

# The Logistics Aspects of Grain' Trade

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*Summary: The export of grain plays an important role in the foreign trade of the country, so the change of agricultural export, with either its positive or negative excursions, has significant effects on the foreign trade capacity of the whole national economy and also the development of its balance.*

*Due to the natural givens of Hungary it is possible to produce a volume that far exceeds national needs.*

*For Hungary it is a key issue to develop logistics service centres, which will basically change the division of labour in the field of transporting goods.*

*Today agricultural logistics belongs to the acknowledged and important branches of economy.*

*Its main point is that it covers the tasks of delivery, storage, quality assurance of different grains and other products through intervention warehouses to transportation abroad.*

*It is very favourable for the national logistics industry that there are four pan-European corridors going across the country and that companies developed at regional level during the past few years. At the same time the bad conditions of infrastructure, the capital shortage of small- and middle-sized companies and also the subsidization system, which is not really effective and quite unpredictable, forestall the development.*

## 1. Introduction

The economic and social role of agriculture have always been followed with vigorous attention by the public opinion in Hungary.

It is especially true nowadays when you can hear extreme opinions about the situation of Hungarian agriculture and also the situation on the market of grain causes general price increase of foods.

The agricultural economy – thanks to its givens played (or even play?) a traditionally equilibrant role in the Hungarian national economy.

Agriculture has been one of the decisive branches during the past period of time and although its role is decreasing, which is naturally attached to the social and economic development, its significance cannot be doubted.

Hungary has such good natural, geographical (economic geographical and weather conditions), and biological givens and also a production culture and human resources which means comparative advantage for our agricultural production against most of the European countries. (Szitáné Surányi Rozália, 2004.)

After joining the EU the introduction of the intervention system rose several problems and these problems were even worsened by the non-satisfactory communication, if there was any, from the government's side. People were informed about the changing proceedings but the state organizations held off in exploiting the subsidies ensured by the intervention more effectively. Due to the absence of organizing the procedures in details and in a mature way they tried to make the situation better by making desultory and overdue arrangements.

Now, three years after our joining, there are still a lot of problems out of the ones mentioned above. Although there are different plans now, the projects that should have started six or seven years ago, have already begun. There are a few minor, mainly vanishing movements towards making communication better. However, it is not enough, we still have a lot to do.

## **2. The aim and method of the research**

The aim of the research is to analyse the logistics aspects of grain trade in this, we can say, extraordinary situation and also to analyse the situation that has evolved as a result of the opening intervention possibilities due to our joining the EU.

When defining competitiveness it is essential that we know the competitors.

(Tütő et. al. 2003.)

Because of the character of the study I used mainly Hungarian sources, for example data of the Central Statistics Office (CSO) and the Agricultural Economic Research and Information Institution (AKII).

The data – even after putting them in tables, which was the main arranging principle – are usually available with their original measures. On the basis of this, the extent of the multitude was usually possible to show, and draw the conclusions with the help of the tables.

Róthné and Sugár say that with the help of the distribution ratios a multitude and also its structure can be characterized concisely according to criterion varieties. And it is also possible to compare the structures of two or more multitudes.

### 3. The competitiveness of basic commodity-production

In our arable plant farming the seeding territory of grain is about 70% at present. The seeding territory of the two most important cereals – wheat and maize – is about 2-2.5 million acres altogether.

Our grains that are widespread in public production are competitive in international comparison. In spite of the favourable natural agricultural lands the achieved grain performance in area units is much lower than the grain averages of the most important grain producer countries in the European Union. These figures show a very variable picture. Among the reasons the obligate ignorance of the necessary expenses has got as big role as natural disasters that have quite often happened in the recent years.

The main data concerning wheat are shown in Table 1, and the data concerning corn can be seen in Table 2.

