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CONTENT

1 Introduction to the dairy sector

The dairy sector is very important in Lithuania and takes a significant place both in agricultural production and in the manufacture of food products and beverages. The value of dairy products contributes about a quarter (26% in 2005) to the total agricultural output, and the sales of the milk processing industry amount to about a quarter of the total value of food products and beverages sold (26% in 2005), or 4.5% (in 2005) of the total sales of manufacturing industry. Milk and dairy products make up the largest share of agricultural and food products exports accounting for about 20% (21% in 2005).

Milk production is found predominantly on small farms; the average size of dairy farm (2.7 cows in 2005) is the smallest in the EU. However, it is not possible for producers to operate commercially on such small scale due to the much lower milk prices received and to the problems of compliance with EU veterinary and hygiene standards which has led to rapid enlargement of farms and increased marketing of milk in recent times. In 2005 the average dairy farm size 35% higher than in 2000 and milk sales increased by 8 percentage points. The numbers of milk producers and of cows are declining but milk production and sales are going up due to increases in cow productivity.

The dairy processing industry is one of the most concentrated and modern sectors of the food industry in Lithuania. In 2005 the income of three groups of milk processing enterprises accounted for about 80% of the total sales of all milk processing enterprises; they processed 75–80% of the total milk processed in the country. About 50% of dairy products produced are exported, with cheese leading the way. Exports are rising, and especially so since Lithuania joined the EU: in 2005, income from exports was 57% higher than in 2003. Lithuanian capital is the main source of funding for the milk processing industry, but there are 2 quite small enterprises funded with foreign capital and one joint venture (mixed capital). In all three largest groups of processing enterprises Lithuanian capital predominates, with foreign capital providing 11-27% of the total value of shares.

The consumption of milk is going up overall in Lithuania, with the consumption of fresh milk products and cheese increasing while that of butter is in declining slightly Most of the items consumed are produced locally. However, the quantities of imports are growing and, like the exports, these have increased particularly since Lithuania joined the EU.

EU membership provides for the organisation of a common market in milk and milk products according to requirements of Council Regulation (EC) No 1255/1999. Milk processing enterprises mostly get export subsidies. According to the direct payment scheme payments are made to milk producers from the national budget for quantity of marketable milk produced in the corresponding quota year. Milk production is limited by the milk production quota system. The national milk production quota has not yet been exceeded, and it is forecast that this will remain the case for the 2006/2007 quota year.

2 A dual sector?

The majority of small milk producers in Lithuania sell only a proportion of their product to processing enterprises or directly to consumers. The remainder is used on the farm for consumption by the nearest relatives and for feeding calves. However, the increasing size of

dairy farms and the reduction in their number has resulted in the decline of milk consumption on farm. There are no reliable statistical data as regards direct sales before 2004 and so it is impossible to calculate milk consumption on farm exactly. But differences between milk production and sales for processing indicate a general tendency. The amount of milk unsold for processing declined from 772,000 tonnes (45% of milk produced) in 2000 to 663,000 tonnes (36%) in 2005. The same tendency is suggested by FADN data. According to the latter, the consumption of milk on family farms and in agricultural companies decreased from 13% in 2000 to 5.3% in 2004. The FADN data do not include small holdings, which sell a proportion of their production but which consume on farm the largest amounts of milk among all producers, or those farms which produce milk only for their own needs. However, the overall tendency is for a notable decrease in on farm consumption of milk.

The dual structure also exists in the milk processing sector, especially on the small farms. A proportion of the milk consumed on farm is processed into dairy products for both on farm use and direct sales. Full statistical data about milk production on farm level is missing, but it is possible to make an assessment of the amounts produced from the data on cheese production that are available among various sources in the Department of Statistics. In 2004, 66,500 tonnes of cheese (except processed) were produced by the processing industry whereas total cheese production amounted to 89,100 tonnes, thus, 22,600 tonnes (25%) were produced on farm. In the 2004/2005 quota year, 400 tonnes of cheese were sold directly to consumers and the remainder was consumed on farms. According to the 2004 consumption statistics, cheese produced on farm accounted for 50% of the total. It is a very large amount considering that rural residents make up only 33% of the total population in Lithuania.

