Fruit market in Poland

2014
Poland is an important temperate climate fruit producer on a global scale. Among the European Union countries, we rank lower than Italy, Spain and France, but higher than Greece and Germany. We are the largest grower of apples, sour cherries, raspberries, currants and high bush blueberries in the EU. Poland is also a significant producer of strawberries, gooseberries and chokeberries.

Fruit growing is a significant direction of agricultural production in Poland. The share of fruit in the value of crop market output in 2013 amounts to over 15%. In recent decades Polish horticulture has been following the economic developments taking place in the entire food economy, adjusting to the principles of free-market economy and changing market conditions. Poland’s accession to the European Union in 2004 facilitated the commercial expansion of Polish fruit farmers on the EU market. The skilful absorption of the EU funds, aimed mainly at developing production and storage facilities, contributed to an increase in the competitiveness of Polish fruit and fruit preparations. It was also facilitated by the fact that farmers organised themselves into producer groups and organisations. There are 173 groups of fruit and vegetable producers that were granted preliminary recognition (bringing together 2.6 thousand members) and 139 recognised organisations of fruit and vegetable producers (4.6 thousand members) functioning in Poland.

**Share of fruit in the value of crop market output in 2013**

- **Plant production**: 84.8%
- **Fruit production**: 15.2%

**Source**: ARR calculations based on the Central Statistical Office (GUS) data.

The European scheme of protected geographical indications and traditional specialities run by the European Commission features (as of 15 October 2014) 37 Polish agricultural products, including 6 fruit market products. On the other hand, among around 1.3 thousand food products featuring on the national list of traditional products kept by the Minister of Agriculture and Rural Development, which is gradually extended to include new items, there are 129 products from the fruit and vegetable market.

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1 MARD data (date of access: 15 October 2014).
In 2013, fruit tree orchards were grown by 128 thousand farms, whereas fruit bushes by 68 thousand farms. Recently, the average area of horticultural crops has increased (in 2013 it was by 36% higher than in 2010, and amounted to 2.1 ha).

We produce high quality fruit. The extensive resource base of Polish gardening creates excellent conditions for the development of processing. Both horticulture and the fruit processing sector offer a wide selection of tasty and healthy products to domestic and foreign consumers. State-of-the-art technological solutions have been implemented in the domestic fruit processing facilities. Fruit-processing plants hold food production certificates.

Due to the climatic conditions the fruit production in Poland is of a seasonal character and experiences wide crop fluctuations in individual years. The range of fruit cultivars grown is limited to temperate varieties. Poland is self-sufficient in growing fruit as well as in producing fruit preparations. Between 2004 and 2013, on average 26% of fresh fruit production was intended for export.

We owe the development of horticulture in Poland to linking the theoretical and practical achievements, in which a prominent role was played by the Research Institute of Pomology and Horticulture in Skierniewice and its founder and director of many years prof. Szczepan Aleksander Pieniążek. This outstanding researcher revolutionised the fruit growing system and was a precursor of changes in fruit storage. His activity resulted in a development of intensively managed low-growing orchards that ensure higher and less labour-intense crops. The newly-introduced apple varieties preserve their excellent flavour through the entire storage period.

**Structure of tree fruit growing in Poland in 2013**

<table>
<thead>
<tr>
<th>Tree Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sour cherry trees</td>
<td>13%</td>
</tr>
<tr>
<td>Sweet cherry trees</td>
<td>4%</td>
</tr>
<tr>
<td>Plum trees</td>
<td>4%</td>
</tr>
<tr>
<td>Peach and apricot</td>
<td>7%</td>
</tr>
<tr>
<td>Pear trees</td>
<td>1%</td>
</tr>
<tr>
<td>Apple trees</td>
<td>71%</td>
</tr>
</tbody>
</table>

Source: ARR calculations based on the Institute of Agricultural and Food Economics – National Research Institute (IAFE-NRI) and GUS data.
Between 2004 and 2013 fruit crops in Poland accounted for 5–11% fruit production in the European Union. In 2013 they rose to an all-time peak of 4.13 million tonnes, which was 29% higher than average crops in the years 2004–2012. An increase in fruit production is facilitated by: sufficient land resources and a numerous group of producers with extensive professional and marketing knowledge, as well as entrepreneurial spirit and innovativeness.

