by the Ministry of Agriculture and carried out in 30 rural municipalities from 8 March to 8 May 2006. Following is an overview of the most important conclusions of the study, conducted by BDA ESTONIA and OÜ SAAR POLL.

People representing four stakeholders were asked questions in the survey:

- the non-profit sector;
- local governments;
- undertakings;
- rural inhabitants.

Primary sector enterprises formed the largest share; most of them, in turn, were traditional agricultural holdings (farms and larger cooperatives). The number of service enterprises was somewhat smaller and they represented a fairly wide spectre of narrower areas of activity from computer maintenance to

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veterinary medicine. The number of trade and catering enterprises was somewhat larger. Nine enterprises were in the accommodation (tourism) business; some companies had agricultural or other operations at the same time. The sample contained a smaller share of secondary sector enterprises; all of them were industrial companies (i.e. no construction companies). Of the respondents to the survey, two-thirds were salaried workers; two-third of them in turn worked in their home rural municipality.

47.5% of the representatives of local governments and 41.9% of undertakings stated that they participated actively in the operations of the non-profit sector (it is possible that they are not members). Although the percentages of inhabitants are significantly lower, a participation rate of 27.8% in non-profit associations and partnerships is a pleasantly positive indicator.

The formal indicators of social capital among the respondents are good: a high rate of participation in third sector activities, the considerable membership of local non-profit associations and regional coverage. The involvement of younger inhabitants in the promotion of local life seems to be a challenge: young people formed only a negligible share of the respondents. The number of non-profit associations focusing on young people is also relatively small. Although a remarkable percentage of undertakings were personally involved in the non-profit sector, their activities in non-profit associations are not related to the development of enterprise. The survey leads to the conclusion that there are virtually no associations of undertakings in rural areas.

Needs of rural areas

Improvement of the living environment is considered to be the most important field of activity. The second priority is the enhancement of the region's competitiveness in the areas of production and service. A better use of natural and cultural resources and appreciation for local products ranked one place lower, on average.

All the sectors agreed that ensuring development opportunities for young people in rural areas should be the first priority; there is also relative unanimity as regards the next two items on the list: the creation/maintenance of jobs and nature protection. While it could be expected that job creation would be on the top of the list, the fact that nature protection shares the same position with it will need further specification. The sectors are very unanimous about their last priority: the development of new local products, take-over of experience from other regions, and organising joint marketing of local products.

The attitude to innovative activities aimed at specialising in the development of new local products and competitive advantages, and activities requiring greater skills, bringing in external skills, studying and organising the joint marketing of local products, as activities requiring actual cooperation, is rather uncertain and they are considered less important.

The development of infrastructure (mainly roads), public transport, security, the availability of education and quality improvement, and the development of agriculture and various social areas, were also mentioned frequently in addition to the above-mentioned areas.

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Conclusions:

- The preferences of thematic areas suggest that the areas perceived as problematic are more important for rural inhabitants than areas offering more specific solutions.
- A more detailed assessment of regional needs shows that the greatest concern is the competitive and job possibilities of the younger generation. Maintaining a clean natural environment inherent to rural areas and improving the quality of the living environment are also considered important.
- The attitudes reflect an underestimation of joint economic activities and innovation. The question arises: how will new jobs be created if not by the development of new products and services and cooperation in their marketing?
- As many previous questions have shown, the general attitude to cooperation is positive, but cooperation is not perceived as a major precondition for success. Cooperation needs are among the middle rather than the top priorities. Undertakings are especially keen to underestimate cooperation.

Trust and cooperation

The survey demonstrated that non-profit organisations have the most positive attitudes: they have the highest rate of trust in the other sectors. The third sector is best trusted by the local governments and other non-profit associations. The level of trust in non-profit associations is much lower among un-

dertakings and inhabitants. However, the high rate of non-response reveals the undertakings' and inhabitant's weaker link with the third sector.

Local governments enjoy the highest degree of trust among the three stakeholders, but undertakings and inhabitants have the greatest percentage of distrust in them at the same time. As expected, other representatives of the rural municipality have the greatest trust in rural municipality officials.

Undertakings are the most distrusting and suspecting of all the sectors. One-third of the respondents did not assess their trust in the third sector; this shows that there is little contact between undertakings and the non-profit sector.

Inhabitants are the least trusting and the most distrusting of all the sectors. The probable reason for this is that inhabitants are the least informed and involved, and they are more passive. The greater the mutual contacts and cooperation, the greater is trust.

Cooperation is best with the local government sector, which has resources and power. Non-profit associations work especially closely together with the rural municipalities, as they largely depend on the local government's funding of their activities. One-fifth of undertakings keep regular contact with the local government. More than 50% of inhabitants have no contacts whatsoever with the local government.

The local government communicates the most (26.7%) with the non-profit sector of its area, while undertakings' and inhabitants' contacts with non-profit associations are very small and three-thirds of undertakings and inhabitants have no contacts at all with non-profit associations.

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The relatively weak level of networking is revealed by undertakings' contacts with other undertakings: only 16.3%. Only 18.9% of non-profit associations have regular contacts with other non-profit associations. 32.6% of undertakings and 28.9% of non-profit associations have no cooperation whatsoever with other organisations of the same sector.

Local government representatives see themselves in the role of helpers and advisers. They supply information and help write projects. Non-profit associations are also supported financially and in practical issues (transport, facilities, etc.). Participation in third sector events was mentioned frequently; joint organising of such events was mentioned a little less frequently. There was no mention of joint planning of development.

It is positive that the attitude to potential cooperation partners is good: as a rule, all the partners can be involved in local cooperation projects.

The local government is the most popular cooperation partner for all the stakeholders. The reason is obvious: it has material resources and competence and experience in promoting local life; it is possible that its decisions are crucial to development. Only undertakings prefer cooperation with other undertakings to cooperation with the local government officials. Non-profit associations prefer to cooperate with the local government rather than other non-profit associations. The differences in these preferences are not statistically great, but they characterise the tendency toward vertical rather than horizontal relations. Or, hierarchic relations of power rather than partnership-based cooperation.

The most important condition of cooperation is benefiting from the cooperation with the local rural municipality government and village (settlement). There is a danger that in the event of projects requiring a larger number of partners (settlements, rural municipalities), each participant may strive toward their own benefit without seeing the whole picture. This is a negative outcome if the benefits of the components (settlements, rural municipalities) mostly depend on the success of the project as a whole, compared to the case when the impact of an investment is intended to go beyond the limits of single villages and rural municipalities.

The remaining points characterise the atmosphere of cooperation processes; these aspects are considered to be important enough: acceptance of each other (each other's opinions) and democratic leadership, as well as a good company of people. Work is largely perceived as being volunteer work (i.e. not paid), but not as insignificant. Only undertakings have listed remuneration among the top three conditions of cooperation.

