Market in cereals in Poland
Share of cereals in the sown area in general and harvest of wheat, barley and maize in the period 2008–2012

Source: ARR study on the basis of the Central Statistical Office (GUS) data.
Poland as an important producer of cereals

Poland ranks second in the European Union for cereal cultivation area (after France), and third – for the harvest of cereals (after France and Germany).

Production of cereals constitutes one of the main directions of agricultural production in Poland. The share of cereals in the value of global agricultural production in the period 2008–2012 was 20%, and the share of cereals in the value of commodity agricultural production reached 15%. As regards the structure of the sown area, cereals make up for almost 74% of the total sown area of the country. Popularity of cereal cultivation is connected with the favourable climate and soil conditions, fairly simple technology of production, relatively low labour consumption, easiness to store, transport and sale.

Situation on the market in cereals is of a considerable importance for the food industry in general. Through the supply of the basic raw material for the production of fodder, the sector of cereals is a factor influencing to a large extent the economic conditions of animal production, in particular the production of pigs and poultry for slaughter.
Cereals cultivated in Poland

The cereal species structure is determined by climate and soil conditions. Wheat is the predominant cereal in the domestic production. The share of production of triticale and barley is systematically growing. The production of maize is also characterised by the growing tendency. However, the share of cereal blends and rye in the domestic production has decreased in the recent period. The share of oats is quite stable. Small quantities of buckwheat and millet are also cultivated in Poland.

On the territory of Poland the cultivation of winter cereals – whose yield is much higher than the yield of spring cereals – is predominant. Only the cultivation of barley involves the predominance of spring species (which is connected with the low resistance to frost that is characteristic for barley).

In Poland cereals are cultivated primarily on private farms. These are predominant in the ownership structure of domestic agriculture. Production methods applied on those farms are characterised e.g. by lower consumption of mineral fertilizers and plant protection agents – in comparison to large-scale farming, which fosters the preservation of natural environment and landscape.

[Structure of cereal harvest in the period 2008–2012]

Source: ARR study on the basis of the Central Statistical Office (GUS) data.
### Cultivation area, yield and harvest of cereals in Poland

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>Cultivated area (thousand ha)</td>
<td>Yield (t/ha)</td>
<td>Harvest (thousand t)</td>
</tr>
<tr>
<td>Wheat</td>
<td>2578</td>
<td>3.54</td>
<td>9136</td>
</tr>
<tr>
<td>Triticale</td>
<td>755</td>
<td>3.13</td>
<td>2360</td>
</tr>
<tr>
<td>Rye</td>
<td>2045</td>
<td>2.30</td>
<td>4708</td>
</tr>
<tr>
<td>Barley</td>
<td>1093</td>
<td>3.02</td>
<td>3299</td>
</tr>
<tr>
<td>Oat</td>
<td>567</td>
<td>2.39</td>
<td>1354</td>
</tr>
<tr>
<td>Basic cereals in total</td>
<td>7038</td>
<td>2.96</td>
<td>20 857</td>
</tr>
<tr>
<td>Cereals blends</td>
<td>1431</td>
<td>2.68</td>
<td>3833</td>
</tr>
<tr>
<td>Maize</td>
<td>1//</td>
<td>6.04</td>
<td>1069</td>
</tr>
<tr>
<td>Other</td>
<td>49</td>
<td>1.27</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>8695</td>
<td>2.97</td>
<td>25 817</td>
</tr>
</tbody>
</table>

Source: ARR study on the basis of the Central Statistical Office (GUS) data.