The development of domestic fruit production is to a large extent stimulated by export. Since Poland’s accession to the European Union revenues from fruit exports have increased

**Fruit harvest in Poland**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit in total (thousand tonnes)</td>
<td>3 521</td>
<td>3 646</td>
<td>2 744</td>
<td>3 415</td>
<td>3 843</td>
<td>4 129</td>
</tr>
<tr>
<td>Tree fruit including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td>2 522</td>
<td>2 626</td>
<td>1 878</td>
<td>2 493</td>
<td>2 877</td>
<td>3 085</td>
</tr>
<tr>
<td>Pears</td>
<td>87</td>
<td>83</td>
<td>47</td>
<td>65</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Sour cherries</td>
<td>202</td>
<td>189</td>
<td>147</td>
<td>175</td>
<td>175</td>
<td>188</td>
</tr>
<tr>
<td>Plums</td>
<td>133</td>
<td>121</td>
<td>84</td>
<td>92</td>
<td>103</td>
<td>102</td>
</tr>
<tr>
<td>Sweet cherries</td>
<td>48</td>
<td>51</td>
<td>40</td>
<td>38</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>Peaches</td>
<td>14</td>
<td>13</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Apricots</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Berries in total including:</td>
<td>502</td>
<td>546</td>
<td>526</td>
<td>531</td>
<td>557</td>
<td>607</td>
</tr>
<tr>
<td>Strawberries</td>
<td>186</td>
<td>198</td>
<td>153</td>
<td>166</td>
<td>150</td>
<td>193</td>
</tr>
<tr>
<td>Raspberries</td>
<td>57</td>
<td>81</td>
<td>93</td>
<td>118</td>
<td>127</td>
<td>121</td>
</tr>
<tr>
<td>Currants</td>
<td>195</td>
<td>196</td>
<td>196</td>
<td>170</td>
<td>195</td>
<td>199</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>20</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Chokeberries</td>
<td>38</td>
<td>37</td>
<td>53</td>
<td>48</td>
<td>51</td>
<td>58</td>
</tr>
<tr>
<td>Highbush blueberries</td>
<td>4</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Central Statistical Office (GUS), plant production output, GUS Agricultural Statistical Yearbooks.
3.5-fold (from EUR 210 million in 2004 to EUR 728 million in 2013). Apples are the product we export in the largest amounts. They are followed by pears, raspberries, strawberries, sour cherries and sweet cherries as regards export volumes among domestically grown fruits. The foreign sales of plums, apricots and currants generate lower revenues.

**Fresh fruit exports from Poland**

<table>
<thead>
<tr>
<th>Fruit cultivars</th>
<th>2004</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit in total (thousand tonnes), including:</td>
<td>650</td>
<td>993</td>
<td>913</td>
<td>776</td>
<td>1264</td>
<td>1515</td>
</tr>
<tr>
<td>Apples</td>
<td>434</td>
<td>777</td>
<td>725</td>
<td>534</td>
<td>958</td>
<td>1230</td>
</tr>
<tr>
<td>Pears</td>
<td>15</td>
<td>20</td>
<td>12</td>
<td>25</td>
<td>39</td>
<td>42</td>
</tr>
<tr>
<td>Raspberries</td>
<td>32</td>
<td>25</td>
<td>16</td>
<td>17</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Strawberries</td>
<td>23</td>
<td>16</td>
<td>15</td>
<td>14</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>Sour cherries</td>
<td>4</td>
<td>10</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Sweet cherries</td>
<td>8</td>
<td>11</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Plums</td>
<td>20</td>
<td>18</td>
<td>7</td>
<td>10</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Black currants</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Fruit in total (EUR mln)</td>
<td>210</td>
<td>366</td>
<td>365</td>
<td>396</td>
<td>622</td>
<td>728</td>
</tr>
</tbody>
</table>

Poland is the largest producer of apples in the European Union and the fourth in the world. Our share in the global apple production in the years 2004–2012 oscillated around 4%, and in the EU production – around 26%. The largest global competitors of Poland as regards apple production include China, the United States of America and Turkey, and among the EU countries – Italy and France. Between 2004 and 2013 the area under apple trees in Poland ranged from 162 thousand ha to 195 thousand ha. The share of these trees in the total area under fruit trees in Poland increased to 70%. The largest area of apple tree orchards is located in the orchard regions of Mazowieckie Voivodeship near Grójec, Warka and Tarczyn. Significant apple orchard concentrations are also present in Lubelskie, Łódzkie, Świętokrzyskie and Zachodniopomorskie Voivodeships.
Two varieties of Polish apples have been registered in the EU register of Protected Geographical Indications, namely jabłka łąckie (since 2010) and jabłka grójeckie (since 2011).

**Jabłka łąckie**

have the so-called “mountain-green note”, which means that they have a distinctive taste, are characterised by relatively high acidity, which is related to the specific microclimate of Łącko Basin in Małopolskie Voivodeship. Jabłka łąckie include selected apple varieties of extra class and class I. Their blush is clearly more intense than that of apples from other regions. When peeled, they do not turn brown.

**Jabłka grójeckie**

are extra class and class I apple varieties grown in the apple orchard region around Grójec. Each of the varieties meets the requirements for colouring, size and firmness of flesh. All jabłka grójeckie are characterised by a specific acidity and an intense blush. The advantages of these apples result from the soil conditions present in the Grójec region, as well as from fruit farmers skills drawing on the experiences of generations of their predecessors.