The continuing enlargement of dairy farms and withdrawal of small farms from milk production will lead to a decrease in the consumption and processing of milk on farm. Larger farms tend to sell milk for further processing. The amounts of milk and dairy products (in terms of milk equivalents) sold directly to consumers has already declined by 20% in the 2005/2006 quota year compared to 2004/2005. But a proportion of small milk producers are going to sell milk and dairy products directly because it is profitable as, even in the local markets, retail prices of dairy products are higher than those paid by processing enterprises for milk purchased from these farms. Human consumption and milk processing on farm will continue because the income of rural residents is lower than the national average, but are likely to decline as incomes increase.

3 Prospects for dairy product consumption

Since 2000 the consumption of milk and dairy products has risen. Between 2000 and 2004 the per capita consumption of milk and dairy products (in terms of milk equivalents) increased by 9%, from 272 kg to 296 kg. Consumption preferences for particular dairy products can only be judged by reference to data on industrial output, the amounts of products sold directly from farms and the quantities imported. Statistical data covering the consumption of dairy products produced by the dairy industry and on farms are not published in Lithuania.

Table 1 below gives the consumption per head of dairy products in 2004. Further data is given in the Statistical Workbook. During the period 2001–2004 per capita consumption of fermented milk products increased by 24% (due to introduction of new products, especially desserts) and the consumption of cheese and curd went up by 9% while the consumption of butter declined by 12%.

Table 1 Consumption of main dairy products (industrial products, direct sales and imports) in Lithuania in 2004 (kg per head)

Dairy products	Consumption
Liquid milk (bought in shops)	21.5
Fermented milk products	19.5
Butter	2.8
Cheese and curd	9.4

Lithuanians are used to drinking fresh (on farm) or pasteurised (bought in shops) milk. 94% of milk in shops is pasteurised (2005 data). The largest amounts of milk consumed contain 1-3% fat milk; in 2005 such milk made up 89% of the total bought. The most popular milk in Lithuania contains 2.5% fat. Lithuanians prefer dairy products made in Lithuania due to their high quality and reliability. In 2004, only about 2% of milk and milk products (in terms of milk equivalents) consumed in the domestic market were imported. However, the amounts of imports are growing, particularly since Lithuania joined the EU. Between 2003 and 2005, the value of milk and dairy products (excluding raw milk) imported more than doubled. Yogurt and cheese are among the largest amounts imported, and from the end of 2004 these imports included raw milk for the first time. The imported dairy products on the Lithuanian market compete mainly on price but also on wider consumer choice due to the range available.

The consumption of milk and dairy products and of other food products is determined mainly by nutritional habits and income. The present level of consumption of milk and dairy products in Lithuania is conditioned by limited income. Traditionally Lithuanians consume rather a lot of milk and dairy products. In 1975 per capita consumption amounted to 449 kg of milk and dairy products (in terms of milk equivalents) per year and in 1990 it was 476 kg. In 2004, consumption of milk and dairy products had decreased by 38% as compared with 1990. The expected growth of consumers' purchasing power should allow an increase in consumption of milk and dairy products in Lithuania both in the short and the longer terms.

4 Expert views on the challenges at the level of the milk production

In Lithuania very many small farms are engaged in milk production; their share in the structure of dairy farms is significant. In 2005 the number of small farms keeping 1-2 cows made up 68% of the total dairy farms. Consequently, the average dairy farm is very small: in 2005 it was 2.7 cows per farm. The average size of the dairy farm in Lithuania is the smallest in the EU. Many actual problems are caused by small dairy farms and many changes are related to the growth of farm size.

Lately the number of small dairy farms has been declining rapidly. Some small dairy farms have stopped producing; others have increased their scale of production. The average farm size went up from 2 cows in 2000 to 2.7 cows in 2005, or by 35%. The enlargement of dairy farms is one of the main successes in recent years because very small dairy farms are non-viable. However, in the 2005/2006 quota year 17% of milk supplied was from producers keeping 1-2 cows and 31% from the herds of 1-4 cows.

The other rather important success for milk producers has been increased prices for milk sold, although they are still the lowest in the EU due to their small size. In 2005 the average milk

purchase price was only 196 EUR per tonne but that was 30% higher than in 2000. Milk processors were enforced to increase milk purchase prices for local large milk producers because of potential competition from buyers in neighbouring countries. The increase of milk prices have improved circumstances on large dairy farms so that they can restructure and expand production, develop and adopt new practices in compliance with EU veterinary and hygiene requirements. The purchase price of milk for small milk suppliers was raised only slightly as they have no negotiating capacity to pit against large milk processing enterprises. Due to much lower milk purchase prices (as much as 60% lower compared to large producers), small dairy farms cannot improve their efficiency because they have no funds to develop production, or to implement EU veterinary and hygiene standards. In consequence, some of them go out of production, including a large number of older milk producers who take early retirement under measures included in the Rural Development Plan. Low milk purchase prices have encouraged some small producers to establish cooperatives and to work together on the issue of higher price as well as with some problems of milk collection and storage. However, cooperatives in Lithuania are not popular because of their association with former collective farms.

