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MAIN CHARACTERISTICS OF TRADE OF THE HUNGARIAN CEREALS AND OIL CROPS BETWEEN 2000 AND 2010 AND THE EFFECTS OF CHANGES IN INTERVENTION RULES TO THE HUNGARIAN COP SECTOR FROM 2004 TO 2010¹

Fehér, István² & Kiss, István³

²professor emeritus

Feher.Istvan@gtk.szie.hu

University of Szent István, Faculty of Economics and Social

³PhD candidate

kissistvan@agr.unideb.hu

University of Debrecen, Faculty of Applied Economics and Rural Development

Abstract: In this paper the trade of the Hungarian cereal and oil crops from 2000 and 2010 are introduced. The general attributes of the Hungarian crop sector are analyzed and a specific picture from aspect of the trade in Hungarian cereal and oilseed sector, with a focus on the quantity of the export and import of wheat, maize, rapeseed, sunflower and other crops and their main target countries. This article also aims to show the impacts of the changes in the EU's intervention rules and provide analysis.

Key words: cereal production, cereal and oilseeds, export, import intervention system, Hungary

1. Introduction

“Minimal differences can be observed regarding the area being under wheat production in Hungary. The sowing area of wheat decreased in Hungary both in 2010 and 2011 as compared to 2009 due to various reasons on behalf of the growers. The profitability of wheat production was low in 2009, and as a consequence a number of growers decided to change the sowing structure to the detriment of the wheat sowing area. The sowing period in autumn of 2010 was exposed to various bad meteorological conditions together with ground water troubles, therefore a number of growers could not sow wheat on the areas previously intended. In summary, it has to be stated that both in 2010 and 2011 wheat production area decreased in Hungary as compared to 2009, however there were completely different reasons for the decrease in case” (KISS, 2012).

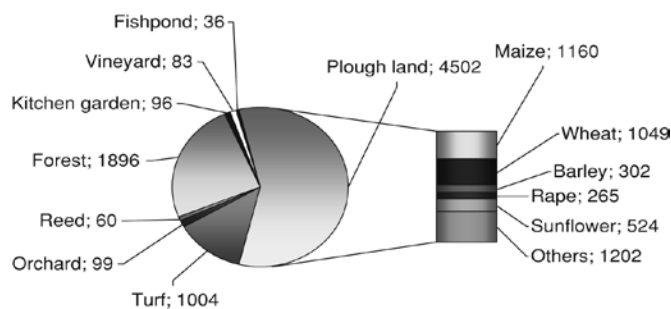


Figure 1: Structure of agricultural land in Hungary and the sowing area structure of crops in 2010 (in thousand hectares)
Source: KSH, 2011 In: KISS, 2012

“Figure 1 illustrates the structure of the agricultural area in Hungary. Hungary has 4.5 million hectares of arable land. Shares of cereals’ sowing area within the Hungarian arable land fluctuated between 68.4% and 69.9% in the period of

¹„A kutatás az Európai Unió és Magyarország támogatásával a TÁMOP 4.2.4.A/2-11-1-2012-0001 azonosító számú „Nemzeti Kiválóság Program – Hazai hallgatói, illetve kutatói személyi támogatást biztosító rendszer kidolgozása és működtetése konvergencia program” című kiemelt projekt keretei között valósult meg. (The research has been carried out in the frame of the priority project titled “National Excellence Programme - Convergence programme for the establishment and operation of a system supporting students and researchers Nr TÁMOP 4.2.4.A/2-11-1-2012-0001” supported by the EU and HU.)

2004 and 2008. The differences between the different years are negligible. The significance of wheat and corn is nearly the same within cereals. Both plants cover approximately 28% of the entire arable land (KSH¹, 2011). In 2009 Hungary, having 1.15 million hectares of wheat producing area, was placed 29th in the world ranking” (KISS, 2012).

2. Objectives, materials and methods

The authors determined their objectives as follows:

- making a general analysis about the Hungarian cereal and oilseeds sector and also the trade of these crops;
- showing the changes in EU's intervention rules;
- analysing the influences of these changes.