Polish horticulture is characterised by a wide diversity of apple varieties. Currently, Polish orchards are dominated by Idared, Szampion, Jonagold, Ligol, Gloster and Cortland, which are characterised by durability in trading and are less sensitive to fungal diseases. Between 2004 and 2013 apple production in Poland, despite fluctuations, was on the increase, which was particularly dynamic in the last three years of this period.

In 2013 3.1 million tonnes of apples were harvested against 2.5 million tonnes in 2004. The increase in production was the outcome of market conditions and structural transformations. The introduction of dwarf orchards on a large scale, extension of area under apple trees, as well as creation of appropriate production base in the form of storehouses and sorting and packing equipment facilitated increasing production volume and extending the range of products offered.
The apple owes its delicious taste mainly to the content of malic acid, citric acid and sugars. It is a source of vitamins, especially vitamin C, which strengthens our immunological system. Given the large content of alkaline mineral salts, apples deacidify our body. Their relatively low calorific value and body cleansing ability makes them also useful for dietetics.

Owing to the large scale of production, improving quality of dessert varieties and a relatively low production costs, in 2013 Poland outstripped China and became a global leader in apple exports.

Between 2004 and 2013, Polish foreign trade in apples experienced a dynamic increase in volume and value of exports. In this period, apple exports rose almost 2.8-fold (from 434 thousand tonnes to 1.230 thousand tonnes). Its value increased from EUR 90 million to EUR 447 million (i.e. almost 5-fold) and accounted for 40–60% of the value of fruit exports. After Poland’s accession to the EU, we exported from 17% to 43% of domestic apple production per year. The major foreign markets for Polish apple sales were the CIS countries, especially Russia. In 2013 apple exports to this country accounted for 55% of the entire volume of exports of this fruit.

The scale of apple imports to Poland is incomparably lower. Following accession to the EU, Poland imported from 7 thousand tonnes of apples in 2004 to 138 thousand tonnes in 2007.
(mainly for the needs of the processing sector). Imports of fresh apples do not pose a threat to the domestic production, since apples are imported mainly from the southern hemisphere in the early-summer period as a complement to our domestic supplies.

Poland as a significant global exporter of apple juice concentrate

A significant factor stimulating the development of domestic apple production is the production of apple juice concentrate as Poland is its second largest exporter in the world (after China). Between 2004 and 2013 apple juice concentrate exports were on the increase. In the 2012/2013 season around 280 thousand tonnes of apple juice concentrate were exported from Poland against 204 thousand tonnes in the 2004/2005 season. The main recipients of Polish apple juice concentrate were EU countries, in particular Germany (around 60% of the entire export volumes of this product), the United Kingdom (15%) and the Netherlands (7%).

Directions of exports of Polish apple juice concentrate in 2013

Source: ARR study based on the data from the Ministry of Finance.
Fruit from trees – rich taste of nature

Poland is the largest producer of sour cherries in the European Union. In 2012 the share of Polish crops in the EU sour cherry production amounted to 64%. At the same time, Poland is the third largest producer (after Turkey and Russia) of this fruit in the world, with a 15% share in the global production.

The area under sour cherry trees in the 2004–2013 period amounted to 33–39 thousand ha. The largest sour cherry orchards are grown in Mazowieckie Voivodeship, as well as in Lubelskie, Świętokrzyskie and Łódzkie Voivodeships. The most popular cultivar in commercial orchards is Łutówka. Other cultivars include Nefris, Northstar and Kelleris.

Depending on weather conditions, sour cherry harvest in Poland ranged from 108 thousand tonnes (in 2007) to 202 thousand tonnes (in 2004 and 2008). The majority of sour cherry crops are intended for frozen fruit production and juice. Sour cherries are also used to produce jams and other preserves. These fruits were usually exported in a frozen form, mainly to German and Russian markets. Between 2009 and 2013 frozen sour cherry exports oscillated around 56–89 thousand tonnes, while exports of fresh sour cherries ranged from 5 thousand tonnes to 11 thousand tonnes. Sour cherries belong to the group of fruits with the largest content of antioxidants. Furthermore, they are low-calorie and contain vitamin B and fibre in abundance.

Polish fruit farmers are immensely experienced in sweet cherry growing. The most popular sweet cherry cultivars are Kordia and Regina. The area under sweet cherry trees in the 2004–2013 period was stable and amounted to 10–12 thousand ha. As regards production volumes, there are larger fluctuations, which is related to higher sensitivity of sweet cherries to

Wiśnia nadwiślanka (słupska, słupianka, słupiec) – a local type of sour cherry intended for juice making, grown along the river Vistula, from Ożarów to Lipsko, on calcareous soils – in the was entered into the register of Protected Designations of Origin in 2009. It has been grown for 120 years. Wiśnia nadwiślanka fruit is more intense in colour and is evidently smaller than fruit of other varieties. It also has an intense, slightly tart and clearly sour taste. It is very good for preparations and is valued as a dessert fruit.
ground frost and diseases. After Poland’s accession to the EU, sweet cherry harvest ranged from 20 thousand tonnes in the 2007 year of poor harvest to 51 thousand tonnes in 2009. Sweet cherries are intended mainly for the domestic market, and in the years of good harvest 20–30% of the production is exported. Fresh sweet cherries were exported mainly to the CIS countries.