Although both the number of dairy farms and of cows has decreased, milk production and sales have increased due to improvements in yield per cow. On larger holdings the farmers are more knowledgeable; more attention is paid to feed quality and there is potential for further improvements and the application of other up-to-date cow keeping technologies. In addition, larger farms have better opportunities to purchase cows of new more productive breeds.

During the process of privatising dairy enterprises farmers had a preferential opportunity to acquire up to 50% of the shares offered but they did not take advantage of this scheme. Therefore, they now have no influence on the decisions of milk processors. Small dairy farms cannot negotiate prices on equal terms with milk processors, the largest of which can virtually dictate terms to small producers. Therefore, relations between milk producers and processors are rather strained, and the farmers are dissatisfied with their relationship with the processors. Currently, milk producers are looking for an opportunity to build a large milk processing enterprise for themselves in order to counteract the prevailing dictatorial position of the milk processors.

The positive changes of farm enlargement with the consequential increases in efficiency of production should continue into the future. The sales of milk should be on the increase. In the near future, milk production quota will not limit the increase of milk production (at least until the 2008/2009 quota year), but in the longer term producers will face this problem. For small producers, the sale of milk is often one of main sources of regular income and so the economic forces which are disrupting the traditional structure of milk production could lead to the emergence of some social problems, including emigration.

5 Expert views on the challenges at the stage of milk collection from farms

The particular arrangements for milk collection from farms in Lithuania are conditioned by the small size dairy farms and low cooperation levels. The largest milk processing enterprises collect for themselves. Collection from small milk producers results in high costs. According to data from milk processing enterprises, the average milk collection costs made in 2004 were €34 per tonne; the costs of milk collection from small producers were higher. These costs do not just cover transport but also include maintenance of stationary milk collection stations

because EU veterinary and hygiene standards forbid collections from other forms of storage facilities. Before EU membership milk from small producers was collected in traditional containers by raw milk vehicles.

Due to competition for raw, milk processing enterprises strive to purchase milk even in remote Lithuanian villages. Therefore, transport costs on milk collection from some places are high, especially when the number of suppliers becomes smaller and milk vehicles cannot make up full loads. Also there are some areas where different processing enterprises each have their own stationary milk collection stations competing for limited supplies; this also increases milk collection costs.

With reference to high collection costs from small producers, milk processors pay them much lower price for their milk. Therefore, small farms have no motivation to keep their dairy farms. On the other hand, milk processing enterprises aim to encourage the establishment of large farms loyal to their particular business provide credit to dairy farms which intend to expand production or to purchase storage facilities

As mentioned above, the establishment of cooperatives could help to solve the problem of milk collection from small milk producers, but these are not yet extensive enough. However, in the area where a cooperative becomes established, it also helps to increase milk prices for small milk producers who are not members.

In Lithuania the quality of milk purchased is high. In 2005, 93% of the total milk purchased met EU standards. In 2001 the figure was only 52%. Considerable progress has been made due to economic measures (on average 20% lower price is paid for non-standard milk) and to well organized control of milk quality.

In the immediate future farms will not be large enough to manage without stationary milk collection stations, and competition among processing enterprises will not decrease, so milk production costs will remain high. However, in the long-term, economic forces will cause small milk producers to increase production and sell milk from their own storage facilities, or to cooperate or to leave the industry. Then stationary milk collection stations owned by the processing enterprises will be sold to cooperatives or closed. Then milk collection costs should decrease. In the case of large milk suppliers, the opportunity to plan transport routes more effectively milk collection should also allow costs to decrease.