Data were collected from international and national databases. The major international source was the FAOSTAT database. The main data about the cereal and oilseed production and export, import quantities were collected from this database. The authors make a general description of the main target countries of the Hungarian cereal and oilseed sector. For this part of the paper, FAO Trade Flow Map is used as well. In addition, the relevant data of the Hungarian Central Statistical Office were collected also for certain aspects of this paper.

For the next logical part of the study, other authors' compositions were used and synthesized. Furthermore, authors contacted employees of the Agricultural and Rural Development Agency and collected data regarding the Hungarian intervention system and stocks.

3. Results and discussion

3.1. Export-import in cereal production

Figure 1 shows the quantity of export and import of the two most important cereals in Hungary. We can see on this graph that both the import of maize and wheat are negligible.

Our cereal production is export oriented. Figure 1 proves this statement, because Hungary exported significant quantities of these cereals every year. The export of wheat was the lowest in 2000, but afterwards it increased in 2001. It stagnated between 2002 and 2003. The Hungarian export of wheat rose gradually from 2004 to 2006. In 2007, it dropped again, but it increased again by 2008, in which Hungary exported 2.1 million tonnes of wheat. In 2009, it fell by 452 thousand tonnes. 2.18 million tonnes were exported in 2010, the highest point during this period.

¹Hungarian Central Statistical Office (abbreviation: KSH)

The export of maize was similar to the export of wheat between 2000 and 2006 in all years but one. This exception was 2002, because the export of maize by far exceeded the export of wheat in this year. In 2007, the export of maize shot up dramatically. It was twice as high as in the previous year.

In 2007, the first reason of the change was that there was a serious drought in Europe and there was need for the Hungarian intervention stock. The second reason for the change was that the Hungarian farmers offered a great amount of maize to intervention between 2004 and 2006. The intervention stocks of maize reached the highest level by the year of 2007 due to their offer. The intervention system was treated by the Hungarian farmers as if it was a fixed market with fixed prices. Due to this kind of thinking, the Hungarian intervention stock was the highest in the European Union. On the other hand, the yield of the maize was quite good from 2004 to 2006 and the farmers could not sell their maize. In 2007, Hungary exported its stocks. In 2008 and 2009, the export of maize increased from 3.3 to 4.1 million tonnes. In these years, the yield of maize was invariably good. In 2010, it dropped a little bit.

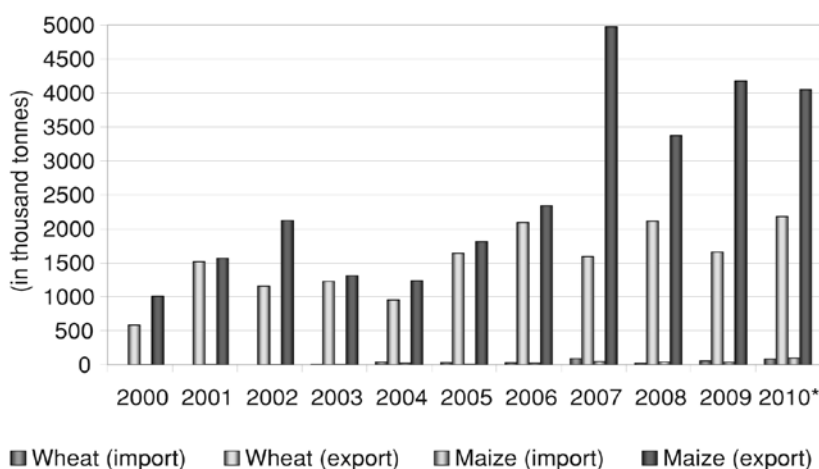


Figure 1: Quantity of the export and import of wheat and maize between 2000 and 2010
Source: FAO and KSH, 2012; *KSH data