### Cereals cultivation area in Poland

Decrease of the agricultural land area resulted also in the decrease of the cereal sown area in Poland. However, this decrease was noted only in relation to the basic cereals sown area, while the sown area of maize cultivated for grain was increased. In the period 1996–2000 cultivation of cereals in Poland took up the area of 8.8 million ha (8.7–8.9 million ha), however, in the period 2008–2012 this area decreased to 8.1 million ha (7.6–8.6 million ha). The area sown to basic cereals (wheat, rye, triticale, barley and oats) amounted to 6.3 million ha and equaled nearly 80% of the cereal sown area in general. Cereal blends for fodder took up less than 16% of the total cereal cultivation area, maize for grain – over 4%, and buckwheat and millet – ca. 1%.
Yield and harvest of cereals

In Poland the harvest and the yield of cereals in individual years are subject to considerable fluctuations connected with the changeability of weather conditions. However, as regards the yielding there is noted the rising tendency in relation to all cereals. In 2012 the yield of basic cereals amounted to 3.54 t/ha, and of maize 7.35 t/ha. In result, despite the decrease of the sown area, the yield of cereals is bigger than a decade earlier.

The harvest of cereals in the period 2008–2012 reached the volume ranging from ca. 27 million tonnes (in 2011 – due to draught occurrence during the vegetation period and long-term rainfalls during harvest) to 29.8 million tonnes (in 2009 – which was the record year). The increase of harvest is connected with the change in the cereal cultivation structure, biological progress with regard to new species cultivation and the improvement of the effectiveness of yield-enhancing and plant protection agents. The reduction of the cultivation area is compensated with the increase of yield.

Cereal cultivation regions

The volume of cereal production in Poland is regionally differentiated due to such factors as: soil quality, length of vegetation period, agrarian structure, agricultural condition, level of urbanisation and industrialisation. The biggest cereal producing

Total sown area, harvest and purchase of cereals in years 2008–2012

Source: ARR study on the basis of the Central Statistical Office (GUS) data.
voivodships of Poland include: Wielkopolskie, Mazowieckie, Lubelskie, Kujawsko-Pomorskie, Dolnośląskie and Łódzkie (58% of the domestic cereal sown area and the harvest volume). The biggest quantities of cereals are purchased in the following voivodships: Dolnośląskie, Wielkopolskie, Zachodniopomorskie, Kujawsko-Pomorskie and Opolskie. The share of these five voivodships in the domestic purchase amounts to ca. 60%.

Allocation of seed

For a long time domestic cereal demand has been 27–28 million tonnes. The main factors causing changes in domestic level of using cereals in particular years are cyclic fluctuations of pig stock and growing production of poultry. There is a downward trend in the consumption of cereals. Industrial consumption of grain is continuously growing, although its share in total use of cereals is still insignificant.

Cereals in Poland are destined for:

- **fodder**

Feeding the livestock has a dominating position in the structure of domestic consumption of cereals (61%). Averagely nearly 17 million tonnes of cereals per year are destined for fodder, from which almost 80% of the grain is used in farms.

Fodder industry consumes ca. 3.5 million tonnes of cereals, which is about 20% of the grain destined for fodder. Ongoing concentration of animal production stimulates the development of that cereal processing sector. Demand for industrial feed blends, which production exceeded 8 million tonnes, increases. The production of poultry and cattle feed grows gradually. Changes in the animal production influence the increase in the use of industrial feed at the expense of the use of grain directly from the farm.
As regards the use of cereals for feed, the share of rye decreases (less than 4% in 2011/2012 against 9% in 2003/2004), whereas the share of wheat (21% against 18%) and triticale (22% against 16%) rises. The change of the structure of used feeds is influenced by decreasing pig livestock and increasing production of poultry.

**consumption**

Demand for grain for consumption decreases due to the fall in consumption of cereal products. The fall results mainly from the rise of incomes, but also from the changes in lifestyle and the possibilities of substituting these products for other products. The use of cereals for consumption purposes in the marketing years 2008/2009–2012/2013 amounted to 5.3 million tonnes (19% of domestic use) against 5.7–5.8 million tonnes in years 1998/1999–2005/2006. Grain mill products are dominated by wheat flours, with a share of 65%. In 2012, the production of wheat flour equalled 2.2 million tonnes, while that of rye
flour reached 219 thousand tonnes. Meanwhile the production of groats and flakes totalled 96 thousand tonnes.