6 Expert views on the challenges at the milk processing stage

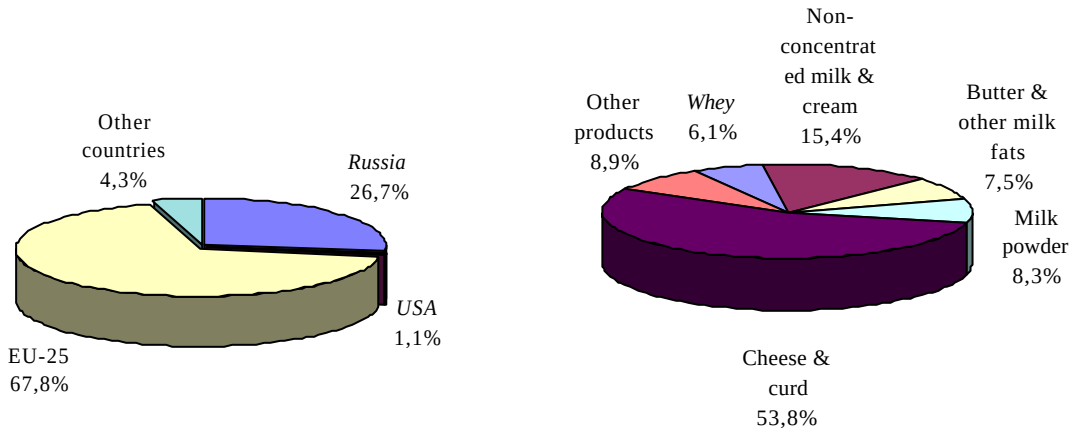
The dairy processing industry is one of the most concentrated and modern sectors of the food industry in Lithuania. In 2005 the income of three groups of milk processing enterprises accounted for about 80% of the total sales of the dairy industry; they accounted for 75–80% of the total milk processed in Lithuania. Large dairy enterprises were among first that got EU veterinary licences to sell their products in the EU market. At present 35 enterprises and their subsidiaries have such licences and one enterprise has a licence to trade in the local market. The output of milk processing enterprises was strongly cheese-oriented, the product that is in greatest demand and which, according to forecasts , will continue to be in great demand in the world market: cheese makes up 47% of the total value of dairy products sold and 54% of the total value of dairy products exported.

About 50% of the output of dairy enterprises is exported. Both amounts of exported products and the share of exports in total sales are increasing. The growth became notably more intensive after Lithuania had joined the EU: in 2005: compared to 2003, the income from exports went up by 57% and within total sales; the share of products exported went up by 8 percentage points.

Insufficient utilisation of production capacities is a severe problem for the dairy industry. The utilisation rate is about 70%. The reason is the highly seasonal nature of milk production, especially on small farms. In 2005 the volume of milk delivered in August was 2.17 times that delivered in February, but the February farmgate price was only 8% above that for August, thus the seasonal price scale seems inadequate to encourage a more even flow of production.

Antagonistic relations between milk processors and milk suppliers (not only small) are also a problem which must be mentioned. It is not very likely, but if this antagonism should lead to the construction of a new large milk processing enterprise as was suggested in the section 4, it could cause an imbalance at the processing stage.

The other group of challenges that the milk processors and manufacturers currently face relates to exports. The main markets for Lithuanian dairy products are the EU and Russia. The income from the exports of dairy products increased twice from €126.0 mn in 2000 to €257.4 mn in 2005. The noticeable growth of the exports was in 2004, i.e. in the year when Lithuania joined the EU. In 2004, compared to 2003, the exports went up by 41 per cent. Such shift was due to the open EU single market, export subsidies as well as partly due to the necessity to reduce stocks before the date of the EU membership. In the structure of exports dominate cheese (50-60%) and milk fats (8-20%).



Structures of dairy products exports in 2005

Between 2000 and 2005 period the structure of exports by dairy products hardly changed. More important changes were going on in the geographical structure of exports. As table 2 below shows, in 2002 the USA was the largest destination for Lithuanian dairy exports getting 41%

compared to the EU-25 countries 34% but by 2005 the situation had changed dramatically with EU_25 receiving 68% and Russia 27%.

Table 2 Destinations of dairy products exports in 2002-2005, %

	2002	2003	2004	2005
EU-25	34	42	72	68
USA	41	25	6	1
Russia	18	20	19	27

The important reason for the decline of dairy products exports to the USA in 2003 was the Lithuanian monetary policy. In 2002, instead the peg to the US dollar the Litas was pegged to the Euro. Therefore, due to the drop of US dollar exchange rate in point of the euro, in the same year the income of milk processing enterprises from the exports of dairy products into the USA were lower In 2003 this process increased particularly. As a result, a search for new more profitable markets was started. In 2004, when Lithuania had joined the EU, EU single market with its attractive prices for dairy products became opened as well as a possibility to get subsidies for the exports to traditional Russian market emerged, therefore, the USA market became unimportant.
The Russian market for the Lithuanian dairy enterprises is well-known from the times of former Soviet Union; on the other hand, Lithuanian dairy products are well-known on the Russian market. Export subsidies accelerated the exports of dairy products into this country: in 2005, compared to 2004, the amounts exported into Russia increased by 58%.