We cannot talk about significant changes with regard to these target countries due to the fact that Hungary is a landlocked country. In general, the quality of Hungarian wheat is excellent, but it depends on the vintage of the given marketing year. In 2009, the most important target countries of the Hungarian wheat export were Italy, Romania, Greece, Bosnia and Herzegovina, Austria and Slovenia. These were the top six countries in 2009. The share of Italy, Romania, Greece and Bosnia Herzegovina within the Hungarian wheat export was between 10 and 25%, respectively. Hungary exported 382 thousand tonnes to Italy, 285 thousand tonnes to Romania, 226 thousand tonnes to Greece, and 192 thousand tonnes to Bosnia and Herzegovina in 2009. Nowadays, the role of Romania in the Hungarian wheat export is very important, because 363 thousand tonnes were exported to Romania in 2008. In 2007, the quantity of the Hungarian wheat export towards Romania was 382 thousand tonnes. However, Hungary

exported 538 thousand tonnes to Romania in 2003. This was the highest level in the last ten years. The reasons are very simple. Romania can produce a sufficient quantity of wheat, but the quality of their wheat is not similar to the Hungarian wheat, because Romania cannot produce sufficient quantity of edible wheat and their wheat is improved by the Hungarian wheat. On the other hand, Romania exported a remarkable quantity of feed wheat every year. This market phenomenon can generate a vacuum on the Romanian wheat market.

There were other important target countries of the Hungarian wheat export in 2009. Hungary exported 164 thousand tonnes to Austria, 75 thousand tonnes to Slovenia, 71 thousand tonnes to Israel, 50 thousand tonnes to Germany. Contrary to Romania, Israel and Germany are quite distant from Hungary.

We can see that the most important target country of Hungary's maize export was Italy in 2009, when its share was 28% of the Hungarian maize export. However, in 2000 Italy's share was only 1.39%. The Russian Federation was more important, because Hungary exported 119 thousand tonnes to Russia in 2000, but only 3.1 thousand tonnes in 2009.

That is why we can claim that there were significant changes in the rank of the target countries of the maize export. Italy has become the most noteworthy target country after Hungary's accession to the EU. The role of Romania was of the same importance as the role of Italy in 2009. Romania ranked second within the target countries of the Hungarian maize export in this year with 882 thousand tonnes. The position of Romania among our target countries became stronger after Romania's accession to the EU.

There were other important target countries of the Hungarian maize export in 2009. Hungary exported 536 thousand tonnes to Germany, 482 thousand tonnes to Netherlands, 275 thousand tonnes to Austria. The position of these countries among the target countries of the Hungarian maize export became stronger after Hungary's accession to the EU.

3.2. Export-import in oilseeds production

Figure 2 shows the quantity of export and import of rapeseed and sunflower seed between 2000 and 2010. Both of the import of rapeseed and that of sunflower seed are unremarkable in this period. In 2009, the quantity of export was three times as high as in 2000. The export of sunflower seed was 280 thousand tonnes in 2000, but in the next year it went down by 80 thousand tonnes. It increased steadily from 2001 to 2004. In 2005, it dropped again, but this change was not too serious. The export of sunflower seed rose gradually between 2006 and 2009, but afterwards it reached its highest level in 2010.

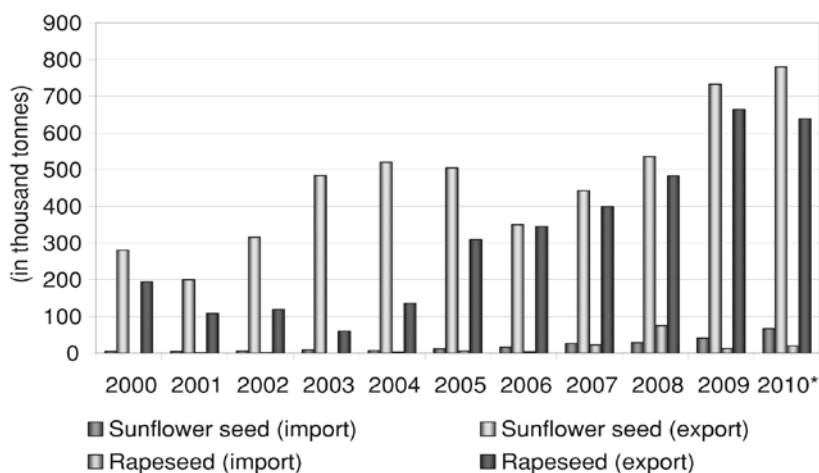


Figure 2: Quantity of the export and import of rapeseed and sunflower seed between 2000 and 2010

Source: FAO and KSH, 2012, *KSH data

The export of rapeseed was about 200 thousand tonnes in 2000, but it decreased in 2001. If we look at the quantity of export of rapeseed between 2001 and 2004 then we can state that there was no serious change in this period, but afterwards it improved and there was a sudden increase by the year of 2005. We have to mention that the lowest level of export of rapeseed was in 2003, because of the fact that there was a significant drought in Hungary in this year. This drought affected its yield, but there was another serious reason for this nadir, namely that the Hungarian farmers produced rape only on 70.9 thousand hectares in 2003, which was the lowest level of the last ten years. Nowadays, they produce rape on 200-260 thousand hectares (FAO, 2012). The export of rapeseed increased gradually between 2004 and 2009. The highest level was in 2009. In the next year, it dropped a little bit.

