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Polish foreign trade in ornamental nursery plants after the accession to the EU

Abstract. The paper presents analyses of changes in direction and dynamics of Polish import and export of the ornamental nursery material in the years 2005-2011 as well as the turnover balance. Apart from the total turnovers these changes were investigated for particular groups of nursery plants separated by the *Combined Nomenclature* (CN) codes. The analysis also included the significance of these groups of plants in the entire import and export of nursery plants and also the geographical structure of import and export of each of these groups, identifying countries which are the biggest suppliers and countries which are the biggest buyers. The investigations showed the worsening of the turnover balance, the decrease of export diversification and the lack of stability in the business contacts.

Key words: ornamental nursery plants, export, import, Poland, foreign trade

Introduction

The effect of economic development, increasing industrialization, and urbanization is the growing significance of ornamental plants in human life. Not only the ornamental and aesthetic values of plants are important but also their influence on human health and well-being by providing peace and safety, reducing tension and stresses, increasing concentration and also improving interpersonal relations. Owing to these facts, plants increase the quality of life and, indirectly, the work output [Stigsdotter, Grahn 2004; Nowak 2005; Stigsdotter 2005; Ulrich 2012]. Greenery soothes the urban environment, making it more attractive. It increases company prestige and attracts customers, and raises property values. [Haydu et al. 2008; Hall, Hodges 2011; Palma et al. 2011]. Greenery also improves the thermal conditions inside and around buildings, reducing energy consumption, and it supplies oxygen which is essential for living and removes carbon dioxide, purifying the air from particulate and gas pollutants [Borowski 2009]. It also extends the biodiversity of the urban environment [Haydu et al. 2008]. Thus ornamental plants, and in particular those growing outside, play a very important role both in the social, environmental and economic sphere.

The ornamental nursery sector is the most dynamically developing flower market both in developed and developing countries. This has been observed in Poland since 1989. Up until 2002, nursery land area increased from 1450 ha to 4393 ha, and in the next 8 years it doubled to 6747 ha [Jabłońska 2007; Jabłońska, Olewnicki 2013]. It makes Poland the fifth producer in Europe [Ilczuk et al. 2013]. At the same time, foreign trade turnover increased, which is an advantageous factor because international trade is one of the stimulators of economic development [Klawe, Makać 1977; Pawlak, Poczta 2011; Smith 2012]. It is

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particularly true in regard to export [Strojny 2013]. As seen from the research by Jabłońska, Olewnicki and Kowalczyk [2013] the volume and value of the Polish export of nursery ornamental plants in the years 1996-2009 increased annually by 12.6% on average, while the volume and value of import by 7.8% and 13.5%, respectively, with simultaneous turnover balance increases. Nursery ornamental material constitutes the basis of the Polish flower export, with a growing share which in the years 2005-2009 amounted to 56% of its volume and 39% of its value. The share in the flower import amounted to about 22% and 11%, respectively. According to the authors, those long-term tendencies should remain, But the turnover growth dynamics decreased after Poland joined the EU. Therefore, the present research undertook a trial to verify that hypothesis. However, nursery material is not a homogeneous group of plants, but a group varying as to the types, genera, utility value, use possibilities or production technology. Thus, questions arise: apart from studying general changes in the Polish foreign trade in nursery plants in the recent years, what role do the particular groups play in it; what is the aim of diversification (concentration) of export, which according to Misztal [2011] in the years 1995-2009 was one of the most important factors determining the level of Gross Domestic Product/per person and increasing in the countries of its relatively low level, including Poland. In order to assess the chances of further development of nurseries it is also important to investigate the directions of trade, mostly of export, because as many economists stress [Cieślewicz 2012; Kacperska 2012; Kita, Poczta 2012; Wierzejewski 2012; Strojny 2013], significant perspectives of its further growth on the basis of the farm and food articles lie in the Eastern markets, e.g. Russia, Ukraine, Belarus or even China.

The aim of the study was to evaluate the level, direction and dynamics of changes, as well as assortment and geographical diversification in Polish foreign trade of ornamental nursery plants after 2004, in order to assess the chances of further development of the nursery sector.