Conclusions:

Trust in other sectors is generally good. The non-profit sector is the most trusting of others. Local governments deserve the highest degree of trust. Undertakings are generally more wary of the public and third sectors. At the same time, inhabitants demonstrate the lowest degree of trust. These results show that the more mutual contacts and cooperation there are, the higher the level of trust.

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It is positive that there is a good attitude toward potential cooperation partners – as a rule, all the partners can be involved in local cooperation projects.

The local government is the most popular cooperation partner for the stakeholders. However, it is negative that the willingness to cooperate with the third sector is the smallest, although the differences are relatively small. Intrasectoral cooperation among undertakings and non-profit associations is generally weak. Non-profit associations and undertakings have stronger contacts with the local government, especially compared to inhabitants, only 50% of whom communicate with their local government.

There is little horizontal networking between the local private and non-profit sectors. This cooperation is incidental or practical rather than substantive in its nature.

Local governments do not see the other sectors as being partners for development issues. Especially the non-profit sector is not perceived as an equal partner, but rather a sector in need of help.

As expected, willingness to cooperate with the neighbouring rural municipalities is much lower than willingness to cooperate within the home municipality. The main cooperation criterion is benefit for the home municipality.

The existing forms of cooperation are mainly seen as the means of intensifying further cooperation (only the order of importance of these forms of cooperation has changed). Cooperation with respect to jointly administered objects, organisations or workers, as well as with respect to investments

in joint objects is considered less important -- less than one-third of the respondents are involved in these forms of cooperation (and consider it necessary to intensify such cooperation in the future). It is understandable that “soft” forms of cooperation are easier to carry out. However, in the case of investments there is a danger that potential investments will be fragmented from the start (so that every rural municipality gets something).

Where cooperation is not sufficient (not meeting the needs or wishes), this is due to a number of obstacles, some of which can be objective and others subjective. The first type of obstacles (objective obstacles) require that a certain degree of expenses are incurred where necessary and/or that these obstacles are taken into account as actually existing factors; in some cases, the objective can be achieved in different ways. Overcoming obstacles of the second category (subjective obstacles) requires a change of attitudes or perceptions or the settlement of disagreements (such as personal conflicts) with the help of systematic explanatory work and competent arguments.

The most common obstacle (80.8%) is a lack of resources, which is apparently related to the third-important obstacle: “First we need to take care of our own affairs and then we can do something jointly with the other rural municipalities” (the opinion of 62.5% of the respondents). Thus, cooperation between rural municipalities is regarded as an additional activity of the local government rather than an important means of achieving the main goals. There seem to be areas where co-

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operation between the rural municipalities is not mandatory, but there is a sufficient number of areas where this should be regarded not as a matter in itself, but as a means. Depending on what activities will be undertaken within the LEADER programme, the lack of resources could prove to be a motivator of cooperation rather than an obstacle.

The lack of a cooperation tradition was mentioned as the second-important obstacle (73.3%); this is the gap that the planned programme will be filling.

The fourth obstacle mentioned (60.8%) largely refers to the peculiarity of the Estonian rural settlement pattern: small settlements, sparse population, work and service migration (pendulum migration) to towns and larger centres rather than between the settlements. Mutual communication and cooperation is often prevented by the insufficiency of connecting roads and public transport. It is not wise to oblige rural municipalities cooperate by force; mutual communication arising from population patterns is often the reason and the objective condition that should be taken into account, and probably has been taken into account in the planning of cooperation areas. Little communication due to objective circumstances (except for e.g. the quality of roads) is less important in the development of certain areas such as tourism routes.

The fifth and eighth important obstacles: political and personal disagreements (47.5% and 44.2%, respectively) are subjective in their nature and can be removed, willingness allowing. These obstacles can thwart all good intentions, which is why team leaders need to constantly monitor these aspects.

Conclusions:

- There is certain cooperation experience and a general positive attitude to cooperation. There is experience in the main forms of cooperation that will apparently be important for LEADER.
- Considering that the LEADER areas of activities will cover more than two or three rural municipalities on average, cooperation contacts need to be created and developed in certain areas.

Willingness to cooperate in the implementation of the LEADER measure

It is positive that all sectors have a generally positive attitude to the preparation and implementation of a regional strategy. Once again, the public and third sectors are more interested in the preparation and implementation of a regional strategy. However, the difference with the interest of undertakings is not as great as in the case of many of the former issues.

Undertakings are hesitant about the preparation of the strategy. They are 50% less hesitant about implementing the strategy, as they see themselves as having the least of roles in implementation compared to the other sectors. This is a warning sign that undertakings do not perceive LEADER as “their programme”.

While the third and private sectors see themselves as having a greater role in both the development and implementation of the strategy, the public sector would rather prefer the role

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of the implementer. Local governments seem to be ready to take greater responsibility. They are also less discouraged by financial obligations.

As regards participation in the strategy process, it is equally important for all the sectors that their own rural municipality (90–92%) and village (86–89%) benefit from it. This seems to be among the main motivators that inspire the stakeholders to participate.

The quality of the strategy process seems to be the second important motivator: it is important for all the stakeholders that they be treated as equal partners (80–86%) and that leadership be democratic (78–82%). 10% of the respondents are used to a more authoritarian style of leadership.

Being paid for participating in the strategy process is a little less important. This has the least importance for the public sector (54%). Many respondents seem to consider this as a part of their everyday work. In the third sector, 61% of the respondents would like to be remunerated and 25% of the respondents do not consider remuneration important. The third sector is apparently used to volunteer work. As expected, the private sector is the least willing to contribute without pay: 70% of the respondents regard remuneration important and only 20% do not.

The third and private sector consider compensation of expenses important: only 10% were ready to incur their own costs. Local government officials are 10% more yielding -- they would probably also incur less personal expenses, since the strategy processes are often part of their work duties.

One of the recurring motives was the wish not to give empty promises and to see a tangible result. As one respondent put it: "... that the written projects would really be financed".

There was a frequent wish to obtain more information and training before taking a decision, and to weigh the pros and cons before deciding to participate. "I will not do anything without thinking first," said one of the respondents.

Undertakings stressed that they have little time. Many respondents did not regard a regional strategy to be the duty of undertakings. "This work should be done by those whose job it is: the local government, ministry, and others."

The different stakeholders are surprisingly unanimous about their readiness to prepare the strategy. They see their role in participating in discussions and representing their stakeholders. They are ready to collect information if necessary. It is natural that local government representatives see this as mostly their role, since they have the best access to different databases.

Undertakings are more modest and hesitant about all activities; the reasons for this have already been revealed by the previous questions: a lack of time and interest, and less confidence in the future.

It is surprising that 12% of the third sector do not consider it necessary to represent their stakeholders -- this should be the primary role of citizens' associations.