The rape became a very popular plant in Hungary and its harvested area increased gradually from 2004 to 2009. In 2010, it went down a bit. Rape production is quite export oriented. If we look at the quantity of export and the quantity of rape produced in this period then we can state that our country exported more than it produced in 2009, 2008, 2006, 2005 and 2000. It was possible, because there were stocks in Hungary.

We can make similar claims about our sunflower production, but we have never exported more sunflower than we produced. It became a similarly popular plant like the rape due to the fact that the profitability of both sunflower and rape is better than that of cereals.

In our view, the harvested area of sunflower and rape culminated in the last five years in Hungary, because farmers have to follow the technological rules. There are some regulations for crop rotation in the cross-compliance system.

The most important target countries were the Netherlands, Italy and Germany. Hungary exported 264 thousand tonnes to the Netherlands, 174 thousand tonnes to Italy and 120 thousand tonnes to Germany. These countries produce remarkable quantities of biodiesel and they use rapeseed oil for biodiesel production. Due to this consumption, they need sunflower seed oil for human usage.

There were other important target countries of the Hungarian sunflower seed export in 2009. Without listing all, we exported 40 thousand tonnes to Austria, 32 thousand tonnes to Bosnia and Herzegovina, 23 thousand tonnes to Belgium, 21 thousand tonnes to Slovakia, 18 thousand tonnes to Romania, 12 thousand tonnes to France, 11 thousand tonnes to Poland.

Germany was the most important target country. We exported 443 thousand tonnes to Germany in this year. In 2009, the total quantity of the Hungarian rapeseed export was 732 thousand tonnes. We have to mention that the exported quantity to Germany was the highest in 2009. Hungary exported 260 thousand tonnes to Germany in 2008 and 158 thousand tonnes to Germany in 2007. Thus, we can claim that there was an intensive increase after Hungary's accession to the EU.

There were other noteworthy target countries for rapeseed export in 2009. We exported 140 thousand tonnes to Austria, 39 thousand tonnes to Slovakia, 13 thousand tonnes to Netherlands, 12 thousand tonnes to Romania, 10 thousand tonnes to Italy.

To sum up the export-import situation of the most important Hungarian crops, we cannot talk about significant changes in the most important target countries of the Hungarian wheat, sunflower seed and rapeseed export. However, there was a remarkable change in the maize export, because the position of Italy became stronger and the position of the Russian Federation weakened.

3.3. Trade of the other crops in the COP sector

Table 1 shows the quantity of import and export of other crops in the Hungarian COP sector between 2000 and 2010. The other crops are barley, beans, oats, peas, rye, sorghum and soybean.

If we take a closer look at table 1 then we can claim that there were no significant quantities of import of the other crops from 2000 to 2010. The quantity of the import of barley changed between 0.19 and 77.29 thousand tonnes during this period. The import of dry beans varied from 3.7 to 8.47 thousand tonnes. However, the quantity of green beans

Table 1: Quantity of the import and export of other crops in the Hungarian COP sector from 2000 to 2010 (thousand tonnes)