Table 1

Years	Area (harvested thousand acre)	Grain (thousand tonnes)	Export		Import	
			Amount (thousand tonnes)	Its value (thousand USD)	Amount (thousand tonnes)	Its value (thousand USD)
2003	1 114	2 941	1 142	157 183	1	229
2004	1 174	6 007	962	131 978	37	6 995
2005	1 131	5 088	1 592	195 741	16	2 306
2006	1 078	4 379	2 039	289 266	14	1 887

Table 1

Source: AKII, CSO+own calculation

Years	Area (harvested thousand acre)	Grain (thousand tonnes)	Export		Import	
			Amount (thousand tonnes)	Its value (thousand USD)	Amount (thousand tonnes)	Its value (thousand USD)
2003	1 145	4 532	1 270	157 512	3	530
2004	1 190	8 332	1 288	207 132	13	3 598
2005	1 198	9 050	1 851	233 966	2	760
2006	1 229	8 441	2 259	300 499	16	2 914

Table 2

Source: AKII, CSO+own calculations

## **4. Trade of agricultural products**

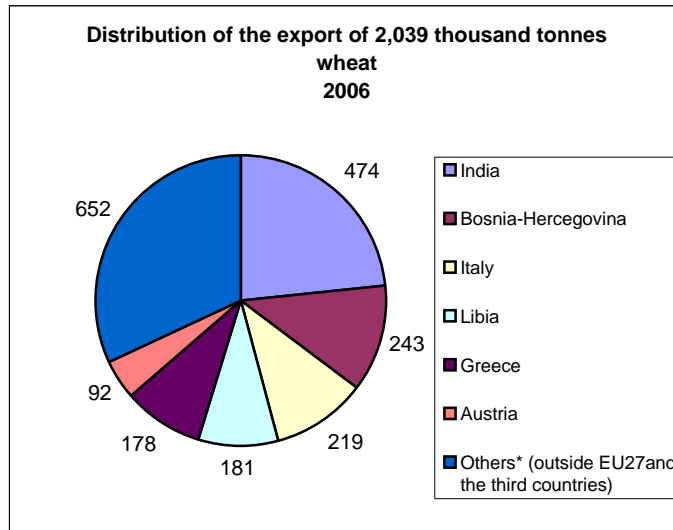
The trade of agricultural products was going under a significant change during the last decade. Throughout the years the weight and the significance of certain characters changed. Some of the co-ordination and integration connections remained others were established again. The system of agricultural trade has become varied. The common channels of distribution before the change of regime meant some security for the producers. This situation strengthened the producers point of view but it didn't inspire agricultural producers to introduce modern marketing methods and use them in practice.

### **4.1. The main characteristics of grain trade**

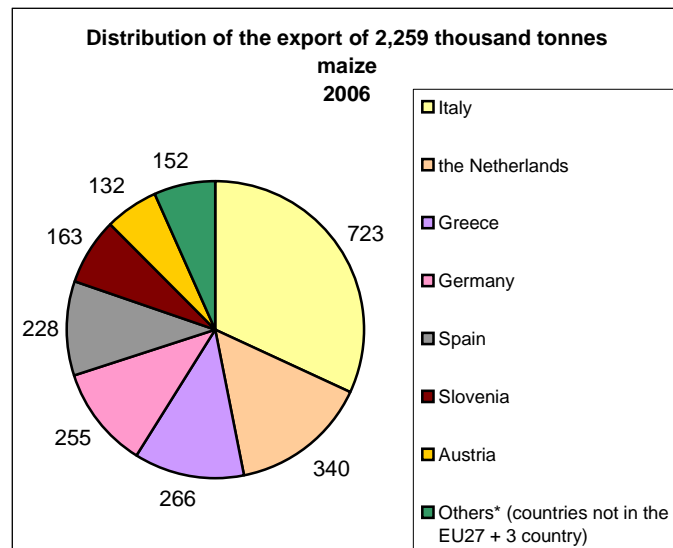
Until the end of the 1980s the trade of food grain was monopolized. It was the county companies which belonged to the Grain Trust who carried out the buying-up. Prices were controlled centrally and the distribution was tightly restricted. In the middle of the 1980s the distribution in the case of feed grain was less tight and at the very end of the 1980s the cessation of the Grain Trust eased the tights even more. In corn export a new tender and permission system were introduced from 1992 and the number of companies with licence needed for the foreign trade of corn increased. With the privatization of the companies belonging to corn industry, mill industry and corn mixing industry the number of the members on the market rose further.

In 2003 the income from the selling of grain was 396 million USD. This group of goods gave 12.4% of the export. Out of this the income from wheat and maize was 315 million USD. The export of grain continued growing in 2004, 2005 and 2006. In 2006 more than 70% of different grains were transported to the EU countries and approximately 30% to countries outside the EU.