All three sectors feel little willingness to participate in the strategy formulation and in the steering group for strategy drafting. While wording the strategy is indeed the work of ex-

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perts, the non-willingness to participate in the steering group is a warning sign, as it reveals a wish not to take responsibility. The preferences of all the sectors are similar in this issue. Again, willingness to take roles that require less effort and responsibility is greater. A majority of respondents are willing to participate in events and activities of interest to them; dissemination of information seems to be a feasible task.

On the other hand, the respondents are afraid to draft and manage projects. Only 32% of non-profit associations, 28% of local government representatives and only 19% of undertakings are ready to implement projects under the LEADER measure. These percentages certainly reflect a certain fear of bureaucracy and, on the other hand, financial difficulties in prefinancing the projects.

The respondents prefer to participate in the projects or contribute to the preparation process, or in the extreme case, to be the applicant if the project is written by someone else. The willingness of undertakings is 10–20% weaker in all these issues.

As a welcome surprise, 52–66% of the respondents are ready to volunteer. However, one-third of undertakings and one-fifth of local government and non-profit association representatives are certainly not willing to volunteer. This result in the non-profit sector is surprising.

Conclusions:

- Willingness to participate in the regional strategy process and its implementation is good. The responses refute the common belief that the strategy process is a nuisance and an unimportant and obtrusive activity for the stakeholders. Willingness to prepare the strategy is in some cases even greater than to implement it. It is welcome that more than a half of the respondents are willing to volunteer for regional cooperation.
- The significantly lesser interest of undertakings in participating in regional partnership, compared to the other sectors, is worrisome. It is all the more important to motivate undertakings to be interested, since meeting one of the most important development needs – “creating local jobs” – is up to them.
- All three sectors are more willing to be involved in activities requiring less responsibility and less competence – both in the preparatory and implementation stages. Willingness decreases when the activity requires additional effort and work.
- Only up to one-third of the third sector and 28% of local governments are willing to implement the relatively large-scale and resource-demanding projects financed according to the Structural Funds principles. Undertakings are willing to implement projects to about the same extent, provided that they are helped in project preparation and also in the bureaucratic aspects of implementation.
- The large gap between the perceived regional needs and the willingness to meet these needs is worrisome. Especially worrisome is the lack of willingness to create new jobs and offer development opportunities for young people.

6. AGRICULTURAL EDUCATION, RESEARCH, ADVISING, AND MUSEUMS

Maarja Normak, Helena Tabur-Jõgi, Merry-Aart Jüriado, Sirje Tamkõrv

6.1. Agricultural vocational education

The year 2005 began for agricultural vocational education with the conference “Field Training – Door to the World of Work”, which was attended by representatives of the Riigikogu, various ministries, the Rural Development Foundation, Estonian Chamber of Agriculture and Commerce, Estonian Qualification Authority, Examination and Qualification Centre, Estonian University of Life Sciences, county governments, farm associations, professional associations, vocational educational institutions and young farmers.

The main issues raised and tackled at the conference were:

- cooperation between schools and public sector organisations, federations of employers, agricultural enterprises and technology companies, research and development institutions and field training facilities;
 - the possibilities of applied higher education in the fields of agriculture, forestry and horticulture;
 - individual development of vocational teachers, financing of adult education, and the training needs of undertakings supervising production training;
 - the current status of school farms and the need of developing agricultural field training centres on their basis;
 - supporting field training bases by state benefits;
 - assessment of the production enterprises related to agricultural field training and the creation of a database;
- promotion of agricultural vocational training by competitions for young professionals.

As at the end of November 2005, a total of 1907 students were studying in agricultural fields in vocational educational institutions.

Table 1. Students studying in agricultural fields in vocational educational institutions (November 2005)

Study programme	2004	2005
Agriculture	313	349
Farm Economics	93	52
Forestry	225	221
Horticulture	160	133
Fisher-Boatmaster	38	32
Food Technology (Õisu School of Food Technology)	212	195
Nature Management	55	60
Landscape Engineering	279	415
Agricultural Mechanisation	35	63
Horse Breeding	19	21
Fur Animal Breeding	14	

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Landscape Gardening	68	84
Garden and Landscape Design	5	
Garden and Nature Management		22
Natural Environment and Landscape Management	37	29
Rural Economics	70	31
Land Surveying	22	50
Rural Enterprise	36	36
Forwarder Operator	10	10
Harvester Operator	5	
Farm and Home Economics	117	104
Total	1813	1907

Source: Ministry of Education and Research

Professional competitions

Various professional competitions are held for the students of agricultural vocational educational establishments every year. The annual combined competition for young farmers was held at the Türi School of Technology and Rural Economy within the framework of the international AGRI exhibi-

tion in June with 33 contestants from the Kehtna Economy and Technology School, Olustvere School of Service and Rural Economics, Põltsamaa Farming and Household School, Türi School of Technology and Rural Economy, Vana-Antsla Vocational Secondary School, and Kesko-Agro Eesti AS. The professional competition for young gardeners was held at the Jäneda Flower Party in June. Twelve students from the Räpina Horticultural School, Räpina Upper Secondary School, Luua Forestry School and Suuremõisa Technical School participated. The ploughing competition for young farmers was conducted within the framework of the Estonian Ploughing Championship in 2005. The students of the Olustvere School of Service and Rural Economics and the Türi School of Technology and Rural Economy participated. The Ministry of Agriculture supports the participation of students in annual international forestry competitions. Students of the Luua Forestry School participated in the IV EUROPEA Forestry Competitions at the Kaunas Forestry School, Lithuania, in 2005. Professional competitions in agriculture demonstrate the practical skills of the students and help promote agricultural vocational education.

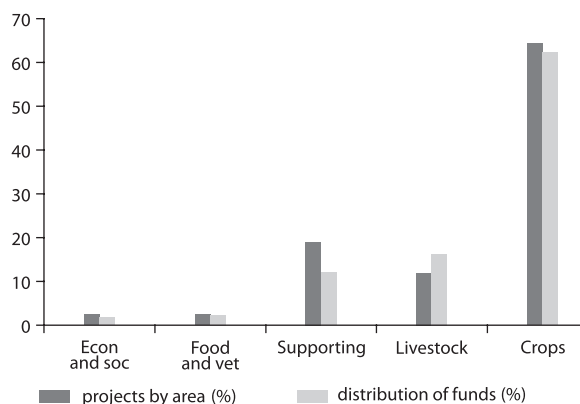
Stipends

In 2005, the Ministry continued its cooperation with the Rural Development Foundation by paying stipends to students studying in agricultural fields. This covers agriculture, forestry, fishery, and horticulture. The amount of the stipend begins from a monthly EEK 1000 and depends on the student's academic proficiency.