As regards the area under plum trees and harvest volumes, plums rank sixth—following apples, strawberries, currants, sour cherries and raspberries. In 2012 Poland was the fifth producer of plums among the EU countries (following Romania, France, Spain and Italy) with an 8% share in the EU production. At the same time, we ranked 17th among the global leaders in plum production. The area under plum trees in Poland oscillated in the past years around 18–25 thousand ha. Plum harvest in the recent years amounted to 100 thousand tonnes, which fully covered our domestic demand. The most popular plum cultivars include Węgierka zwykła and Węgierka dąbrowicka, as well as Renkloda Ulena and Stanley. The Polish processing industry also uses this tasty fruit to produce mainly frozen fruit, candied fruit, dried fruit, jams and preserves, and alcoholic products. A chocolate-covered prune (śliwki w czekoladzie) is a valued confectionery product.

Pears are cultivated in Poland on a relatively small scale. The share of Polish pears in EU crops in 2012 amounted to 3%. The area under pear trees in the 2004–2013 period oscillated around 8–14 thousand ha. After Poland’s ac-

Śliwka szydłowska and suska sechłońska were entered into the register of Protected Geographical Indications in 2010.

Śliwka szydłowska is a designation of various cultivars of Prunus domestica originating from the Szydłów municipality, which has undergone the process of drying and smoking. This process gives the prune its unique colour, taste and aroma. Śliwka szydłowska is characterised by its even, elastic flesh and wrinkled but shiny skin.

Suska sechłońska is a dried and smoked prune. The adjective ‘sechłońska’ comes from the place-name Sechna, in the municipality of Laskowa, in Małopolska region. The smoking process gives the fruit a distinct aroma and unique colour, and it is slightly sweet in taste. Cultivars of Prunus domestica are used in this process.
cession to the EU, pear harvest, excluding the years of poor harvest (2007 and 2010), amounted to 59–87 thousand tonnes. The largest area of pear orchards is located in Mazowieckie and Łódzkie Voivodeships. The most popular pear cultivar in Poland is *Konferencja*. The area under *Lukasówka* and *Faworytka* is also significant. Other pear cultivars (e.g. *General Leclerc*, *Bera Hardy*, *Carola*, *Bonkreta Williamsa* and *Concorde*) are less significant for the commercial production. Pears are rich in potassium, they also contain phosphorus, calcium, magnesium, sodium, copper, iron, boron and iodine. They are also a rich source of fruit acids – malic and citric – as well as hydrocarbons and fibre.

The area under **peach and apricot** trees in Poland is relatively stable. The area under peach trees amounts to 3–4 thousand ha, and that under apricot trees to 1–2 thousand ha. Orchard households specialising in the production of this fruit are located mainly in Świętokrzyskie, Wielkopolskie and Mazowieckie Voivodeships. The main peach cultivars include: *Redhaven*, *Reliance* and *Royalvee*, and apricot cultivars – *Early Orange*, *Harcot*, *Wczesna z Morden* and *Późna z Mordan*. The peach production in Poland oscillates around 4–14 thousand tonnes. The production of apricots is significantly lower. Between 2004 and 2013 the volume of apricot harvest ranged from 1 thousand tonnes to 5 thousand tonnes.
Poland – an undisputed leader in the EU berry fruit production and a significant global producer

The berry fruit production has been playing an important role in the Polish horticultural production since 1970s. Currently, around 200 thousand mainly small households are involved in berry fruit growing. After Poland’s accession to the EU, the total area under berry fruit bushes amounts to around 115–147 thousand ha. The berry fruit harvest accounts on average for 16% of fruit harvest in general, and this production has been systematically increasing – in 2013 it reached 607 thousand tonnes, a rise of 21% compared to 2004. The processing base is of a crucial importance for the development of berry fruit production.