Material and methods

Our investigations aimed at analyzing the import and export level of the ornamental nursery plants after the accession of Poland to the EU (the years 2005-2011) as well as the turnover balance from the volume and value point of view. The investigations included the direction and dynamics of changes using indexes with a constant base assuming the year 2005 as 100 and linear trend coefficients determined for the absolute and relative values. The latter was determined as a percent in relation to the multiannual average assumed as 100. Apart from turnovers in general, the above changes were investigated for particular groups of plants separated by CN codes, namely: rhododendrons and azaleas, rose bushes, rooted seedlings, ornamental trees and bushes, perennial plants and forest trees. The analyses also included the significance of these groups of plants by determining their percent share in the total turnover and also by the geographical structure of import and export of each of those groups. We identify the countries of the biggest suppliers and countries of the biggest buyers. It should be stressed that forest trees, as a production sector, are not counted among the nursery sector in Poland but as a branch of the national economy, namely forestry. However, they all function under the same CN code, thus comprising the research material. The study was based on unpublished data of the Central

Institute of Foreign Trade (CIHZ) and Analytical Centre of Customs Administration (CAAC).

The changes in total turnover of nursery plants

Analyzing the foreign trade in ornamental nursery plants during the entire period of 2005-2011, a growing tendency was noted both in import and export. In the case of volume, export grew annually by 3098.1 tons in absolute values and import by 2041.1 tons, although in relative values the dynamics were at a similar level of 12.6% a year in relation to the average for that period (Table 1).

Table 1. Import, export and balance in the foreign trade in nursery plants in Poland in the years 2005-2010

	Years							Trend coefficient	R ²
	2005	2006	2007	2008	2009	2010	2011		
	Value turnover								
	thousands EUR								
Import	11847.4	14071.0	21562.6	25222.6	25067.2	31790.7	34371.0	3804.1	0.96
Export	23874.7	17258.1	22288.3	29797.3	24856.3	29321.5	32711.7	1900.1	0.61
Balance	12027.3	3187.1	7257	4574.7	-210.9	-2469.2	-1659.3	X	X
	index (2005=100%)							%	
Import	100.0	118.8	182.0	212.9	211.6	268.3	290.1	16.25	0.96
Export	100.0	72.3	93.4	124.8	104.1	122.8	137.0	7.41	0.61
	Volume turnover								
	Tons								
Import	7866.8	9681.2	19964.1	19128.8	15258.6	19619.4	21859.9	2041.1	0.65
Export	25755.8	15786.3	25447.3	36793.7	30585.1	36293.9	47105.9	3935.8	0.71
Balance	17889.0	6105.1	5483.2	17556.9	15326.5	16674.9	25246.0	X	X
	index (2005=100%)							%	
Import	100.0	123.1	253.8	243.2	194.0	249.4	277.9	12.62	0.65
Export	100.0	61.3	98.8	142.9	118.8	140.9	182.9	12.65	0.71

Source: our own research based on Kowalczyk [2013].

In 2011 the import of plants to Poland was 2.8 times bigger than in 2005, and the export was 1.8 times bigger. It is not a favourable fact. Even less favourable is the situation analyzed from the value point of view. Here the rate of growth of the import is much bigger than the export. The import value increased on the average by 16.3% a year and the export value by 7.4% as compared to the long-term average. In 2011 the value of plants brought to Poland was 2.9 times bigger than in 2005 and the value of plants sold was only 1.4 times bigger. It should be stressed that although the growth of imports was systematic, exports noted a breakdown in 2006 when the volume of exported plants was 38.7% smaller than in 2005, for a value which was 27.7% smaller. In the following years export recovered, but the process was too slow to maintain an active balance of the turnover which was characteristic

for the foreign trade in nursery material. The last year of the active balance of the turnover was the year 2008. In 2009 the adverse balance amounted to -210.9 thousand EUR and in 2010 and 2011 up to -2.5 mln and -1.7 mln EUR. As far as volume is concerned, still more plants are exported than imported and that predominance in recent years amounts to 15.3 mln – 25.2 mln tons.

The difference in the dynamics of growth in import volume and value and export volume and value, as well as worsening of the turnover balance with the predominance of volume export over import, reflects the fall in price in the first and the increase of prices in the second. For one ton of imported plants in 2005 and 2011, buyers paid 1.50 thousand and 1.58 thousand EUR while for a sale of one ton they earned 0.93 thousand and 0.69 thousand EUR, respectively. On one hand, these differences may be connected with the direction of import and export and on the other hand, with a varied and changing assortment structure of that group of plants, which are very diversified in prices because of, among other reasons, species, cultivar, age, method of cultivation, sale in containers or with bare roots. Unfortunately, foreign trade statistics do not provide such detailed information, registering only the turnover of the basic types of plants.