6.2. Agricultural research and development

A transfer to uniform financing of applied research and development took place in 2005 in accordance with the conditions prescribed in the national programme **“Agricultural Applied Research and Development in 2004–2008”**. The projects are divided into the following areas for financing purposes: rural economic and social studies, food safety and veterinary medicine, activities supporting agriculture, and, as the largest area, crop and livestock farming.

Figure 1. Projects financed in 2005



A total of 26 projects (including 7 and 19 from the researchers of the Jõgeva Plant Breeding Institute and the Estonian Research Institute of Agriculture, respectively) with an aggregate budget of MEEK 9.9 were ordered from the institutions of the Ministry of Agriculture. The projects were long-term, most of them were launched in 2004. Outside the administrative area of the Ministry of Agriculture, 16 projects totalling MEEK 5.9 were financed. Most of them were applied research projects carried out by researchers of the Estonian University of Life Sciences. Detailed information on the applied research under way and completed is available at the websites of the institutions carrying out the projects.

As the projects to be financed are selected by public competition once a year before the year of launch, as prescribed in the basic programme document, a public competition for the projects to be commenced in 2006 was held in 2005. The 70 project applications received were examined by area expert committees, whose assessments were approved by the Agricultural Research Council, which made a proposal to the minister for financing the most important projects for the sector.

Work of the Agricultural Research Council

The composition of the Agricultural Research Council was renewed in order to increase the vote of producers in the agricultural research policy development. Expert committees were involved in the application assessment in order to ensure the applicability of research on production and rural life. The council hosted the Mecklenburg-Vorpommern agricultural research council in December to discuss further cooperation possibilities.

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Estonian Research Institute of Agriculture (ERIA)

ERIA has six research and development departments: Departments of Agroecology, Field Crops, Plant Protection, Grasslands, Mechanisation, and the Testing Laboratory of Agricultural Machinery. The institute employed 55 people in 2005, including 31 researchers (15 doctors of agriculture, 3 doctors of technology, 5 research masters; 4 researchers are currently in master's studies and 3 research masters are in doctoral studies at the Estonian University of Life Sciences).

In 2005 the institute worked on 19 studies commissioned by the Ministry of Agriculture, four grants of the Estonian Science Foundation, one project financed by the Ministry of Education "Optimisation of the quantity and quality of field and grassland crops by integration of agricultural techniques and various technologies", and seven joint projects between Estonia and foreign companies.

Table 2. *Financing in 2005 (EEK)*

Ministry of Agriculture applied research	5 056 759
Estonian Science Foundation grants	579 646
Targeted financing	–
Base-line funding	612 000
Contractual research	1 165 135

The research and development results of 2005 and recommendations for agricultural producers on the agricultural techniques for growing cereals and legumes, rapeseed, potatoes and grass plants, plant protection, the production and storage technologies of grass fodders, suitability studies of agricultural machines, precision farming technologies and the profitability of growing field crops are available at the ERIA website www.eria.ee.

The 2005 list of publications includes one brochure, two books, 65 scientific articles, 61 popular scientific articles and 46 ERIA newsletters. ERIA organised ten study days and co-organised another ten. Its researchers made 78 presentations at conferences and training days.

Jõgeva Plant Breeding Institute (JPBI)

The research and development objective of JPBI is to increase the efficiency and competitiveness of agricultural production and to improve the quality of agricultural products by breeding and introducing new varieties. The institute employs 120 people, including 26 research workers whose average age is 46. There are 10 doctors and 11 masters; nine researchers are in doctoral studies and one researcher is in master's studies at the Estonian University of Life Sciences.

6. AGRICULTURAL EDUCATION, RESEARCH, ADVISING, AND MUSEUMS

The main tasks of the institute in its area of activity are:

- breeding new varieties of agricultural crops;
- ensuring the maintenance breeding of varieties;
- developing and improving the agricultural technology for the varieties;
- commercial production and marketing of basic grain seed and certified seed;
- preservation of varieties and valuable hybrids in the gene bank;
- basic and applied research in plant production for gathering new knowledge;
- development and innovation for the application of new knowledge;
- publication of research results;
- organising advising and training within its area of competence;
- carrying out efficiency trials for the registration of plant protection products since 2002;
- carrying out trials for preparing a list of recommended varieties of field crops since 2003.

Applied research was carried out in 2005 in the following areas: applied research into the variety breeding and varietal improvement of cereals and legumes, oil crops, potatoes, vegetables and fodder crops, and agrotechnical aspects and seed production of agricultural crops; development and im-

plementation of a web-based advisory system on plant protection; implementation of tissue culture methods in variety breeding.

The institute participated as a coordinator in the implementation of the national programme "Collection and preservation of genetic resources of agricultural crops 2002–2006".

The institute participated in the work carried out under four grants by the Estonian Science Foundation, the theme financed by the Ministry of Education "Links between and the heritability of the yields, quality, and disease resistance of field crops bred for sustainable farming" and in the EU 6th framework programme projects "Faba bean breeding for sustainable agriculture" (EUFABA), "Environment friendly food production system: requirements for plant breeding and seed production" (ENVIRFOOD) and "Potato Late Blight Network For Europe" (EUCABLIGHT), and the Estonian–Dutch projects "Strengthening of the Estonian plant health system in accordance with EU legislation with specific attention to plant propagation material" (PPA03/ES/9/1).

6.3. Advisory activities

In order to be competitive in increasingly tough competition, farmers need professional advice. The efficiency of advisory activities is determined by the skill of using different methods, the most important of which are individual advising, group advising, and mass advising. The purpose of the entire agricultural advisory system is to develop agriculture by means of competent advice, to disseminate state information about the restrictions and opportunities arising from EU membership, and to introduce the support measures. Channelling research information and innovation to the individual is no less important. The second major role of the advisory system lies in collecting feedback on the actual needs of farmers, analysing it and forwarding it to the appropriate partner. Those who organise research and training activities need insight into the farmers' problems so as to plan their activities in accordance with the needs.

Since a professional agricultural adviser has immediate contacts with farmers, the adviser is the connecting link between research and practice, which is crucial for the practical application of research results. Agricultural advisers summarise and systematise the wishes of producers for the purposes of research, training days and publications, and act as the intermediaries of research results.

A new NDP measure was applied in 2005 to support the development of the advisory system: Measure 3.8 -- support for advisory and information services. The objective of the measure is to develop a system of offering advisory services and

to support the provision of advice and information services to farmers. Support was available under four submeasures as of the second half of 2005: setting up of advisory centres, advisory support, and support for nationwide and county information days.

Advisory centres approved by the Minister of Agriculture have been operating in each county since the end of summer of last year. The centres ensure the availability of quality advice, help find the necessary information and understand laws and regulations, introduce and disseminate publications, and organise information events. Each centre has agricultural advisers, attested or qualified by a professional certificate, in the areas of crop and livestock farming and finance as a minimum.