In the nearest 2-3 years the exports of dairy products should go up, but the growth would not be such rapid as it was in 2004. It is expected that the annual export growth could reach about 10%. Despite the risky Russian market, due to the market know-how, notice of Lithuanian products, possibility to sell with a well-known own brand name and export subsidies, the exports of dairy products into this country should increase further. The exports to the EU countries will be impeded by the absence of a well-known brand name and higher competition. In longer perspective, a rapid growth of exports will be limited by the amount of raw milk, since Lithuania will reach the committed national milk production quota.

The problem related to the EU market is that Lithuanian dairy products only entered the EU market recently. They constitute a small share of the total of dairy products available, have no recognised brand mark, and thus sell on price alone. The processors have insufficient funds to alleviate this situation through advertising. In Russia Lithuanian dairy products are better known and appreciated but the problem is greater risk and the unpredictable behaviour of the state. In 2002-2003 the Russian crisis resulted in considerably decreased exports to that country; in 2004 the Russian Veterinary Service suddenly introduced special veterinary licences that had to be obtained as permission to export Lithuanian products to their country(16 enterprises were able to get them) and in 2006 customs duties were increased In addition to all this, export subsidies are being reduced not only for dairy products exported to Russia, but also for the exports to all third countries. But export subsidies in particular are the instrument of market organisation which Lithuanian milk processing enterprises mainly use. Nevertheless, dairy enterprises have great experience in Russia and will not leave the Russian market for the time being.

In the immediate future considerable changes at milk processing stage are unlikely, only the decrease of export subsidies can reduce the profit of enterprises. In the long-term, the level of

utilisation of processing capacity should be raised, because the enlargement of dairy farms should smooth seasonality of milk production. The larger share of production coming from large dairy farms should also allow a gradual increase in the purchase price of milk. Sometime before or during the 2008/2009 quota year the growth of production and exports of milk processing enterprises will become limited by the availability raw milk, i.e. at that time the national milk production quota should have been reached. Raw milk is already being imported from neighbouring countries, so expansion beyond the quota is hardly possible. This fact should force milk processing enterprises to become more concerned with their brand image in the EU because it is one more way to increase their income.

7 Conclusion

Very small dairy farms are one of the biggest challenges at the milk production stage. This situation is associated with low cow productivity, high seasonality of production, high costs of milk collection and low average milk purchase price. An inefficient milk production structure emerged after the restoration of Lithuania's independence during the period of changes to the economic system. However, more recently dairy farms are becoming larger, during the last 5 years the average size of dairy farms increased by 35%. The enlargement of farms is encouraged by very low milk prices for small producers and more accessible support to larger commercial dairy farms. On the other hand, discrimination against small farmers was designed to encourage the establishment of dairy cooperatives. However, due to its association with former collective farms the level of cooperation is low despite the fact that the state supports this activity.

Some challenges at the milk processing stage are related to milk production: insufficient utilisation of production capacities due to seasonality of milk supply, high milk collection costs and antagonistic relationships with milk suppliers. Since collaboration with large milk producers is more profitable, milk processors provide them with economic support (higher purchase prices, credits for investment in their farms), while small farms get much lower prices due to inefficient production and are forced to stop production or to enlarge their herds. The same policy is applied via structural funds: early retirement with special attention paid to small milk producers, and farm enlargement are supported under the measures of the Rural Development Plan while medium and large-scale dairy farms can receive practical support under the measures of the Single Programming Document.

The other group of challenges that milk processors face is related to exports. The problem is that the Lithuanian brand is unknown in Europe because Lithuanian dairy products have only recently entered the EU market In Russia, where Lithuanian dairy products are known better, the problems are market risk and less and less EU support for exports to this country (as to all third countries). However, because milk processors have great experience in Russia, they will not leave that market for the time being. In future, when a lack of raw milk will limit production as national quota levels are reached, more attention will need to be paid to promotion of the Lithuanian brand to increase awareness among consumers in the EU market so as to increase sales in order to raise income.