Turnover assortment structure

Out of six isolated groups of ornamental nursery plants the most important role in imports is played by ornamental trees and shrubs. In the years 2009-2011 they amounted to over 1/3 of the turnover total value and volume. Their share in value was higher in respect to the past four years by 6.1 percentage points, and in volume the share was lower by 3.2 percentage points (Table 2). In second place, there are perennial plants with a growing share in import value from 23.8% to 30.5% and in volume from 14.6% to 21.4%. This results from the fact that relatively more and more expensive perennial plants are imported. The reverse situation was observed in the import of seedlings, the third in significance of import products. Their share in the total import increased from 14.1% to 18.6% in relation to the volume and decreased from 19.3% to 13.7% in relation to the value which points to a relative price drop of the rooted seedlings. In the years 2005-2008 forest trees took an important place in imports, amounting to 22.4% from the volume point of view. However, in the years 2009-2011 that share decreased to 15.4%. Also the share of forest trees in the import value decreased and due to their relatively lower prices it amounted to 8.4% in the last period. A slight drop of the share of roses import is also observed but from the value point of view it is a little higher (9.4%) than the forest trees and in the volume point of view it is clearly lower (7.0%). The smallest role in imports is played by rhododendrons and azaleas although their share in import slightly grows.

Table 2. The share of particular groups of plants in the total import and export of nursery plants in the years 2005-2008 and 2009-2011 (in %)

Groups of plants	Import				Export			
	Volume		Value		Volume		Value	
	2005-2008	2009-2011	2005-2008	2009-2011	2005-2008	2009-2011	2005-2008	2009-2011
	%				%			
Rhododendrons and azaleas	2.5	3.0	4.6	4.4	1.6	1.3	3.1	3.7
Rose bushes	8.6	7.0	11.6	9.4	14.1	12.5	26.1	29.5
Forest trees	22.4	15.4	13.2	8.4	1.9	4.1	1.4	2.7
Rooted seedlings	14.1	18.6	19.3	13.7	22.8	10.0	27.9	22.8
Trees, shrubs	37.8	34.6	27.5	33.6	53.4	68.1	33.0	34.6
Perennial plants ¹	14.6	21.4	23.8	30.5	6.2	4.0	8.5	6.7

¹ including heathers, heaths, water plants, ect.

Source: our own research based on Kowalczyk [2013].

As far as Polish export is concerned ornamental trees and shrubs play the most important role. In the value point of view their share in the entire export also amounts to 1/3 of the turnover but volume is much higher, with the simultaneous growth from 53.4% to 68.1% (Table 2). Thus the conclusion is that cheaper plants are exported and more expensive plants are imported. It should be stressed that such a significant role in both export and import of that group of plants results from an extreme assortment scope and diversity. The second place in the export is taken by rose bushes with their share in its value in the successive subperiods 26.1% and 29.5% but only 14.1% and 12.5% in its volume. Similar relations are observed in the export of rooted seedlings. Their share amounting to 27.9% and 22.8% in the export value and 22.8% and 10.0% in the volume place them third. The remaining three groups of plants play a small role in the Polish export.

Changes in the import and export of particular groups of nursery plants

An observed growth tendency in the import characterized all groups of the nursery plants, with the biggest dynamics in the case of perennial plants and rhododendrons and azaleas. Import of both groups grew every year by about 20.0-21.0% in the point of view of both value and volume (Table 3). Only the growth of the volume of imported rooted seedlings was slightly quicker. However, its value grew about 12.2% on the average per year, which points to importing cheaper and cheaper initial material. Import of the remaining three groups of plants grew clearly slower and the smallest dynamics were observed in the case of rose bushes.