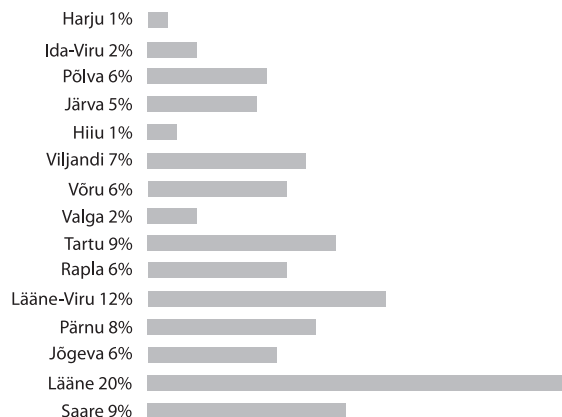
The advisory centres were able to apply for setting-up support under Measure 3.8 in an amount of up to EEK 124 000. Fourteen advisory centres used this opportunity. They used the support mainly for purchasing information technology and office equipment and for hiring technical workers.

217 applications for advisory support were received in 2005, which was less than expected. The reason may lie in the relatively late launch of the measure -- the second half of the year is not the best time for individual advising. Agricultural producers were able to apply for covering up to 75% of the eligible costs of the advisory service, but not more than EEK 9000 per applicant per calendar year and not more than EEK 450 per hour of advisory service. The advisory service had to be provided in an approved advisory centre by an agricultural adviser attested or certified for the relevant area, who worked

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for the advisory centre. The average amount of support requested was EEK 5100 per contract. The farmers of the Lääne-maa county were the most active applicants for advisory support: they filed 42 applications which made up one-fifth of all the applications received.

Figure 2. Distribution of applications for advisory support by counties



Nationwide information days are organised on the basis of the national information days schedule, which is prepared by an advisory committee to the Minister of Agriculture (involving officials of the ministry as well as representatives of farmers' organisations) and sets out the topics for the information days needed for the budget year, as well as specific requirements for each topic which applicants for support must take into account when organising the information days. Organisers of

nationwide information days are also entitled to support for publications on related topics if the requirement for a publication is specified for the given topic in the schedule.

A total of 23 applications for organising national information days on 25 different topics were received. No applications were received for eight topics, which were carried forward into the 2006 schedule of national information days. Support was available to cover 100% of the eligible costs, up to EEK 15 000 per information day and up to EEK 100 000 for each publication compiled for an information day.

The topics of county information days are not pre-scheduled, so that the initiative as to the topics came from the applicants and depended on the needs of the region. EEK 120 000 was assigned to each county for this type of support. An organiser of an information day could apply for 80% of the eligible costs, up to EEK 12 000 per information day. Evaluation committees set up by the county governments of representatives of the farmers of the county, the county government and the local governments made their selection from among the projects received. A total of 184 applications were filed. The local approved advisory centre was the main applicant and organiser of information days in most of the counties.

In order to receive feedback on the availability and quality of the advisory service, the relevance and sufficiency of the topics of information days, and other issues, a survey is planned to be conducted in 2006 and 2007 among the farmers who used the advisory services and visited the information days.

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The survey results will be used to decide on the topics of information days for the following years, to improve the quality of the advisory service, and to promote farmers' interest in the advisory system.

6.4. Activities of agricultural museums

Estonian Agricultural Museum

The Estonian Agricultural Museum is becoming the central museum of its area and it plays a major role in the collection, preservation, studying and display of items related to the Estonian rural culture, agricultural production, ownership relations, agricultural education and research.

With a view to the museum's goals, the greatest attention has been paid to the renovation of the museum buildings and modernising their contents.

The main building of the museum is a former manor house. In order to contribute to the pedagogical aspect of museum work, the historical smithy building (from 1886) will be renovated and its second floor will be dedicated to various museum programmes. The first floor will be occupied by a handicraft workshop for women and a carpenter's shop for men. A blacksmith will work in the smithy, which will also accommodate an exhibit on the blacksmith's craft.

A research council was set up on 13 December 2005 to advise on the museum's research and development activities. The tradition of the museum's yearbook and scientific conferences is being brought back to life.

The exhibits and events of the Estonian Agricultural Museum were visited by 96 280 visitors in 2005, including 16 480 on spot at the museum. The museum participated in 20 outside events (fairs in Tallinn, Pärnu, Tartu, the international Hansa Market, etc.) which attracted 79 800 visitors. Eight temporary exhibitions and displays were organised on the spot during the year. Twenty educational programmes were conducted with a total of 3567 participants.

There were four larger family events that attracted 6430 visitors in total. These included the traditional Estonian red cow exhibit and competition "Viss 2005" and the "Tartu Autumn Fair. Pedigree Animal 2005". The event "Favourites' Gathering. Horse Day" and a Christmas party together with the Estonian National Museum's Friends Society and the Ülenurme community were held for the first time.

The traditional Republic of Estonia anniversary concert was held together with the Ülenurme Music School. The museum hosted two shows by the Estonian Puppet Theatre. The museum also hosted the International Geography Conference and the training days of the Baltic Defence College and the Tartu Vocational Education Centre. The museum entertained visiting groups from children's camps, conducted seminars, meetings, conferences and reunions, organised the autumn running race of the Ülenurme rural municipality, hosted children's birthday parties and marriage parties.

The year 2005 marked the 160th anniversary of the birth of count von Berg and the 130th anniversary of the Sangaste rye variety. A rye room was opened on the occasion in coopera-

tion with the Estonian Rye Association and the Jõgeva Plant Breeding Institute. The museum participated in the following fairs with its exhibits and workshops: "TourEst 2005", "Home and Garden", "St Martin's Fair in Tallinn", "Pärnu Home 2005", "Tartu Agro 2005", "Woman 2005", "Flour Fair 2005" and "Simple Christmas in Tartu". The museum participated in the Tartu International Hansa Days with its exhibit "Estonian Rye – a Hansa Product" and with a flax workshop. It also participated in the Paunvere exhibition and the Michaelmas by the Emajõgi River, the Altmõisa Strawberry Party, the Rannarootsi Day, the Narva Museums' Festival and various rural municipality, village and farm days.

C. R. Jakobson Farmstead Museum

The year 2005 was full of activities for the C. R. Jakobson Farmstead Museum. The museum was open on 354 days of the year and attracted 24 018 visitors. Its scientific library was supplemented by 15 publications and 58 newspaper articles were added to the catalogue. The museum's main collection includes 9410 items, of which 6862 have been scientifically described and 567 are displayed. There are 3587 items of supplementary scientific material.

The storm in January 2005 did much damage at the museum's location, breaking trees in the park and forest and keeping the museum's workmen busy for a long time. The storm also lifted most of the stork's nest, which had decorated the museum venue for years, off its place on top of an old larch.