**Strawberries** are a source of numerous valuable B-group vitamins, vitamin C and microelements, i.e. magnesium, potassium, iron, zinc, iodine, copper and phosphorus. In 2013 57 thousand farms in Poland cultivated strawberries. Between 2004 and 2013 domestic strawberry plantations covered the area of 37–56 thousand ha, and the harvest ranged from 150 thousand tonnes to 198 thousand tonnes. Most cultivated varieties include: *Selva, Evie, Diamante, Linosa, Capri, Albion* and *Senga Senga*. Such a high level of strawberry production ranks our country as a third – after Spain and Germany – largest producer of strawberry in the European Union and tenth worldwide. In 2012, the share of Polish strawberry production in the EU and global harvest amounted to 15% and 3% respectively.
Poland is the largest producer of **raspberries** in the European Union and the second largest – after Russia – worldwide. In 2012 the share of Poland in the EU and global raspberry production amounted to 70% and 21% respectively. The large popularity of raspberry cultivation in Poland results from its healthful properties, taste qualities and demand from the fruit and vegetable industry. The most popular cultivars include: Polana, Polka, Koral and Benefis. In 2004 the area under raspberry cultivation amounted to 14 thousand ha and by 2013 it increased to 29 thousand ha, with a simultaneous increase in production from 57 thousand tonnes to 121 thousand tonnes. Fresh raspberry exports in 2010–2013 oscillated

**Truskawka kaszubska** was entered into the register of Protected Geographical Indications in 2009; it is a traditional product of Pomorskie Voivodeship. Owing to its raping conditions, **truskawska kaszubska** stands out from varieties grown in other regions by a larger sugar content in fruit. This results from the specific microclimate of the Kashubian Lake District. It is well fit for preparations (jams, juice), as a yoghurt additive and for direct consumption.
around 16–17 thousand tonnes and were lower than in 2004–2009 when 16–32 thousand tonnes of raspberries were exported. The decrease in fresh raspberry exports was caused by the increased processing of this fruit in domestic processing facilities. Frozen raspberry exports were larger than those of fresh raspberry. Between 2009 and 2013 the Polish frozen raspberry exports amounted to 39–64 thousand tonnes. Frozen raspberries were directed mainly at the German market.

As regards currant growing, Poland ranks second in the world after Russia. Polish currant harvest accounts for 30% and 70% of the global and EU harvest respectively. In 2004–2013 the area under currant cultivation amounted to 39–47 thousand ha. Currant harvest oscillated around 190–200 thousand tonnes (except for the years 2007 and 2011, when it was lower due to crop failure). As regards production structure, black currants accounted for 77%, and red currants – 23% of production. The exports of fresh black currants were insignificant and amounted to 2–10 thousand tonnes. Black currants were exported mainly in a frozen form (17–27 thousand tonnes). Currants, regardless of their cultivar, are an invaluable source of vitamins and minerals. Black currants contain more than 3 times as much vitamin C as lemons. Owing to the contents of anthocyanins and phytoncides, they are used to prevent viral and fungal infections. The most widely cultivated black currant varieties include Ceres and Titania, and red currant varieties – Detvan, Tatran and Rosetta.

Poland ranks third in the world in the gooseberry production (following Germany and Russia) and second among the European Union countries. The share of domestic production of gooseberries in the global production amounts to 10%, and in the EU production – 16%. The area under gooseberry cultivation in Poland is stable and oscillates around 3 thousand ha, and its production – depending on the year – ranges between 14 thousand tonnes and 20 thousand tonnes. The most widely cultivated varieties include: Ribes grossularia, Hinnomaki rot and Invicta. Gooseberry owes its nutrition value to the large content of vitamins, minerals and pectins.

Poland is the largest producer of chokeberries in the world, with a 90% share in the global production. Between 2004 and 2013 chokeberry plantations covered in Poland the area of 5–8 thousand ha, and chokeberry production increased from 38 thousand tonnes to 58 thousand tonnes. The most popular cultivars include Hugin, Nero and Viking. The increase in chokeberry popularity results from a growing demand on chokeberry preparations – mainly juice. Healthful properties of chokeberries stem from its abundance in vitamins and mineral components.
Highbush (American) blueberry is a plant originating from the Northern America. Its fruit is very tasty and of high nutritional and healthful value owing to the contents of mineral salts, pectins and vitamins. Highbush blueberries are mainly consumed raw as a dessert fruit. Poland is the largest producer of highbush blueberries in the European Union, with a 23% share in the total harvest. As regards the global production, our country ranks third (after the United States and Canada), with a 3% share. The high position of domestic highbush blueberry production results from a large increase in the cultivation area. Between 2004 and 2013 it increased from 1 thousand ha to 7 thousand ha. At the same time, the highbush blueberry harvest rose from 4 thousand tonnes to 13 thousand tonnes, and almost the entire production was focused on dessert fruit. The most often cultivated varieties include Bluecrop, Bluegold, Spartan, Sunrise and Duke.
Processing – an important direction in Polish fruit use

Fruit processing is an important industry branch in Poland. The production of fruit preparations after Poland’s accession to the EU amounted on average to 861 thousand tonnes. Frozen fruit dominate among fruit preparations produced in Poland. Its share in the production of fruit preparations amounted on average to 40%. Concentrated juice also had a relatively large share – 30%. The share of jam and marmalade and other fruit preserves totalled 16%.