The distribution of the export of wheat and corn in 2006 is shown in Chart 1 and Chart 2.



**Chart 1**  
Source: own-made chart



**Chart 2**  
Source: own-made chart

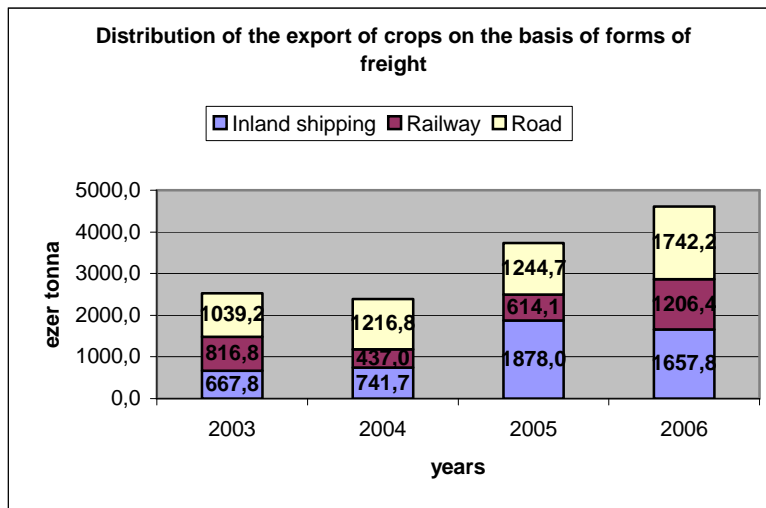


Chart 3.  
Source: www.gabonaszovetseg.hu

## 5. Agricultural Logistics

Hungary's geographical position is very favourable from both agricultural and logistics point of views. This is not so obvious in the aspects of big volume agricultural products, which has two causes:

- the logistics service centres are not prepared for handling mass goods and
- the possibilities of transportation by ship are limited.

The logistics attraction areas are shown in Chart 4.

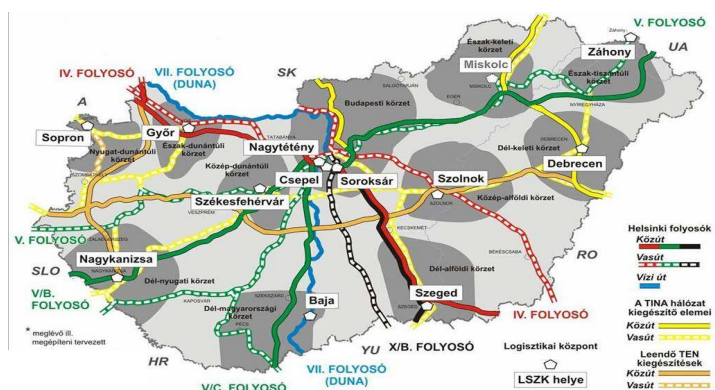


Chart 4.  
Source: Kiss Gyula, MLSZKSZ

We have to be able to make the best of the outstanding geopolitical givens. Decision makers have just started to realize recently that it is not enough to only produce a good quality product if the transportation and storage between the producer and the final user are not well-organized.

Due to the distinctiveness of the products agricultural logistics differs in many respects from the logistics of other economic branches. Agricultural logistics is a comprehensive approach, a system of tools, an organizational structure and operative mechanism which is an effective tool when solving everyday economic processes, like purchasing, production, harvest, storage, packing and transportation. To get agricultural products on the market and to ensure their competitiveness we need value improving logistics systems.

### **5.1. Activities in grain logistics**

- Grain farming (seed-corn, agricultural land, chemical products, irrigation, etc.)
- Harvest
- Transportation to granary, quality certification
- Storage in a silo or in a hall store-house
- Storage in public granaries, loan accommodation
- Exporting, international transportation (by rail, by ship)
- Internal transportation to mills
- Processing –packing – unit cargo making
- Storage of semi-prepared goods (e.g. flour)
- Transportation to further processing
- Secondary processing – packaging – unit cargo making
- Finished products e.g. (bakery products, dough, extruded products etc.) storage
- Transportation to wholesale trade, supermarkets
- Transportation to retail trade

#### **CONSUMPTION**

Source: Csonka Endre Logistics yearbook, 2003.