Denomination	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*	
Import	Barley	60.61	50.66	0.19	53.48	77.29	57.39	12.86	65.28	61.08	33.39	77.27
	Beans, dry	3.70	5.33	6.47	7.23	7.97	8.47	7.06	9.05	8.06	7.24	8.35
	Beans, green	0.03	0.00	0.00	0.07	0.01	0.36	0.69	1.32	0.23	0.48	no data
	Beer of Barley	17.97	14.45	22.16	47.73	96.89	78.26	75.90	69.73	82.73	88.01	no data
	Oats	0.00	4.63	0.01	1.10	4.91	0.12	0.15	0.68	1.32	0.06	0.01
	Peas, dry	3.46	5.95	4.95	3.30	1.82	3.27	3.04	3.20	2.37	3.09	5.09
	Peas, green	0.01	0.00	0.01	0.00	0.03	0.03	0.00	0.01	1.44	0.00	no data
	Rye	1.19	0.63	0.03	0.00	2.70	1.18	0.07	1.63	1.80	1.24	0.013
	Sorghum	0.00	0.00	0.10	0.00	0.00	0.12	0.00	0.00	0.39	0.50	no data
	Soybeans	4.90	55.26	54.32	17.01	5.32	11.38	0.56	6.19	13.92	14.42	14.101
	Triticale	0	0	0	0	0	0.001	0.07	0.1	0.053	0.11	0.033
Export	Barley	82.86	139.89	133.49	112.03	126.83	307.90	309.85	363.86	478.59	223.89	501.68
	Beans, dry	0.25	0.05	0.14	0.34	0.15	0.99	1.07	1.93	1.83	1.86	1.21
	Beans, green	0.11	0.04	0.00	0.00	0.06	0.07	0.00	0.00	0.00	0.03	no data
	Beer of Barley	6.31	1.23	2.59	0.85	4.98	34.11	35.67	38.37	53.47	27.50	no data
	Oats	6.02	7.48	8.40	8.03	2.74	9.46	12.63	5.37	5.87	4.05	5.83
	Peas, dry	10.39	8.22	11.16	10.52	12.08	10.88	10.68	13.47	13.26	12.34	9.67
	Peas, green	0.07	0.02	0.09	0.00	0.00	0.14	0.00	0.89	0.51	0.43	no data
	Rye	5.46	7.01	13.27	10.31	4.81	8.56	12.89	12.03	13.92	8.15	10.92
	Sorghum	1.41	0.91	1.28	1.32	1.79	2.24	4.16	6.80	2.61	4.31	no data
	Soybeans	11.09	6.25	5.26	3.29	2.50	6.03	5.73	7.80	11.09	24.82	30.82
	Triticale	12.42	32.83	34.62	17.3	28.78	41.93	38.93	12.52	17.14	16.11	11.57

Source: FAO and KSH, 2012

*KSH

changed between 0 and 1.32 thousand tonnes. The situation of the dry and green peas is similar to that of the beans. Hungary imported rye during this period, but the quantity of the rye is negligible. The volumes of the sorghum, oats and triticale are also unremarkable. Hungary imported from 0.56 to 55.26 thousand tonnes of soybeans between 2000 and 2010.

To conclude, the quantity of the import of the other crops in the Hungarian COP sector is not remarkable. Therefore, we cannot talk about serious competition from import on the domestic crop market. There is import of crops in Hungary either due to special needs or trade policy considerations, or because the foreign crops might be cheaper in a given moment.

We mentioned earlier that Hungarian crop production is export oriented and we introduced the quantities of the export and import of the most important crops in our country. The correctness of this statement was proved. However, we have to talk about the volume of the export of other crops. A remarkable quantity of barley was exported by Hungary. It varied from 82.86 to 501.68 thousand tonnes during this period. The peak was in 2010, when Hungary exported 501.68 thousand tonnes. Barley was the most significant among the other crops in the Hungarian COP sector.

3.4. Competitiveness of the Hungarian COP sector on the World market

Figure 3 shows the carrying costs of the farm crops by modes of transport and destination. Hungarian crops can be competitive up to a distance of 500 km on land. Thus, the most important target countries of our crop export are close to Hungary (POPP, 2009).

On the one hand, the carrying costs impose a very serious disadvantage for Hungary on the international crop market. On the other hand, we have to state that this disadvantage can protect the competitiveness of our crops against imports on the domestic market.