The production of fruit preparations increased by 28%, from 790 thousand tonnes in the 2004/2005 period to 1,010 thousand tonnes in the 2012/2013 period. As regards concentrated juice and frozen fruit this increase amounted to 40% and 7% respectively, and for drinking juice, nectar and other drinks – 18%. The average production of jam and marmalade and other fruit preserves dropped by 7%.

**Fruit preparations production**

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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In total preparations (thousand tonnes)</td>
<td>790</td>
<td>930</td>
<td>845</td>
<td>785</td>
<td>868</td>
<td>1,010</td>
</tr>
<tr>
<td>Juice concentrate, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>apple juice</td>
<td>260</td>
<td>330</td>
<td>255</td>
<td>190</td>
<td>261</td>
<td>365</td>
</tr>
<tr>
<td>Jams, marmalades and other preserves</td>
<td>138</td>
<td>130</td>
<td>126</td>
<td>133</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>Frozen fruit</td>
<td>350</td>
<td>345</td>
<td>329</td>
<td>325</td>
<td>345</td>
<td>375</td>
</tr>
<tr>
<td>Dried fruit and other preparations*</td>
<td>30</td>
<td>125</td>
<td>135</td>
<td>137</td>
<td>132</td>
<td>140</td>
</tr>
<tr>
<td>Drinking juice, nectar and other drinks**</td>
<td>1200</td>
<td>1610</td>
<td>1600</td>
<td>1580</td>
<td>1485</td>
<td>1410</td>
</tr>
</tbody>
</table>

Source: ARR study based on the IAFE-NRI data.

* compote, pasteurized fruit, tinned fruit, nut preserves.
** including vegetable drink.
### Fruit preparations exports

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In total preserves (thousand tonnes)</td>
<td>664</td>
<td>775</td>
<td>753</td>
<td>645</td>
<td>691</td>
<td>833</td>
</tr>
<tr>
<td>Juice concentrate, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>apple juice</td>
<td>237</td>
<td>293</td>
<td>265</td>
<td>194</td>
<td>238</td>
<td>319</td>
</tr>
<tr>
<td>Drinking juice, nectar and other drinks</td>
<td>204</td>
<td>252</td>
<td>215</td>
<td>158</td>
<td>196</td>
<td>280</td>
</tr>
<tr>
<td>Frozen fruit</td>
<td>86</td>
<td>112</td>
<td>115</td>
<td>95</td>
<td>87</td>
<td>102</td>
</tr>
<tr>
<td>Dried fruit</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Jams, marmalades and other preserves</td>
<td>23</td>
<td>30</td>
<td>29</td>
<td>28</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>Tinned fruit, fruit and nut preserves</td>
<td>34</td>
<td>57</td>
<td>53</td>
<td>51</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>Temporarily preserved fruit</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>In total preparations (EUR million)</td>
<td>522</td>
<td>912</td>
<td>719</td>
<td>844</td>
<td>1083</td>
<td>1223</td>
</tr>
</tbody>
</table>

Source: ARR study based on the IAFE-NRI data.
The dynamically growing production of fruit preparations was also stimulated by an increase in export demand. After Poland’s accession to the EU exports of fruit preparations averaged 717 thousand tonnes, and its value – EUR 861 million.

The structure of exports with respect to volume was dominated by two groups of fruit preparations – frozen fruit and concentrated juice.

Between 2004 and 2013 exports of frozen fruit ranged from 250 thousand tonnes to 320 thousand tonnes, whereas exports of concentrated juice amounted to 158–319 thousand tonnes.

Exports of concentrated juice were dominated by apple juice with an average share of 84%. Drinking juice, nectar and other drinks also had a significant share in exports of fruit preparations. Foreign sales of these products ranged from 86 thousand tonnes to 136 thousand tonnes.

**Foreign trade in fruit preparations between 2004 and 2013**

Source: ARR study based on the IAFE-NRI data.
Activities of the Agricultural Market Agency on the fruit and vegetable market

‘School Fruit and Vegetable Scheme’

The Agricultural Market Agency implements an EU ‘School Fruit and Vegetable Scheme’, whose purpose is to change eating habits of children by increasing the share of fruit and vegetables in their everyday diet, as well as promoting healthy eating habits by accompanying educational programmes in primary schools.

Pupils from I–III grades of elementary school and children fulfilling the obligatory one-year pre-school preparation in primary schools are provided with: fresh fruit (apples, pears, strawberries, highbush berries), fresh vegetables (carrots, radishes, sweet peppers, turnip cabbage, cocktail tomatoes) and fruit, vegetable or fruit and vegetable juice.

Since launching the scheme in the 2009/2010 school year, the number of pupils covered by it has increased 4.4 times, and the number of schools – nearly 4.5 times. In the 1st semester of the 2014/2015 school year, 95% pupils from the target group benefited from the scheme. By the end of September 2014, the ARR disbursed PLN 231 million for its implementation, of which PLN 173 million (75%) from the EU budget and PLN 58 million (25%) from the national budget. Primary school pupils were provided free-of-charge with over 233 million of fruit and vegetable servings.