The biggest share in the production of processed products manufactured in Poland corresponds to fresh bakery products, with production output of 1.6–1.7 million tonnes in the recent years. The second place belongs to pastrycooks’ products (402 thousand tonnes in 2012). In the years 2009–2012 manufacturing of pasta reached the level of about 180 thousand tonnes.

In Poland cereal preparations are manufactured mainly of wheat (78%) and rye (18%) grains. Before the accession of Poland to the EU, the consumption of cereal preparations in flour equivalent amounted to 120 kg per capita. In the following years this consumption fell to 108 kg per capita. Reduction in consumption of cereal preparations is accompanied by a change in their consumption structure. The fall in consumption of bread, flour and groats coincides with a rise in consumption of cereal flakes. Until 2008, the consumption of pastry goods and pasta had been also rising, and it has remained relatively stable in the recent years.

**Production of selected cereal preparations**

![Graph showing production of selected cereal preparations from 2003 to 2012.](image)

Source: ARR study on the basis of Institute of Agricultural and Food Economics – National Research Institute (IERiGŻ-PIB) data.
other directions in processing

For a dozen years an increase of cereal processing in the brewery and distilling industry has been noted. In the marketing year 2011/2012 the total processing of cereals in the above-mentioned sectors (according to the Central Statistical Office) equalled 2.5 million tonnes and was 2.2 larger than in the marketing year 2003/2004. Since the accession of Poland to the EU the use of cereals in the distillery sector increased more than threefold, i.e. to 1.3–1.4 million tonnes. In Poland rye is the main ingredient used in the production of spirit. The leading products of the distillery industry are vodkas, rectified and technical spirit. The significance of the use of spirit as a component for the production of biofuels is growing systematically. There is also an increasing demand for barley intended for the production of malt to be used in the manufacture of beer. The quantity of barley used annually for brewery purposes amounts to 800–850 thousand. The industry also uses wheat for the production of starch.

External trade

Poland’s entering the European single market resulted in the removal of customs and technical borders with other Member States, which contributed firstly to increasing Polish trade in cereals and cereal preparations. Secondly it led to a stronger influence of Community market on the national market. Since the accession to the EU, Polish trade in cereals has been determined not only by the volume of national crops and transport costs, but also by the prices on the markets of other Member States and exchange rates. In 2009–2012 export of cereal grains fluctuated between 1.5 and 3.1 million tonnes.
Export and import of cereal grains and cereal products (in product weight)

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<tr>
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<tbody>
<tr>
<td><strong>Grain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export</td>
<td>3140</td>
<td>2057</td>
<td>1531</td>
<td>2896</td>
</tr>
<tr>
<td>Import</td>
<td>1167</td>
<td>1175</td>
<td>1618</td>
<td>1524</td>
</tr>
<tr>
<td>Balance</td>
<td>1973</td>
<td>882</td>
<td>−87</td>
<td>1372</td>
</tr>
<tr>
<td><strong>Products of primary processing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export</td>
<td>239</td>
<td>254</td>
<td>312</td>
<td>330</td>
</tr>
<tr>
<td>Import</td>
<td>567</td>
<td>635</td>
<td>586</td>
<td>562</td>
</tr>
<tr>
<td>Balance</td>
<td>−328</td>
<td>−381</td>
<td>−274</td>
<td>−232</td>
</tr>
<tr>
<td><strong>Highly processed products</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export</td>
<td>318</td>
<td>352</td>
<td>386</td>
<td>402</td>
</tr>
<tr>
<td>Import</td>
<td>174</td>
<td>179</td>
<td>193</td>
<td>207</td>
</tr>
<tr>
<td>Balance</td>
<td>144</td>
<td>173</td>
<td>193</td>
<td>195</td>
</tr>
</tbody>
</table>

Source: ARR calculations on the basis of the Ministry of Finance data.

High quality and competitive prices of Polish products contribute to their attractiveness on the EU single market. In the marketing years 2008/2009–2011/2012 Polish cereal export (combined with products of processing measured in grain equivalent) ranged between 1.9 and 2.7 million tonnes. The share of export in the distribution of national resources (initial reserves + production) equalled 6–8%. The export of grain mill products and highly processed products is growing systematically, while export of grain fluctuates depending on the volume of crops.