As far as export was concerned, the growing tendency of the biggest dynamics was characteristic for forest trees. However, it should be remembered that in the absolute values they play a small role in the Polish export. A relatively high export increase was also observed in ornamental trees and shrubs which, due to their important position, is a

favourable fact. The only disadvantageous fact was that this group of plants was sold abroad at relatively lower and lower prices because with the annual growth of the export volume by 21.0% its value increased only by 10.2%. The low dynamics of the growth of rose bushes export, the second Polish export product, also cannot be assessed positively although they are sold at a relatively higher and higher prices. The volume of rose export increases every year by 3.9% and the value by 8.6%. In the investigated period, much worse was the situation in the seedling export, although they were also sold at higher and higher prices. However, their export decreases by 10.5% a year and export value increases by only 2.3%. The drop in the Polish export is also observed in relation to perennial plants. However it concerns only the volume and amounts to only 1.15% on the average year

Table 3. The dynamics of import and export changes in particular groups of ornamental nursery plants in the years 2005-2011

Groups of plants	Trend coefficient b						R ²	
	absolute values				Standard deviation			
	volume		value		volume	value	volume	Value
	tons	thous. EUR	%	%	%	%		
Import								
Rhododendrons and azaleas	109.2	183.2	20.8	19.6	57.5	48.2	0.61	0.77
Rose bushes	52.7	227.3	4.2	9.3	23.0	20.7	0.15	0.94
Forest trees	275.6	284.1	9.1	11.4	84.3	59.5	0.05	0.17
Rooted seedlings	580.4	464.3	22.1	12.2	59.3	40.0	0.64	0.43
Trees, shrubs	412.7	1252.8	7.1	17.2	29.0	41.9	0.28	0.79
Perennial plants	608.6	1390.1	21.0	21.5	54.9	47.8	0.68	0.95
Export								
Rhododendrons and azaleas	29.4	95.7	6.5	11.1	23.9	27.8	0.35	0.74
Rose bushes	159.3	609.3	3.9	8.6	19.4	21.1	0.19	0.77
Forest trees	304.2	128.6	32.3	24.9	100.3	78.8	0.49	0.46
Rooted seedlings	-525.3	148.5	-10.5	2.3	25.7	14.8	0.78	0.11
Trees, shrubs	3986.3	885.8	21.0	10.2	50.9	32.7	0.79	0.46
Perennial plants	-18.3	32.4	-1.15	1.7	20.8	21.8	0.02	0.03

Source: our own research based on Kowalczyk [2013].

The value of perennial plants export increases by 1.7% a year. Such a direction of changes results, on one hand, from the fact that domestic production is too small and on the other hand, that we lose competition on the foreign markets due to the cheaper import from African and Asiatic countries and, in the case of rose bushes, also because of a fall in demand. It was shown in research by Bońkowska [2012] that in 2010 the value of the rose bushes import to the EU from Poland was lower by 64.3% than in 2003 while from China and South Africa it was higher by 2.0 and 1.7%, respectively. In 2010 the EU imported 10.0% fewer shrubs than in 2008 – this was 15.4% fewer from Poland but 17.5% more

from China. Thus we have lost a position as one of the leading producers and suppliers of both groups of ornamental nursery plants.

Various direction and dynamics of the import and export changes of particular groups of plants with differences in their absolute level is reflected in the turnover balance. Adverse balance with significant fluctuations is characteristic for foreign trade in forest trees (Table 4). However, as has already been mentioned, that group of plants is not important from the point of view of the development of the ornamental nursery plant sector in Poland. Out of the ornamental nursery plants, the highest adverse balance is observed in the case of perennial plants. That group, above all, shapes the adverse total balance. Additionally, every year the predominance of perennial plants' import value over their export value increases. For the last 4 years, there is also a high adverse balance in the volume. This shows that domestic production is falling behind the growing demand, although Poland has production potential in the form of soil and human potential in the form of well-educated nursery staff. They should be used for the increase of production of not only well known plants but mainly to widening production by new species and cultivars adapted for Polish climatic conditions, as imported perennial plants are not always able to survive Polish winters.

Table 4. The turnover balance of particular groups of ornamental nursery plants

Items	Years						
	2005	2006	2007	2008	2009	2010	2011
	Balance from the value point of view (thous. EUR)						
Rhododendrons and azaleas	48	-161	204	245	187	-425	-586
Rose bushes	4457	4045	3712	3502	4935	5434	6688
Forest trees	-404	-1381	-4366	-2268	-730	-1935	-2698
Rooted seedlings	4836	2896	2096	2079	2955	2614	1790
Trees, shrubs	3943	30	1805	4740	-2205	-846	2438
Perennial plants and others	874	-2243	-2725	-3721	-5353	-7311	-9291
	Balance from the volume point of view (tons)						
Rhododendrons and azaleas	121	-127	69	136	-21	-109	-607
Rose bushes	3316	2680	1745	1982	3987	3007	3327
Forest trees	-402	-181	-6971	-1518	204	-1475	2751
Rooted seedlings	6599	3796	4269	1020	1300	-557	171
Trees, shrubs	7345	1668	5858	19180	12854	17798	27613
Perennial plants and others	910	-99	514	-3138	-2996	-1990	-2508

Source: our own research based on Kowalczyk [2013].