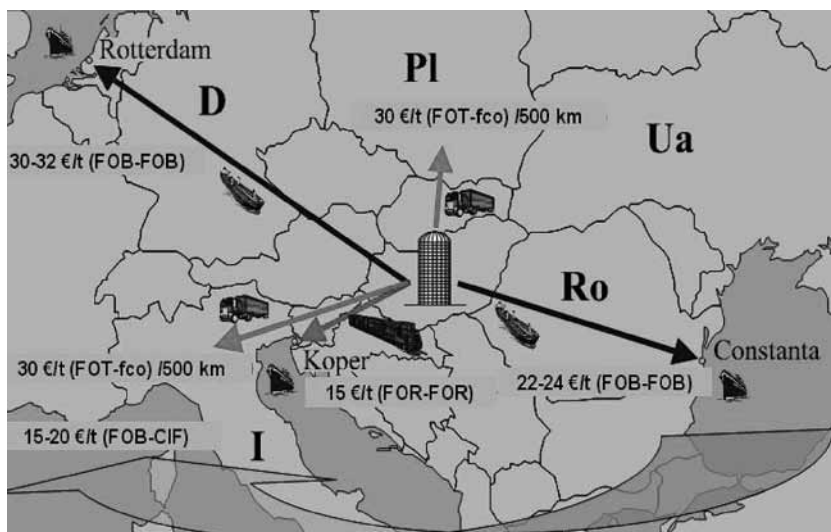


Figure 3: Carrying costs of the farm crops by modes of transport and destination
Source: AKI, IGC in POPP, 2009

3.5. Changes to intervention rules

Firstly, we have to introduce how the intervention rules changed in the EU. It is necessary to make a distinction between the changes that had happened before Hungary joined to the EU and the changes that took place afterwards. Finally, we have to talk about what kind of impacts these changes have on the Hungarian COP sector.

The principal changes between 2000 and 2010 in the EU:

Before Hungary's accession to the EU:

- The intervention prices decreased due to the AGENDA 2000. The prices decreased from €119.19 to €110.25 per tonne in 2000/01 and €101.31 per tonne from 2001/02 onwards.
- In 2003, rye was removed from the scope of intervention and increments were halved monthly.

After Hungary's accession to the EU:

- Quantitative limits were introduced for maize intervention over a three year period. This limit started with a ceiling of 1.5 million tonnes in 2007/08. It was lowered to 700,000 tonnes by the next market year. Finally, the limit was set to zero in 2009/10. The change caused the intervention to no longer be available automatically for maize except when it is necessary due to the circumstances.
- The 2008 CAP Health Check expanded the maize model to other feed cereals. The other very important reform was tendering in the intervention process.

The principal reasons for the reform after Hungary's accession to the EU

"From 2004/05, the EU's maize production increased with the accession of Hungary, along with other new Member States. Intervention became a competitive outlet for Hungarian maize, as prices had formerly been rather low in this landlocked country. A phasing out of maize intervention was therefore decided in 2007" (European Commission, DG Agri, 2011).

"Poor harvests, tight supplies and high EU prices resulted in intervention stocks being cleared in 2007/08. However, following a bumper harvest in 2008/09 they built up again, with low prices resulting in large quantities of barley being offered to intervention. Higher prices in 2010/11 allowed stocks to be cleared again" (European Commission, DG Agri, 2011).

3.6. The impacts of the changes on the Hungarian COP sector

Figure 4 shows the monthly quantities of the intervention closing stocks from December, 2004 to July, 2011. At first glance,

it seems evident that the quantities of the closing intervention stocks reached the highest point within two years after the EU accession. Even so, this situation is not as simple as it seems at first sight. We have to take a closer look at the reasons for the high closing stocks in this period. On the one hand, the intervention system was treated by the Hungarian farmers as if it had been a fixed market with fixed prices. Due to this kind of thinking, the Hungarian intervention stock was the highest in the European Union. On the other hand, this is not the real reason for the high stocks, since the maize yield was quite good from 2004 to 2006 and the farmers could not sell their maize because of the fact that Hungary is a landlocked country and the Hungarian farmers could not be competitive with their crops due to their higher carrying costs. Therefore, they offered their crops for intervention.

We can see that the two most important cereals in the interventions stocks were wheat and maize. In addition, there is also barley and sorghum, but these crops were not so noteworthy.

The quantity of the wheat increased rapidly from December, 2004 to July, 2005. In less than one year it had increased by 1.391 million tonnes. There was a little stagnation of the quantity of the wheat from July to December, 2005, but afterwards it increased steadily again and it peaked in May, 2006. The quantity of 1.821 million tonnes of the Hungarian intervention wheat stocks was the highest since Hungary's accession to the EU. Thereafter, the volume of the wheat decreased constantly from May, 2006 to April, 2008.