Special programmes and traditional events

"Shrovetide on the Farm" introduced old Shrovetide traditions. The programme "Autumn on the Farm" introduced the autumn routines of a farm and old farm tools and items were displayed for the visitors. "Christmas on the Farm" took the visitors back to old-time Christmas when Christmas elves and Santa Claus were still unknown. Holiday bread was baked and tasted in the mill, farm food and traditional games delighted the guests in the kiln-drying room, and farm animals waited in the barn to be fed and petted by the guests.

The C. R. Jakobson Prize – the C. R. Jakobson Competition to award the best cultural and agricultural personality of the Pärnumaa county was first held in 1989, organised by the C. R. Jakobson Foundation. The award-winners are the praiseworthy and industrious people of the Pärnumaa county who have stood out during the year. A total of 58 persons have won the award over the years.

Farm Day – to remember the old farm routines and to celebrate the end of summer and the beginning of the autumn season, the first Farm Day was held at the museum in 1994. It featured a bread workshop, linen mangling, basket weaving, threshing, weaving, and women's handicrafts. The Farm Day has been held annually since then, on the last Saturday of August.

Estonian Dairy Museum

Among the internal developments of the Estonian Dairy Museum in 2005 were the application of pedagogical activities and the development of new ones. Promoting Estonian dairy products continues to be among the priorities of the Estonian Dairy Museum. In cooperation with the Ministry of Agriculture and the Estonian Dairy Association, the museum continued to organise the "Milkmaid" housecraft competition for pupils and the "Dairy Day" event that promotes domestic dairy products. Dairy Day 2005 was a much larger event both in terms of the scale and the number of participants than the first event of 2004. The tradition of the art students' painting camp was continued: the students retouched the paintings made in the previous two years and produced numerous dairying-inspired works of porcelain painting. The traditional Christmas performances lasted throughout December, when the museum's staff organised action-theatre activities for groups of students. Many exciting temporary displays were brought to the museum during the year. The museum participated in tourism fairs in Estonia and Finland.

The Estonian Dairy Museum's Friends' Society continued the concert and performance series in the machine hall; nine events were held in total. As a result of all these activities, the number of visitations of the museum grew from 4500 in 2004 to 6000 in 2005. The development of group visitation numbers was delightful: from 86 groups in 2004 to 142 groups in 2005.

In cooperation with the Ministry of Agriculture and the museums within its area of administration, the Estonian Dairy Museum participated in the publication of a workbook for pupils. As a result of the museum's collection and archiving activities, the number of items in the museum's collection has exceeded 51 000. Major new apparatuses have been reconstructed to supplement the industrial exposition. The facade of the museum's main building was properly restored to give the house a dignified and well-tended look. The work on the green areas of the museum was also completed.

7. COMMUNICATION AND INFORMATION

Ants Laansalu, Liina Lepik, Diana Kömmus, Merje Tammsaar, Eva Lehtla

Opinion polls commissioned by the Ministry of Agriculture show that rural inhabitants and undertakings are becoming better informed of rural and agricultural development possibilities. Urban inhabitants are equally well informed of the impacts of intensive agriculture on the environment and on healthy food. More than 70% of the respondents were able to relate the impact of environment-friendly production to the pace of recovery of the environment.

However, information was not always available, since it was often presented in a form and in a manner which was difficult for the information consumer to understand. The perception of information given to the public was also complicated by old-fashioned understandings and prejudices with respect to agricultural and rural policies and the state's role in implementing these policies.

The following paragraph from the study conducted by M. Tarum and R. Toomla in 2004 characterises the need to intensify communication between the public, the media, and the public sector: "Urban inhabitants share the idea that the Ministry of Agriculture has the duty and power to organise agricultural production on the enterprise level: to determine what and how much should be produced and at what price it should be sold. As regards the areas delimited by these issues, a majority of urban inhabitants have a distorted idea of the ministry's competence and activities. The urban population is divided into two groups of roughly the same size. One group sees rural life as solely agricultural production -- they believe

that all rural people do is "plough, harrow, fertilise and harvest". The other (slightly smaller) group believe that rural activities are more than just agriculture. Very many urban people have lost the understanding of what is going on in the countryside". The above description of the Ministry's competence and activities is completely opposite to the real situation.

According to opinion polls, 50% of urban inhabitants think that stakeholders are not involved in legal drafting; one-half of the respondents think that experts are also not involved. Sociologists believe that the opinions can be interpreted as the expression of a wider attitude: in their answers to both questions, the respondents stated their opinion on whether officials dominated in legal drafting or whether the stakeholders were also involved. The responses are not based on knowledge of the practice of involving these parties, but they express the general opinion on legal drafting practices.

Opinion polls show that the farmers and rural undertakings that communicate with advisory and information centres see themselves as increasingly better informed. The higher awareness of undertakings has facilitated the contribution of the representative organisations of rural areas and farmers to the political decision-making process and to legal drafting in working groups and in the agricultural and rural development council.

Agricultural and rural policy has developed in the direction where support to the development of the food sector is related to the supply of public goods to the wider public. Tax-

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payers and consumers have the right to information about the efficiency of subsidies as public sector expenditure. Consumers are increasingly interested in issues such as the safety and healthiness of food, environmentally sustainable production, animal welfare, etc. It should also be acknowledged that in conditions of globalising economy, the assessment of competition conditions by trade criteria is contrary to the consumers' interest. Fair trade means responsibility to the consumer. The EU Member States have accepted the principle that the quality requirements applied to the private sector must ensure the protection of public interests in the fields of food safety, environment, animal welfare, and plant and animal health.

Based on the conclusions of information needs surveys, two areas of communication and two target groups have developed in the ministry's practice: the public and media, and food sector and rural undertakings and their representative organisations. The key issue in informing agricultural and rural undertakings is how to involve the leaders of representative organisations more efficiently in the decision-making process of preparing the legislation on agriculture and rural development. Also, to supply undertakings with the information they need for making business decisions in due course and on the national level.

7.1. Informing the public

Development of media communication

An important goal is to give the public timely and objective information about food sector events by way of media communication and more efficient cooperation with journalists. Since many agricultural issues are complicated and difficult to convey by written press releases, we began to meet the journalists more often to give them the specialists' view of the essence of important issues and to answer the journalists' questions.

For the first time, we organised trips for journalists to the enterprises in our area of administration whose activities had sometimes received negative media coverage. The purpose of the visits was to acquaint the journalists objectively with the business of the enterprises and let them judge whether or not there were any problems. The first visit was held in October to the Väike-Maarja Loomsete Jäätmete Käitlemise AS (an animal waste handling plant). A visit to Werol Tehased AS in Jõgevamaa followed in November. The visits were popular among the journalists and contributed to objective information being published in the media. In most cases the journalists found that the stories about these enterprises were myths rather than the truth.