Wheat has the largest share in the structure of export of cereal grains (on average...
51% in the years 2008–2012). In comparison to the first years of Polish EU membership, the export share of rye and barley has shrunk while maize share has increased. In the years 2008–2012 it equalled respectively: 15%, 7% and 19%. Polish cereals are distinguished by good quality, high milling and baking adaptability and they also comply with sanitary requirements, which makes them highly sought after by foreign recipients.

Geographic structure of export of cereal grains from Poland in the years 2009–2012

Wheat is exported mainly to Germany and Spain but also to countries in Africa (Algeria, Egypt). Rye is exported to EU countries, especially to Germany, the Netherlands, Finland, while maize is exported chiefly to Germany, the Netherlands and Denmark. In the recent years, Germany and the Netherlands were among the primary recipients of Polish barley.
In 2012 the export of products of secondary processing of cereals exceeded 2.6 times the 2004 export value, reaching 402 thousand tonnes. The biggest share (70%) in the export of these products is that of bread and sugar confectionery. In the same year, the export of bread and confectionery grew more than twice in comparison to 2004, while the export of pasta and processed grains (obtained by swelling or roasting) increased almost 4 times. Germany, the Czech Republic and Hungary are among the most important recipients of bread, whereas Germany, Great Britain, Russia and Turkey import the majority of cereal flakes and processed grains. Pasta is sold mainly to the Czech Republic, Great Britain and Slovakia and also to the USA.

The export of products of primary processing is also rising. In 2012 the export of these products was almost 4.6 higher than in 2004 and equalled 330 thousand tonnes. Wheat flour is among the main exported products of cereal milling. It is widely sought after by foreign importers. The main recipients of wheat and meslin flour are Germany and Great Britain. Cereal groats and grits are sold chiefly to Germany, the Czech Republic and to Belarus. Other products exported by Poland include wheat gluten and malt. The United States are a regular recipient of wheat gluten, whereas Germany and Great Britain usually import malt.

In the marketing years 2008/2009–2011/2012 Poland, depending on the national supply, imported 1.7–2.5 million tonnes of cereals and cereal preparations (measured in grain equivalent). Usually cereal import constitutes only a structural complement to the supply of raw materials necessary for the processing industry. In the years when crops decrease significantly, the cereal import exceeds export.
Trade balance

Until 2004 Poland traded in cereals and cereal products mostly with countries of Central and Eastern Europe. After the EU accession, trade in these goods is conducted mainly within the single market. In this period the export volume has increased, which was accompanied by a change in the assortment and geographical structure of trade in cereals and cereal products. In the years 2009–2012 export of cereals and cereal products constituted 8–10% of Polish agri-food export value, whereas import was slightly lower, reaching 7–8%.

Changes in Polish foreign trade, especially a growing positive trade balance of highly processed products, resulted in export value exceeding import value after the accession.

Foreign trade turnover of highly processed cereal products

Source: ARR calculations based on the data from FAMMU/FAPA (Foundation of Assistance Programmes for Agriculture) and the Ministry of Finance.

In 2005 positive trade balance in cereal grains and cereal products closed at the level of EUR 290 million, and in 2012, as a result of improving trade in grains and highly processed products, it increased to EUR 709 million.
Market organisation

The fragmented structure and low level of use of chemicals in Polish agriculture means that Poland has the ability to produce high quality, organic and natural food – so much searched for at European tables.

Grain is produced in Poland on 1.3 million farms, including 115 thousand farms with the area of over 20 hectares. In the period of 2008–2012, average annual purchase of cereals amounted to ca. 9 million tonnes of grain (including maize). It is expected that as a result of specialisation of farms, production and market-ability of cereals (including feed cereals) will continue to grow.

The potential of Polish processing industry is large. Modern infrastructure, technology and experienced staff are employed to produce healthy products of refined taste and dietary qualities valued by consumers.