There are activities carried out to popularise the scheme (website www.woocewszkole.org, promotional, educational, sports, and conference activities, issuing posters, brochures, gadgets) and educational activities (e.g. schools participating in the scheme are obliged to organise at least two environment and health-related classes in each school year semester). Independent scheme evaluations concerning the impact on eating habits of children prove that the scheme has been effective.

2 Until 31 December 2013 the scheme was named ‘School Fruit Scheme.’
Promotional and information campaigns implemented on the fruit and vegetable market

Since May 2004 the European Commission has allocated to Poland a total of EUR 16.7 million for 6 sector-specific promotional and information campaigns related to fruit and vegetables and juice. These campaigns included:

- **“Carrot”** (implementation period – 2006–2007, budget – EUR 1.8 million, target markets – Romania, Bulgaria);
- **“Deep-Frozen Products Full of Nature”** (2006–2007, EUR 161 thousand, Poland);
- **“5 a Day Vegetables and Fruit”** (2008–2009, EUR 2 million, Poland);
- **“5 Portions of Vegetables, Fruits or Juice”** (3-year, 2011–2013, EUR 3.8 million, Poland, Romania);
- **“Apples Every Day”** (3-year, started in 2012 EUR 4 million, Ukraine, Russia);
- **“European Bicoloured Apples”** (3-year, started in 2014, EUR 5 million, China, United Arab Emirates).
From Poland’s accession to the EU to 30 September 2014 the support granted by the ARR for the implementation of promotional and information campaigns on the fruit and vegetable market totalled PLN 32 million, including PLN 20 million financed from the EU budget.

Another form of ARR activity supporting food promotion are promotion and information activities under the Rural Development Programme and activities financed from the national budget intended to promote organic farming products, regional and traditional products, their production methods, as well as food quality schemes.

Fruit and Vegetable Promotion Fund

Similarly to the other promotional funds\(^3\), it was established to support agricultural marketing and increase consumption of specific products. In five years PLN 30.4 million was credited to the Fund’s account, received from around 8 thousand entities, and PLN 22.4 million was allocated for tasks co-funded by this Fund. In 2014 the following promotional campaigns were financed by the Fund: “Juices and mousses – vitamin in a handy form”, “Unusual properties of ordinary fruit”, “Time for tomato, or you can’t help loving Polish fruit and vegetables”, “European Bicoloured Apples”, “Potato – a traditional, valuable and versatile vegetable” and “EcoEurope – quality and tradition”. The following were also financed by the Fund: “Apple Festival”, “Strawberry Picnic”, “Fruit and Vegetable Picnic”, developing a strategy for the development of fresh and processed fruit and vegetable production, processing and distribution until 2030, as well as the participation of Polish sector organisations at international fairs and sector meetings.

\(^{3}\) Since 2009 the ARR has been administering nine funds for the promotion of agri-food products (i.e. milk, pork, beef, horsemeat, sheepmeat, cereal grains and processed cereals, fruit and vegetables, poultry meat and fish). Decisions on the method of disbursing and allocating funds for individual tasks are taken by the Committees Managing funds. The ARR tasks include administration of funds and their bank accounts.
Sector Promotion Programme for Polish Food Specialities Sector

Under this Scheme⁴ the Agricultural Market Agency carries out activities intended to create new strong brands which will be recognizable all over the world and associated with Poland. Promotion activities support entrepreneurs who are active inter alia in the fruit and vegetable production and processing sector. Polish food specialities are promoted under the logo “Poland Tastes Good”. The scheme covers the following target markets: Russia, Germany, China, France, Ukraine, and the United Arab Emirates. In 2014 the ARR organised the participation of Polish entrepreneurs in fairs and accompanying economic missions, such as: World Food Warsaw, World Food Moscow, SIAL China in Shanghai, World Food Ukraine, SIAL Paris and POLAGRA FOOD in Poznań.

Supporting agricultural producers in emergency and crisis situations

The crisis on the fruit and vegetable market in 2011, caused by the Escherichia coli (EHEC) bacterium, contributed to a reduction in fresh fruit and vegetables consumption in the EU. Therefore, the ARR paid out PLN 179.4 million to over 4,7 thousand vegetable producers. In 2014, following the ban on imports of certain products from the European Union to the Russian Federation, the European Commission established temporary exceptional support measures for producers of certain fruit and vegetables. The Agricultural Market Agency was entrusted with administering the scheme.