The increasing adverse balance of the turnover is also characteristic for the rhododendron trade, which also points to increasing domestic demand and to losing a lot of business on the Eastern European markets with their direct import. Poland is not a major rhododendron producing country and the basis for export is the re-export of plants bought by local nurserymen from Holland, Belgium or Germany. It is seen from the analyses that

more and more imported plants get to the domestic market. The worsening turnover balance, although still active, is noted in the rooted seedlings trade as the effect of a decreasing export with an increasing import. The explanation of that fact should be looked for in the increasing demand of nurserymen for the initial material caused by the production development of mature nursery material of ornamental trees and shrubs both for domestic and foreign markets. Trees and shrubs comprise a group of plants with a high growing active balance in regard to volume, which is a favourable fact. On the other hand, from the value point of view this balance is subjected to significant fluctuation and in 2009 and 2010 it was even adverse. The only group with a constant, active turnover balance on a relatively high level are rose bushes. Similar export and import growth rate show that this situation will remain in the next years.

Geographical structure of the Polish import and export of ornamental nursery plants

In the export of ornamental nursery plants two countries predominate – Holland and Germany. Holland is the country of origin for 50.0-80.0% forest trees, 60.0-70.0% ornamental trees, shrubs and perennial plants, about 50.0% rhododendrons and seedlings and nearly 30.0% rose bushes (Table 5). Germany takes second place, mostly in the import of rooted seedlings (about 40.0% share), then ornamental trees and shrubs (about 20.0%) and forest trees (about 15.0%). However, the role of Germany as a supplier of rose bushes decreased (from about 20.0% to over 7.0%) and its place was taken by China. In the years 2009-2011 the import from China amounted on average to 43.6% a year of the entire Polish import of roses by volume and 38.1% by value. However, as was seen from the observations of the domestic market this was mainly the import of the rose rootstocks for grafting and not grafted rose bushes. Also Belgium has been known for many years as a plant supplier but only as the supplier of rhododendrons and azaleas.

The direction of nursery plant export are more diversified, depending on the group of plants, and export is more diffused, without the clear predominance of 2-3 countries. The buyer of each of the analysed groups is Russia, which buys 40.0-60.0% ornamental trees and shrubs, nearly 30.0% rhododendrons, about 15.0% rooted seedlings, 11.0-16.0% perennial plants but only about 9.0% rose bushes. The biggest buyer of the latter as well as rhododendrons are Germany, which bought over 40.0% rose bushes and over 45.0% rhododendrons and azaleas. The second buyer of roses was Holland with a share of export of 20.0-32.0%. Germany, Holland and Denmark are also the buyers of Polish perennial plants but with varied share. For example, in the years 2005-2008, 30.4% and 3.8% of the Polish perennial plants were sold to Germany and Denmark and in the years 2009-2011 – 23.1% and 1.2%, respectively. This shows the lack of regular trade relations and the instability of the Polish position on particular markets. Apart from the above mentioned 3 countries and Russia, major buyers of Polish perennial plants are the Slovak Republic, Ukraine and Belorussia. The two latter ones, and in particular Ukraine, are also important markets for the remaining groups of nursery plants. Ukraine took third place in buying rhododendrons, first in buying rooted seedlings and second in buying trees and shrubs.

Table 5. The biggest suppliers and buyers of ornamental nursery plants in Poland (with the share of over 1%)