Activities of the Agricultural Market Agency on the cereals market

The Agricultural Market Agency supports farmers by providing them with aid to the use of seed of basic or certified seed category. In 2012 the area covered by aid amounted to 885 thousand ha, which was almost three times higher than in 2007.

After the accession of Poland to the EU the cereals covered by intervention measures were: common wheat, barley and maize. The Agricultural Market Agency took over (in years 2004–2006 and 2009–2010) more than 2.1 million tonnes of cereals, including almost 1 million tonnes in the marketing year 2004/2005.

The functioning on the single EU market, as well as the visible processes of globalization and increased competition on the agri-food markets make it particularly important to carry out promotion and information activities on the domestic and foreign markets.
In support of the promotion and information activities on the market in cereals the ARR provides financial support to the information and promotion campaign ‘Pasta of Europe’. The aim of the programme is to inform on the advantages of European pasta and to create its positive image.

Under the Promotion Fund for Cereal Grains and Cereal Products there are activities carried out with the aim of informing about the quality, characteristics of cereals and cereal products derived from the processing of wheat, rye, barley, maize, oats and buckwheat.

Poland also supports promotion initiatives relating to organic, traditional, regional products as well as products manufactured under other systems of guaranteed quality of food, and initiatives in the field of Polish culinary heritage. The national list of regional and traditional products (kept by the Ministry of Agriculture and Rural Development), which includes 1169 food products (up to September 2013), contains 240 bakery and confectionery products.

Since Poland’s accession to the EU Polish producers can protect and promote the uniqueness of their products by the use of designations provided by the European Union. The certificates granted by the European Commission: Protected Designation of Origin and Protected Geographical Indication highlight the relationship between the quality and the place of origin of the products, and the certificate Traditional Speciality Guaranteed emphasises the traditional method of production.
The EU system for protection of regional and traditional products (up to September 2013) recorded 36 Polish agricultural products. Six of them are cereal products.

The register of Protected Geographical Indication contains:

- rogal świętomarciński
- andruty kaliskie
- obwarzanek krakowski
- chleb prądnicki
- kołocz śląski/kołacz śląski

Market in cereals in Poland

- Obwarzanek krakowski
- Chleb prądnicki
- Kołocz Śląski
The register of Traditional Speciality Guaranteed contains:

- pierekaczewnik

**Under the Sector Promotion Programme for Polish Food Specialities Sector** the ARR participates in the process of creating new strong brands associated with agri-food sector to make them recognisable worldwide and associated with Poland.

Promotion activities covered by the programme are addressed to entrepreneurs who are active in the sector of food processing and production (including among others grain mill products, bakery products, pastry products and cakes, pasta, vodka, beer).

The supervisory body coordinating and controlling the implementation of the Common Agricultural Policy is the Ministry of Agriculture and Rural Development. Administering the CAP schemes is under the responsibility of the Agricultural Market Agency and the Agency for Restructuring and Modernisation of Agriculture.
Ministry of Agriculture and Rural Development – is engaged in issues relating to agricultural production, rural development, food industry, fisheries and phytosanitary and veterinary supervision. The information bulletins of MARD Integrated Agricultural Market Information System publish the data on the level of prices of different categories of cereals and selected cereal products.
Sector organisations

Sector organisations which function in the forms of societies, unions and associations, are an important link ensuring availability of information on cereals market. They unite producers and processors of cereals as well as firms dealing with trade in cereals and service of the cereals sector.