⁴ The scheme is implemented under the system project “Promotion of Polish Economy on International Markets”, Sub-measure 6.5.1 of the Innovative Economy Operational Programme.
Selected institutions functioning on the Polish agri-food market

Ministerstwo Rolnictwa i Rozwoju Wsi
(Ministry of Agriculture and Rural Development)
00-930 Warszawa, ul. Wspólna 30, ph. +48 (22) 623 10 00, fax +48 (22) 623 27 50
e-mail: kancelaria@minrol.gov.pl / www.minrol.gov.pl

Agencja Rynku Rolnego (Agricultural Market Agency)
00-400 Warszawa, ul. Nowy Świat 6/12
ph. +48 (22) 661 72 72 – Contact Point, fax +48 (22) 628 93 53
e-mail: tpi@arr.gov.pl / www.arr.gov.pl

Agencja Restrukturyzacji i Modernizacji Rolnictwa
(Agency for Restructuring and Modernisation of Agriculture)
02-822 Warszawa, ul. Poleczki 33,
ph. 0 800 38 00 84 – infolinia, fax +48 (22) 318 53 30
e-mail: info@arimr.gov.pl / www.arimr.gov.pl

Główny Urząd Statystyczny (Central Statistical Office of Poland)
00-925 Warszawa, al. Niepodległości 208,
ph. +48 (22) 608 30 00, fax +48 (22) 608 38 69
e-mail: gus@stat.gov.pl / www.stat.gov.pl

Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej – Państwowy Instytut Badawczy
(Institute of Agricultural and Food Economics – National Research Institute)
00-002 Warszawa, ul. Świętokrzyska 20
ph. +48 (22) 505 44 44, fax +48 (22) 827 19 60
e-mail: ierigz@ierigz.waw.pl / www.ierigz.waw.pl

Fundacja Programów Pomocy dla Rolnictwa FAPA
(Foundation of Assistance Programmes for Agriculture FAPA)
00-930 Warszawa, ul. Wspólna 30, ph. +48 (22) 623 19 01, fax +48 (22) 623 19 09
e-mail: fapa@fapa.org.pl / www.fapa.com.pl

Inspekcja Jakości Handlowej Artykułów Rolno-Spożywczych
(Agricultural and Food Quality Inspection)
00-930 Warszawa, ul. Wspólna 30, ph. +48 (22) 623 29 00, fax +48 (22) 623 29 98
e-mail: sekretariat@ijhars.gov.pl / www.ijhars.gov.pl
Sector organisations

Sector organisations are an important link ensuring availability of information on the fruit market. They unite fruit producers and processors as well as companies active in fruit trading and providing services to the horticultural sector.
Agricultural Market Agency – as an accredited paying agency of the European Union – performs tasks related to the food sector which are important in both economic and social terms, covering:

- **consumption support** – promotes a proper consumption pattern of milk and dairy products among children and schoolchildren (‘School Milk Scheme’) as well as fruit and vegetables among primary school pupils (‘School Fruit and Vegetable Scheme’);
- **food aid** which is delivered each year to around 3.5 million persons in need;
- **food promotion support:**
  - co-finances sector-specific promotion and information campaigns, carried both on the domestic and foreign markets,
  - provides services related to the operation of nine promotion funds for agri-food products, established in order to support agricultural marketing,
  - initiates promotion activities aimed at the development of local production with a particular focus on the regional, traditional and ecological products being produced under guaranteed food quality systems,
  - implements promotion and information activities under the RDP,
  - implements the Sector Promotion Programme for Polish Food Specialities Sector on selected foreign markets;

- **production quotas** for milk, sugar and isoglucose as well as the monitoring and control of the process of production and processing on such markets as the wine and sugar market;
- **administration of foreign trade exchange** – it issues import/export licences for agri-food products under the applicable European Union regulations;
- **support for producers and agricultural markets:**
  - subsidises the purchase of certified seed and planting stock,
  - implements support programmes for the beekeeping sector;
- **intervention purchase and sale of agri-food products**, in line with the Common Agricultural Policy regulations;
- **subsidies to private storage** and issuing certificates allowing for the use of products under this scheme in other EU countries;
- **administration of support schemes for producers affected by losses** caused by crisis situations;
- **renewable energy sources** – monitoring the production of agricultural biogas, biofuel components and liquid biofuels;
- **preparation of analytical and forecast studies** on the current and expected situation on the selected agricultural markets, as well as making them accessible to the interested participants of the agricultural market (placing them on the Agricultural Market Agency website www.arr.gov.pl).

This brochure is available on the ARR website www.arr.gov.pl.

The brochure was prepared by the ARR’s Analysis and Programming Office on the basis of the data of the Central Statistical Office, Ministry of Finance, as well as the report "Fruit and Vegetable Market" by the Institute of Agricultural and Food Economics – National Research Institute.

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- deep knowledge about producers we merge from various agri-sector and fields
  - economic and market information
  - news and analysis
  - promotion programs and supporting services
  - agribusiness events, seminars, conferences and fairs organized by ARR in Poland and abroad.