The tradition of holding press conferences and briefings was also continued. On average once a month the ministry invites journalists to give explanations about the topical issues. From 2006, the sound recordings of the most important press conferences are available on the ministry's website under Press Conferences.

Special publications and radio/TV shows about rural life

The most important information for the public can be read in the newsletter *Maaelu Heaks*, which was published as a supplement to the newspaper *Postimees* five times in 2005. The main topics were related to the Rural Development Plan, as well as fishing and handling animal waste. A summarised issue was published at the end of the year. The Russian issue *Selskii Vestnik*, formerly titled *Krestjanin*, was published with the newspaper *Molodyozh Estonii* on four occasions and it covered the same topics as the Estonian issues. Information for farmers and representative organisations of rural enterprise was disseminated via the *Euronõu* extra in the newspaper *Maaleht* two times in 2005. The main topics were related to the preparation of the rural development strategy and development plan for 2007–2013, i.e. its goals, principles, measures and options were introduced. New direct sales opportunities and hygiene requirements were introduced to the food sector small businesses.

As of 2006, a Sunday morning show on the *Vikerraadio* channel covers news related to the Ministry of Agriculture for 15 minutes every week. The show usually features two interviews. This time slot was chosen because it has traditionally been a time for agriculture and rural life related shows on *Vikerraadio*. Since the spring of 2006, the national TV channel *ETV* broadcasts the show "Päris maalas", which was commissioned by the Ministry of Agriculture and portraits rural people who are doing great, including young people. The idea of the series is

to break the myth that all country people are failures, poor, or alcoholics. The show is a vivid proof of the opposite.

Crisis communication

The work of the Public Relations Department of the Ministry of Agriculture intensified in connection with the bird flu threat in Estonia. Already at the end of 2005, the department in cooperation with the Veterinary and Food Board (VFB) prepared a crisis communication plan for a bird flu outbreak in Estonia. The plan consisted of five phases: 1) bird flu spreads in the world, but the threat to Estonia is small; 2) the threat of bird flu is real, but the disease has not been discovered in Estonia; 3) the first bird carrying the bird flu virus has been identified; 4) bird flu has broken out in several regions; 5) bird flu has extensively spread in Estonia.

The communication plan was approved by the Government Communication Office and the public relations departments of the ministries involved (Ministries of Foreign Affairs, Social Affairs, Internal Affairs). Since the plan also involved the press representatives of the counties, meetings were held with practically all county press officers to explain their roles before and in the actual phases of a crisis.

The Public Relations Department held a Minister of Agriculture's dinner briefing for journalists to introduce the crisis communication plan; the minister as well as the director general of the VFB spoke about the state's readiness to react and answered the journalists' questions. The communication specialists gave the journalists an overview of communica-

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tion flows in a crisis situation. The heads of the news editorial boards of the nationwide media publications were invited to the briefing in Tallinn. A written briefing on the same subject was sent to the heads of county newspapers and radio channels.

The main activities of informing the public were the preparation and dissemination of printed materials and newsletters, the creation of an information portal and the launch of a hotline dedicated to bird flu.

During March 2006, 300 000 Estonian and 100 000 Russian newsletters about bird flu reached the public via the six largest newspapers and all county governments. The newsletter answered the most frequent questions about bird flu and provided references for further information search.

At the beginning of March, the bird flu information portal **www.linnugripp.ee** was launched in cooperation between the Ministries of Agriculture and Social Affairs; the portal contains answers to the most common questions about bird flu. It also contains specific recommendations for ordinary citizens, poultry farmers, travellers, and journalists. All those who cannot find an answer to their question from the existing database may put their questions in writing via **www.linnugripp.ee**. The questions will be answered by the specialists of the Ministry of Agriculture and Health Protection Inspectorate.

7.2. Internal communication of the Ministry of Agriculture

An internal communication survey was conducted in the ministry in the spring of 2005. The objective of the survey was to measure the ministry employees' assessments of internal communication in general, the communication climate, communication in specific areas, and the speed and quality of vertical and horizontal communication. Another objective was to identify the relevance and frequency of use of various information and communication channels for the employees, the employees' expectations to a potential intranet, and the degree to which internal communication supports organisation management, including strategic management. This opportunity to express an opinion was used by 87% of the ministry's staff.

Several important conclusions on the ministry's internal communication were drawn from the survey. As expected, the results showed that the ministry employees regard their colleagues as the most important and reliable source of information — despite the availability of numerous written and electronic channels of information and communication, immediate communication between colleagues is valued the most. This reflects a confidential communication atmosphere and active informal communication on all levels. A majority of the employees admitted that they were satisfied with their relations with colleagues and trusted their colleagues, direct superiors and the senior management.

The study revealed that the greatest shortcoming of internal communication was the large number of various written and electronic channels of communication. This caused a fragmentation of information and difficulties in finding the necessary information, including information about the organisation's strategic goals and future plans.

It was suggested that creating an intranet for the ministry could be a solution to the problems revealed by the internal communication survey. The intranet would provide a single environment for the information, particularly electronic information, which is currently transmitted and contained in various channels and sources, and would make it easier to find information quicker. The intranet would also raise the employees' awareness of the organisation's mission, vision, values, and goals, and would align their everyday work to the organisation's strategy.

Development of the ministry's website

The new visual identity of the Internet environment supports the restructured content. Work on the content of the website will continue in 2006 and new quality will be provided for the English version. Work has also begun on the creation of a webpage in Russian. The ministry's website was visited more than 430 000 times in 2005.

Surveys show that it is mainly the more successful farmers with agricultural education, as well as alternative rural undertakings, that use the information services made available via the Internet.

Informing rural undertakings

As a follow-up to the World Bank project, the ministry entered into an agreement with the Estonian Chamber of Agriculture and Commerce in 2002 for organising the dissemination of agricultural and rural information. The Information Dissemination Centre created in the course of this project, supported by the county information centres, is an important information channel for disseminating state information. The Information Dissemination Centre's activities are targeted at a specific goal: farmers and rural undertakings must be able to receive timely and understandable information.

Measure 3.8 of the National Development Plan (NDP), which was launched in 2005, made it possible for the former county information centres to reorganise themselves into advisory and information centres. The successful launch of the advisory system made a further contribution to the availability of information and advice in the counties. The centres have two closely interrelated duties: to ensure the availability of quality advice and to help users find the necessary information, understand laws and regulations, introduce new publications, refer people to professional advisers, organise information events, and collect feedback on the clients' needs. The ministry specialists answer the questions that have been raised; the answers are communicated via the Information Dissemination Centre of the Chamber of Agriculture and Commerce to the county centres — this is another improvement in the information flow.