Krajowa Federacja Producentów Zbóż
(National Federation of Cereal Producers)

00-002 Warszawa, ul. Świętokrzyska 20 lok. 402a
phone +48 608 755 255
phone +48 667 958 199
e-mail: biuro@kfpz.pl
www.kfpz.pl

Polski Związek Producentów Kukurydzy
(Polish Association of Maize Producers)

60-837 Poznań, ul. Mickiewicza 33, pok. 43
phone/fax +48 (61) 662 74 20
e-mail: pzpk@kukurydza.info.pl
www.kukurydza.info.pl
Polski Związek Producentów Roślin Zbożowych
(Polish Association of Cereal Producers)
05-870 Błonie, Radzików, lab. II p. 86
phone +48 (22) 733 46 16
phone +48 (22) 733 46 14
phone +48 502 25 78 74
fax +48 (22) 733 46 15
e-mail: pzpz@ihar.edu.pl
www.pzprz.pl

Stowarzyszenie Młynarzy Rzeczypospolitej Polskiej
(Polish Millers Association)
02-532 Warszawa, ul. Rakowiecka 36 pok. 175
phone +48 601 23 62 21
phone/fax +48 (22) 606 38 45
e-mail: smrp@stowarzyszenie-mlynarzy.pl
www.stowarzyszenie-mlynarzy.pl

Izba Gospodarcza Handlowców, Przetwórców Zbóż i Producentów Pasz
(Chamber of Merchants, Grain Processors and Foodstuff Producers)
00-131 Warszawa, ul. Grzybowska 2, lok. 49
phone +48 (22) 331 08 00
phone +48 (22) 331 08 01
fax +48 (22) 331 08 02
e-mail: grain@upcpoczta.pl
www.izbozpasz.pl

Stowarzyszenie Rzemieślników Piekarstwa Rzeczypospolitej Polskiej
(The Republic of Poland Baking Craftsmen Association)
00-246 Warszawa, ul. Miodowa 14
phone/fax +48 (22) 635 89 68
e-mail: biuro@stowarzyszeniepiekarzy.pl
www.stowarzyszeniepiekarzy.pl

Krajowa Rada Izb Rolniczych
(National Council of Agricultural Chambers)
00-930 Warszawa, ul. Wspólna 30
phone +48 (22) 623 21 65
phone +48 (22) 623 23 01
fax +48 (22) 623 11 55
e-mail: sekretariat@krir.pl
www.krir.pl
The above brochure is accessible on the websites of the Ministry of Agriculture and Rural Development and of the Agricultural Market Agency under the addresses:


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The brochure was prepared by the Analysis and Programming Office of the Agricultural Market Agency on the basis of the data of the Central Statistical Office, Ministry of Finance and also reports by the Institute of Agricultural and Food Economics – National Research Institute ‘State and perspectives of the cereal market’ and ‘State and perspectives of the demand for food’.
**Agricultural Market Agency** – as accredited paying agency of the European Union performs tasks concerning the food sector which are relevant in both economic and social aspects, in the scope of:

- **consumption support** – propagates a proper dietary model as well as consumption of milk and dairy products among children and schoolchildren (‘School Milk Scheme’) and also fruit and vegetables among pupils of classes I–III of primary schools (‘School Fruit Scheme’);
- **food aid** which is delivered to the most deprived persons each year;
- **food promotion support:**
  - co-finances sector promotion and information campaigns, carried both on national and foreign markets,
  - ensures the administration 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 special consideration for the regional, traditional and ecological products being produced under guaranteed food quality systems,
  - implements the sector promotion programme of the Polish food specialities on the selected foreign markets;
- **production quotas for** milk, sugar and isoglucose and also **the monitoring and control of the process of production and processing** among others on the markets of wine, sugar and tobacco;
- **administration of foreign trade exchange** – it issues import/export licences for agri-food products under the European Union regulations in force;
- **support for producers and agricultural markets:**
  - subsidises the purchase of certified seed and planting stock,
  - implements support programmes for the bee-keeping sector;
- **intervention purchase and sale of agri-food products**, according to the Common Agricultural Policy regulations;
- **private storage aid** and issuing certificates allowing the use of products under this scheme in other EU countries;
- **administration of support schemes for producers affected by damages** caused by crisis situations;
- **renewable energy sources** – monitoring the production of agriculture biogas, biofuel components and liquid biofuels;
- **preparation of analytical and prognostic studies** on the current and foreseeable situation on the selected agricultural markets, as well as making them accessible to the interested participants of the agricultural market.