We can talk about similar things in the case of maize. The quantity of maize increased sharply between December, 2004 and July, 2005. In 2005, the intervention maize stocks stagnated from July to November, but afterwards the increase persisted due to the new heavy crops. The highest quantity of maize was the 5.201 million tonnes that was achieved in June, 2006. From then, the volume of the maize decreased steadily to October, 2008.

The quantity of barley and sorghum was negligible as compared to the volume of the two most important Hungarian

cereals. The quantity of barley changed between 0 and 367.329 thousand tonnes during this period. The intervention stocks of sorghum varied between 0 and 2.945 thousand tonnes.

If we take a closer look at how the quantities of the intervention closing stocks developed, then we can claim that the total intervention stocks decreased steadily from its highest point to October, 2008 due to the following two reasons. Firstly, there was a serious drought in Europe and there was need for the Hungarian intervention stocks in the EU, and Hungary exported a remarkable quantity of its intervention stocks. The other reason for the decrease was that there were some principal reforms to the intervention system; therefore the European Commission did not buy more quantities of the crops.

Figure 4 also shows distinctly how the principal reforms of the intervention system affected the Hungarian cereal sector. One can see that after the reforms the total quantity of the intervention closing stocks could not reach the level of one million tonnes again in spite of the fact that before the reforms the total closing stock reached the level of seven million tonnes.

On the one hand, the stocks decreased due to the reforms. Therefore, the contracted capacities of intervention cereal stores decreased also. Figure 5 confirms this statement by showing the contracted capacities of intervention cereal stores according to counties between 2004 and 2011. In the 2004/05 marketing year, there were around 4.2 million tonnes of contracted capacity. In 2005, the total intervention closing stocks were around 4 million tonnes.

However, the contracted capacity exceeded 11 million tonnes by the marketing years of 2005/06 and 2006/07. The reasons for this increase are perfectly clear, since the intervention closing stocks increased also during these years. Due to the incremental stocks, it was necessary to build new cereal storages in Hungary. The investments were undertaken by the private sector. Conversely, there were subsidies for these buildings. The most of the investors were traders, integrators and other huge actors of agribusiness. Contrarily, there were only few investors among the Hungarian farmers, because they had no good contacts and faced a lack of capital and abilities.

The contracted capacity decreased dramatically by the marketing year of 2007/08, because of the principal reforms. Thus, it was not necessary to contract for cereal storage. The contracted capacity varied between 1,221 and 1,661 thousand tonnes. After the reforms, we cannot talk about significant changes in this question.

When the new storages were built up there were sufficient quantities of crops to take advantage of these new capacities. Nowadays, the capacity utilisation is not so favourable due to the fact that there were some changes in the intervention system. Therefore, the intervention closing stocks cannot reach again the previous levels and most of these stores

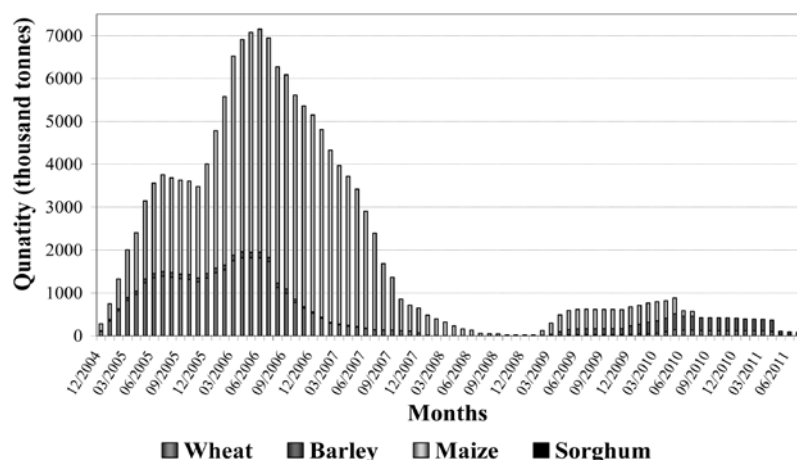


Figure 4: Monthly quantities of intervention closing stocks between December, 2004 and July, 2011
Source: MVH, 2012