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

Budget of the Governing Area of the Ministry of Agriculture for 2005 by Institutions (EEK '000)

	2004	2005
Total for the governing area of the Ministry of Agriculture	2 942 707.41	3 005 237.87
Purchase and renovation of tangible and intangible assets	48 984.64	54 674.74
Including:		
out of public revenues	22 589.23	11 402.09
out of foreign aid projects co-financing	8 220.00	15 780.50
out of foreign aid	10 352.90	18 463.15
out of economic revenue	6 483.00	7 619.00
out of subsidies from state agencies	1 340.00	1 410.00
Ministry of Agriculture	166 110.67	163 934.50
Operating expenditure	125 199.87	136 691.17
Including:		
out of public revenues	103 500.50	106 834.50
out of foreign aid projects co-financing	5 209.34	8 158.42
out of foreign aid	8 755.00	14 989.25
out of economic revenue	350.00	299.00
out of subsidies from state agencies	7 385.00	6 410.00
Appropriations	40 860.80	27 181.60
Including:		
Loomsete Jäätmete Käitlemise AS (animal waste handling company)	5 790.00	12 590.00
membership fees for international organisations	370.80	1 191.60
appropriations for other residents	34 700.00	13 400.00

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

Including:		
Estonian Chamber of Agriculture and Commerce	14 500.00	13 000.00
MTÜ Külade ja väikelinnade liikumine (movement of villages and small towns)	200.00	400.00
Rural Development Foundation	20 000.00	
Other expenditure	50.00	61.73
Agricultural Registers and Information Board	2 427 914.31	2 481 804.40
Operating expenses	123 254.01	87 244.75
Including:		
out of public revenues	66 094.80	67 215.48
out of foreign aid projects co-financing	14 803.64	2 868.03
out of foreign aid	42 355.57	16 806.03
out of government sector's internal subsidies		355.21
Appropriations	2 304 548.60	2 492 637.90
Including:		
for the implementation of the NDP measures out of co-financing for foreign aid	142 490.00	124 824.50
for the implementation of the NDP measures out of foreign aid	388 490.00	313 695.20
for the implementation of the RDP measures out of co-financing for foreign aid	174 437,40	193 328.14
for the implementation of the RDP measures out of foreign aid	697 749.60	773 151.57
for the implementation of the RDP technical assistance measure out of co-financing for foreign aid	2 085.00	2 182.00
for the implementation of the RDP technical assistance measure out of foreign aid	8 340.00	8 728.00
for the implementation of the market organisation measures out of foreign aid	234 700.00	281 543.08
agricultural market organisation out of co-financing for foreign aid		1 600.00

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

agricultural market organisation out of public revenues		31 000.00
for rural and agricultural development support out of public revenues	127 750.00	55 000.00
single area payment scheme out of foreign aid	303 000.00	435 301.30
single area payment scheme out of public revenues	86 838.60	203 730.00
compensation for excise rate increase to fishers out of public revenues		8 500.00
fisheries market organisation		3 000.00
compensation for crop failure to agricultural producers		30 000.00
compensation for fuel excise to agricultural producers		20 000.00
SAPARD financing out of co-financing for foreign aid	34 417.00	2 357.72
SAPARD financing out of foreign aid	104 251.00	4 696.39
Other expenditure	111.70	180.00
Loans to non-residents		-98 258.25
Veterinary and Food Board	100 836.73	87 893.875
Operating expenditure	100 436.00	87 489.35
Including:		
out of public revenues	80 145.00	66 696.00
out of foreign aid projects co-financing	5 107.23	4 165.79
out of foreign aid	12 983.50	3 872.57
out of economic revenue	2 200.00	12 755.00
Membership fees for international organisations	400.97	380.00
Other expenditure		24.53
Plant Production Inspectorate	37 744.44	38 098.243
Operating expenditure	37 629.70	37 607.70

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

Including:		
out of public revenues	37 393.70	37 393.70
out of foreign aid projects co-financing	236.00	214.00
Membership fees for international organisations	114.74	486.20
Other expenditure		4.34
Animal Recording Centre	19 083.17	17 649.075
Operating expenditure	17 928.05	16 919.18
Including:		
out of public revenues	8 938.05	8 969.08
out of economic revenue	8 990.00	7 950.10
Membership fees for international organisations		205.90
Other expenditure	1 155.12	1 223.00
Financial lease payments		-699.00
Rural Economy Research Centre	8 827.45	9 397.452
Operating expenditure	8 727.45	9 297.45
Including:		
out of public revenues	7 397.45	7 197.45
out of foreign aid projects co-financing	230.00	
out of foreign aid		1 000.00
out of economic revenue	1 100.00	1 100.00
Other expenditure	100.00	100.00
Land Improvement Bureau of Supervision and Expertise	1 562.60	1 562.60
Operating expenditure out of public revenues	1 562.60	1 562.60

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

Agricultural Research Centre	32 741.27	45 224.055
Operating expenditure	32 243.27	44 703.57
Including:		
out of public revenues	17 321.10	17 956.10
out of foreign aid projects co-financing	326.50	1 695.71
out of foreign aid	1 902.70	8 875.36
out of economic revenue	5 000.00	6 044.80
out of subsidies from state agencies	7 693.00	10 131.60
Membership fees for international organisations	48.00	48.00
Other expenditure	450.00	472.48
Veterinary and Food Laboratory	42 179.06	40 649.314
Operating expenditure	40 179.06	38 406.17
Including:		
out of public revenues	22 610.70	20 395.70
out of foreign aid projects co-financing		46.95
out of foreign aid		1 419.55
out of economic revenue	6 000.00	7 975.61
out of subsidies from state agencies	10 990.56	8 568.36
for legal persons in public law within the governing area	577.80	
Other expenditure	2 000.00	2 243.15
Land improvement bureaux	24 435.75	25 593.446
Operating expenditure	24 435.75	24 524.04

BUDGET OF THE GOVERNING AREA OF THE MINISTRY OF AGRICULTURE

Including:		
out of public revenues	23 975.70	23 964.04
out of foreign aid projects co-financing		264.84
out of foreign aid		794.51
out of economic revenue	460.05	560.00
Other expenditure		10.06
Agricultural museums	7 034.60	7 713.732
Operating expenditure	7 013.80	7 689.80
Including:		
out of public revenues	6 564.60	7 210.60
out of economic revenue	449.20	479.20
Other expenditure	20.80	23.93
State research and development institutions	25 252.73	31 042.43
Operating expenditure	24 597.80	29 523.45
Including:		
out of public revenues	1 834.00	5 280.00
out of foreign aid projects co-financing	180.00	
out of foreign aid	200.00	
out of economic revenue	8 725.30	10 281.99
applied research for state agencies	13 658.50	13 961.46
out of revenues from other residents		759.65
Other expenditure	654.93	759.34