### **5.1.1. Storage and corn transportation**

At the beginning the Ministry of Agriculture wanted to solve the lack of granaries in Hungary by transporting the corn to granaries abroad. It soon turned out that this was not a really good solution.

The intervention system of the EU that offered sure income was a very new thing to the Hungarian corn-market a few years ago. The past few years at these markets were characterized by a huge offered amount, increasing internal market prices and a “fever” of building ware houses.

It is much worth dealing with the problems and debates around the intervention ware houses since in this area we can find all the problems that are present in Hungarian agricultural economy.

The experts urged mainly the following things: the mapping of warehouse capacity, the building of new and optimized granaries, the tendering of stock taken over for intervention and the compensation for the disadvantages emerging from freight. In practice a lot of small, scattered granaries were built that were difficult to approach from a huge amount of state subsidy.

As far as I am concerned I think that basically not only storage but also the complex grain provider chain should be mentioned.

The improvement of both the logistics centres and the combined goods-forwarding solutions started in Hungary some time ago and it will strengthen in the future.

Transportation on roads is one of the main reasons of polluting the environment. Jams on the roads endanger the biggest advantages of road transport that are flexibility and fastness.

Combined transportation has increased recently and this has lowered the harms of road transport and the best use of transportation by ship and by rail.

Logistics service centres help to use railways and inland water ways rather than roads for transportation . Logistics service provider centres advance to shepherd transportation on road to water ways inside the country and also take the production gentile logistics tasks over from the farmers and organize the transportation chains from the producer to the customer

The first important step of development should be spending money on grain granaries from which it is possible to get the goods onto the sea – cost effectively. The closeness of water (e.g. a river) should be the first criteria, but if it is not possible, it is practical to transport grain to the target market. Railway connection is not enough by itself as there is a need for bases that are suitable for handling directed trains so that great amount could be handled effectively. The direction of the development should be defined in a way that the transportation costs be optimized. It is a fact that there are several warehouse bases in Hungary with good



facilities. They would have been worth renovating as they make effective handling of goods and forwarding possible.

The other question mark is the size. According to the plans of support the sources are given to the producers who were interested in building many small granaries. There is a need for suitable coordination as the minimum limit of the economical size of granaries is around 15,000 tonnes. Under this limit it isn't possible to operate economically since we have to count with constantly high costs partly because of the intervention rules. It is also a false expectation that 100% of these investments should be financed by public funds.

## **6. Summary statements**

Developing agricultural logistics – adjusting it into the network system of the Hungarian logistics centres – serves not only the agricultural branch but also the improvement of Hungarian competitiveness.

Evaluating the present situation of the national logistics service centres we can state that the previously slow development became faster in 2002 and 2003 and, as an effect of the intensive improvement of the roads development, it is still going on.

In the case of some centres (e.g. Szeged, Szolnok and Záhony) the agricultural profile can be developed in a relatively cheap and easy way.

An existing port or an easily evolved one could be a solution (like in Almásfüzitő and Mohács), where the facilities are given to transport goods by ship and also to put transportation from road to water ways. This way of transportation is very important because of environmental protection and also because the lower transportation prices make our agricultural products more competitive abroad. Furthermore, there are no jams and transportation by ship can be performed continuously depending on the level of rivers, of course.

From the things mentioned above it follows that it is practical to concentrate logistics that serves agriculture to places where there are already suitable logistics services and whose transportation and geographical position is favourable, too.

An agricultural service centre which is shaped to suit the needs of agriculture

- provides the collective, processing, storing, handling tasks of the attraction area of its agricultural products and also does the organizing of agricultural production.
- it ensures the possibilities of putting the goods on ships or railway during the transit of agricultural products. Moreover, it takes care of storing functions and different authority tasks,

- in the case of agricultural products – as the consequence of the favourable price – the low transportation costs would help selling internationally in a way that with the direct drawing from warehouse stocks the disadvantages originating from the longer time could be eliminated.

Carrying out more rational goods forwarding processes ( that are undisturbed, characterized by high usage of capacity and environmentally protective, etc.) is one of the most essential conditions of a sustainable and at the same time economically effective transportation.

With forming the system of optimal transportation and storage the efficiency of Hungarian grain production and use could be significantly improved. One of its conditions is that the system and the content capacity of the granaries should suit the local arrangement of grain production.

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