Country of Origin	The share in the total import (%)				Country of destination	The share in the total export (%)			
	volume		Value			volume		value	
	2005-2008	2009-2011	2005-2008	2009-2011		2005-2008	2009-2011	2005-2008	2009-2011
Rhododendrons and azalease									
Holland	50.5	53.7	53.6	56.3	Germany	45.6	47.4	70.1	73.1
Belgium	28.1	18.4	28.0	19.8	Russia	29.1	29.8	17.0	15.6
Germany	17.8	26.0	15.1	21.4	Ukraine	12.8	5.8	6.0	2.6
Luxemburg	2.9	0.8	2.2	0.7	Belorussia	4.7	5.4	2.7	2.7
Others	<i>6 countries</i>				Others	<i>22 countries</i>			
Rose bushes									
Holland	28.9	27.4	33.5	33.4	Germany	51.9	41.1	50.0	32.4
China	27.3	43.6	32.1	38.1	Holland	20.7	32.1	23.1	36.0
Germany	21.3	7.7	17.5	7.4	Russia	8.0	9.6	5.1	8.8
Italy	10.8	-	5.7	-	Great Britain	2.0	5.8	2.7	6.7
Bulgaria	4.2	9.6	2.3	5.8	Belorussia	2.7	3.0	2.7	3.4
Others	<i>12 countries</i>				Others	<i>30 countries</i>			
Rooted seedlings									
Holland	41.3	52.6	47.0	58.1	Ukraine	39.1	26.8	17.7	7.6
Germany	49.6	37.9	37.7	22.6	Russia	17.5	12.8	11.1	12.6
Belgium	3.7	2.8	5.5	4.7	Holland	11.8	21.1	30.9	34.8
Italy	1.5	2.5	0.9	5.0	Latvia	8.8	5.9	5.4	4.0
Denmark	1.2	0.7	5.8	2.1	Belorussia	5.9	9.9	4.0	4.5
Others	<i>18 countries</i>				Others	<i>35 countries</i>			
Ornamental trees and shrubs									
Holland	68.0	71.0	65.4	76.3	Russia	37.1	61.3	31.7	39.5
Germany	21.7	16.8	22.7	15.3	Ukraine	17.5	8.5	15.7	10.1
Italy	4.1	4.0	4.5	2.1	Latvia	9.0	6.0	11.3	9.5
Belgium	2.8	0.6	3.6	0.6	Slovak Republic	2.9	7.3	2.9	9.7
Denmark	1.2	6.5	1.5	4.7	Belorussia	4.8	4.3	5.2	6.4
-					Germany	7.5	1.6	6.4	4.3
Others	<i>19 countries</i>				Others	<i>28 countries</i>			
Perennial plants									
Holland	69.5	63.4	65.9	60.5	Russia	11.2	16.1	9.3	7.4
Germany	17.3	19.6	22.2	25.5	Denmark	3.8	23.1	5.1	15.5
Great Britain	8.5	9.6	5.9	5.2	Holland	11.6	16.3	9.9	12.6
Italy	2.6	4.8	2.5	5.1	Germany	30.4	1.2	19.8	3.2
-					Slovak Republic	5.7	10.9	8.3	10.2
-					Ukraine	10.5	5.6	15.5	6.6
-					Belorussia	2.3	2.9	1.9	3.4
Others	<i>28 countries</i>				Others	<i>31 countries</i>			

Source: our own research based on Kowalczyk [2013].

Apart from the above mentioned major buyers, nursery plants are sold to several dozen other countries, but the share of each in trade is much less than 1%. For example, there were 35 countries buying seedlings, 31, 30 and 28 countries in the case of perennial plants, rose bushes and trees and shrubs. At the same time no tendencies were noticed of enhancing the position of some countries and weakening the position of others. It proves the lack of regular, wide range of trade contacts, which makes efficient development of nursery production in Poland difficult.

Conclusions

The results of the analyses did not fully confirm the earlier predictions concerning the stay in ornamental nursery plants foreign trade with the tendency of the turn of centuries. Although the turnover still increases, but with the same growth dynamics of import and export volume, the import value grows much quicker than the export value. A turnover balance which was active until 2008, in the last three years shows adverse values, although the export volume is still twice that of import. The adverse turnover is affected by the adverse perennial plant trade which results from the quick growth of their import with the dropping export tendency and the adverse balance of the forest trees and rhododendrons trade. The drop of export with the growth of import is also characteristic for rooted seedlings and in the case of the remaining groups of plants, the growth of import is quicker than export, with the exception of trees and shrubs by volume. It is a group with a growing active volume turnover balance but with a highly variable value balance (including even the adverse balance). Thus one can observe the disadvantageous changes – the increase of the export of relatively cheaper plants and the growth of import of relatively more expensive plants. The export diversification also decreased, which as seen from the research does not favour its development. It would be profitable to widen the export scope with perennial plants and seedlings. A significant geographical scattering of export with the simultaneous significant variability of the supply level which points to the lack of regular trade contacts does not favour further development. Apart from the major countries such as Russia, Holland, Germany, Slovak Republic Ukraine and Belorussia, the Polish plants are bought by about thirty other countries whose share in the export is much less than 1% each.

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