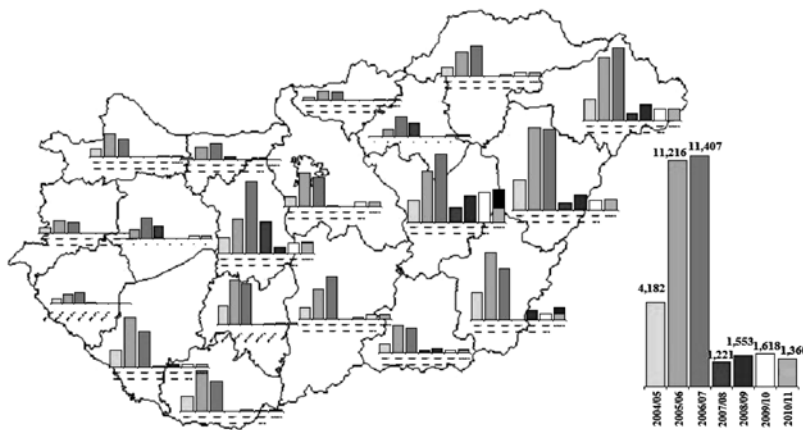


Figure 5: Contracted capacities of intervention cereal stores according to counties from 2004 to 2011 (thousand tonnes)
Source: MVH, 2011

are empty or have a low level of utilization. Figure 6 shows the capacity utilisation of intervention cereal stores according to storages in 2010. We can see on this figure that the previous statement is correct. It can be a serious problem, because if we do anything as an entrepreneur or enterprise in the sphere of business then we have to press down the fixed costs of the product as low as possible. We can reach this objective with good capacity utilisation. If our storages are empty or have a low level of utilization, we cannot press down our fixed costs enough.

However, we have to distinguish between flat storages and tower silos in this question, because the flat storages can be used in alternative ways. The investors can store different things in flat storages, but they can store only cereal in tower silos. Due to the alternative utilization of flat storages, these stores have good capacity utilisation.



Figure 6: Capacity utilisation of intervention cereal stores according to storages in 2010
Source: MVH, 2011

Finally, we would like to emphasize that there was a quite positive impact from the changes to the intervention rules. Earlier, the farmers offered their crops for intervention, and

the intervention price was 101.31€/per tonne. Afterwards, the market prices improved and the EU sold the intervention stocks on the market. The price difference meant profit for the EU. After the reforms, the farmers could not offer their crops for intervention and they had to learn to adapt to the changes of the market environment. Due to the reforms, the adaptability of the Hungarian farmers improved and the price difference was realised in the Hungarian economy.

4. Conclusion

The authors can claim that the Hungarian cereal production is rather export oriented, due to the fact that Hungary produced more quantity than the domestic consumption in the examined period. Hungary exported remarkable quantity of cereal and oilseed between 2000 and 2010, however the competitiveness of our crops is limited because Hungary is a landlocked country without a seaport. The Hungarian crops can be competitive up to a distance of 500 km on the land (POPP, 2009). Thus, the most important target countries of our crop export are close to Hungary.

In the examined period the intervention rules were changed some times by the European Commission. "From 2004/05, the EU's maize production increased with the accession of Hungary, along with other new Member States. Intervention became a competitive outlet for Hungarian maize, as prices had formerly been rather low in this landlocked country. A phasing out of maize intervention was therefore decided in 2007" (European Commission, DG Agri, 2011). The quantities of the closing intervention stocks reached the highest point within two years after the EU accession. The authors examined the reasons of this situation. On the one hand, the intervention system was treated by the Hungarian farmers as if it had been a fixed market with fixed prices. Due to this kind of thinking, the Hungarian intervention stock was the highest in the European Union. On the other hand, this is not the real reason for the high stocks, since the maize yield was quite good from 2004 to 2006 and the farmers could not sell their maize because of the fact that Hungary is a landlocked country and the Hungarian farmers could not be competitive with their crops due to their higher carrying costs. Therefore, they offered their crops for intervention.

After the reforms, the farmers could not offer their crops for intervention and they had to learn to adapt to the changes of the market environment. Due to the reforms, the adaptability of the Hungarian farmers improved and the price difference was realised in the Hungarian economy.

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